

Activity Report 2011

Review of activities 2011

Core Capacity Development

- Monitoring
- National Legislation
- NFP Communications and Coordination
- Surveillance and Response
- Preparedness
- Risk Communication
- Human Resources
- Laboratory
- Points of Entry

WHO Global IHR Commitments

Future Directions

Annexes

- IHR Publications and Reference Tools
- Collaborating Institutions
- Financial Summary



International Health Regulations Coordination Department

Activity Report 2011

Table of contents

- P 4 **Acronyms**
- P 5 **Foreword**
- P 7 **Introduction**

Review of activities 2011

- P 11 **Core Capacity Development**
- P 13 • Monitoring
- P 17 • National Legislation
- P 19 • NFP Communications and Coordination
- P 21 • Surveillance and Response
- P 25 • Preparedness
- P 29 • Risk Communication
- P 33 • Human Resources
- P 37 • Laboratory
- P 41 • Points of Entry

- P 45 **WHO Global IHR Commitments**

- P 51 **Future Directions**

Annexes

- P 57 • IHR Publications and Reference Tools
- P 61 • Collaborating Institutions
- P 64 • Financial Summary

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Acronyms

ACI	Airports Council International	PHEIC	Public Health Emergency of International Concern
AFRO	WHO Regional Office for Africa	PoE	Points of Entry
AMP	Agence de Médecine Préventive	REACT	Reaction to Emergency Alerts Using Voice and Clustering Technologies
AMRO/PAHO	WHO Regional Office for the Americas	SEARO	WHO Regional Office for South-East Asia
APSED	Asia Pacific Strategy for Emerging Diseases	SSC	Ship Sanitation Certificates
CAPSCA	Cooperative Agreement for Preventing the Spread of Communicable Diseases through Air Travel	TEPHINET	Training Programmes in Epidemiology and Public Health Intervention Network
CDC	United States Centers for Disease Control and Prevention	UNWTO	United Nations World Tourism Organization
EID	Emerging and Reemerging Infectious Diseases	USAID	United States Agency for International Development
EIS	Event Information Site	WER	Weekly Epidemiological Record
EMRO	WHO Regional Office for the Eastern Mediterranean	WHO	World Health Organization
EQA	External Quality Assessment	WMO	World Meteorological Organization
EU	European Union	WPRO	WHO Regional Office for the Western Pacific
EURO	WHO Regional Office for Europe		
FAO	Food and Agriculture Organization of the United Nations		
FETP	Field Epidemiology Training Programme		
FOS	Food Safety and Zoonoses		
GCR	Global Capacities, Alert and Response		
GLaD	Global Laboratory Directory		
HSE	Health Security and Environment		
IAEA	International Atomic Energy Agency		
IATA	International Air Transport Association		
ICAO	International Civil Aviation Organization		
IDSR	Integrated Disease Surveillance and Response		
IHR	International Health Regulations		
ILO	International Labour Organization		
IMO	International Maritime Organization		
ITH	International Travel and Health		
NFP	National IHR Focal Point		
OIE	International Office of Epizootics		
PAG	Ports, Airports and Ground Crossings		
PAGNet	Public Health and Ports, Airports and Ground Crossings Network		

Foreword

Doing our work better could well be described as the driving force behind WHO over the past year. The reform of the Organization, which has involved an extensive and sometimes painful analysis of its functioning, led to a substantive restructuring designed to make WHO better able to respond to public health needs in all countries around the world.

For the Health Security and Environment cluster (HSE), and in particular as regards the revised International Health Regulations (2005), the process of evaluation began in April 2010 with the external review of the functioning of the IHR in the context of pandemic H1N1 2009. The work of the Review Committee concluded in May 2011 with the report of its findings and recommendations presented to the World Health Assembly by its Chair, Professor Harvey Fineberg.

The main findings of the Committee were that the IHR helped better prepare the world to cope with public health emergencies, that WHO performed well in many ways during the pandemic, confronted systemic difficulties and demonstrated some shortcomings, and that the world is currently ill-prepared to respond to a severe pandemic or any other public health emergency on a similarly global and threatening scale. The Committee also presented WHO with a set of recommendations, described on page 48, which serve to guide the Organization in further strengthening the IHR framework so that it may better protect the world against the public health events we may face in the 21st century.

Well-functioning national public health systems are the core of the international system for coordinated response to events that might constitute a public health emergency of international concern. The IHR require that countries have the core capacities in place by 15 June 2012. A main focus of the work over the past year has therefore been to meet the core capacity

requirements, identify gaps and assist countries with the development of national action plans to achieve the minimum capacity requirements. The Department has worked diligently with the regional offices throughout the year together with countries to mobilize resources needed to build missing capacities.

In 2011 we witnessed the devastation caused by the earthquake and nuclear accidents in Japan. These events were a disturbing wake-up call to the global community, a tragic reminder of how closely linked we are, from one country to another, from region to region.

The IHR provide not only the legal framework but also a unique opportunity for the international community to work closely together to be better prepared to respond collectively to potential public health events that threaten our global health security. There is much work to be done, and WHO is committed to continuing its work in collaboration with the regional offices to support countries to strengthen their core capacities for preparedness and response to all public health events.



Introduction

Health Security and Environment (HSE) restructuring

The HSE cluster underwent a refining and streamlining process in 2011 to improve coordination between the different technical teams and better fulfil its mandate of ensuring global health security. On 1 December the new HSE structure was made official. Formerly comprised of five departments, HSE now houses four departments. The Global Capacities Alert and Response Department (formerly IHR Coordination), which now includes the Alert and Response Operations Unit, thus expanding the mandate of the department and uniting country capacity building and global alert and response activities under one group. The Pandemic and Epidemic Diseases Department, also new, is responsible for influenza, hepatitis, meningitis and other epidemic-prone diseases and includes a special unit on antimicrobial resistance. The Public Health and Environment and Food Safety Departments remain unchanged. All four HSE departments contribute to the workings of the revised IHR framework, which covers not only infectious and foodborne diseases but also risks that can arise from chemical, nuclear and radiological events. All the four departments work in close collaboration with the six WHO regional offices.

Priority activities in 2011

Strong national public health systems and capacities are the core of the international system for coordinated response to events that might constitute a public health emergency of international concern. All States Parties are required to have or develop minimum core public health capacities to implement the IHR (2005) effectively.

The IHR require that countries have in place the core capacities by 15 June 2012. The focus of the work over the past year was therefore to meet the core capacity requirements and where necessary, identify gaps and assist countries with the development of national action plans to achieve the minimum capacity requirements. In view of the June deadline, but also in line with the recommendation of the Review Committee that WHO assist countries to accelerate the acquisition of the capacities needed to be better prepared, the Department and regional offices worked diligently with countries to assess their existing capacities and develop national action plans to address gaps and mobilize the resources needed to build the missing capacities. This process of reviewing capacities, identifying priorities and developing national roadmaps to accelerate implementation was launched in Zimbabwe for the African Region and the process has since been duplicated in the WHO European Region and will continue (this activity is described in greater detail on page 15).

For countries that are unable to achieve the core national health capacities by June 2012, extensions are possible and WHO is facilitating this process.

Partners in IHR implementation

WHO's vision for international public health security is a more secure world that is on the alert and ready to respond collectively to the threat of epidemics and other public health emergencies that represent an acute threat to public health security, an unbroken line of defence using highly trained personnel and making effective use of up-to-date technologies.

WHO Offices around the world



01.	02.	03.	04.	05.	06.
African Region	Region of the Americas	Eastern Mediterranean Region	European Region	South-East Asia Region	Western Pacific Region
Regional office	Regional office	Regional office	Regional office	Regional office	Regional office
Brazzaville	Washington DC	Cairo	Copenhagen	New Delhi	Manila

HQ headquarters ••• Country office

Global partnership

In a closely interdependent world, global partnerships are essential to the successful implementation of the Regulations. Partnership is required between all countries to share technical skills and resources, to support capacity strengthening at all levels, to support each other in times of crisis and promote transparency. Partnership between different sectors (e.g. health, agriculture, travel, trade, education, defence) is also essential to build coherent alert and response

systems which cover all public health threats, and, at the time of events, are able to rapidly mobilize the required resources in a flexible and responsive way.

IHR activities are carried out in partnership with the WHO regional offices in all WHO regions and in many countries thanks to the commitment and support of its technical and main funding partners.

GLOBAL PARTNERSHIPS FOR IHR IMPLEMENTATION

IHR activities are carried out in partnership with the WHO regional offices in all WHO regions and in many countries thanks to the financial support of its main funding partners:

- the Government of France
- the Institut Pasteur
- the Institut de Veille Sanitaire (InVS)
- the Rhône-Alpes Region
- the Rhône Department
- the Grand Lyon
- the Bill and Melinda Gates Foundation
- the United States Centers for Disease Control and Prevention (CDC)
- the United States Agency for International Development (USAID)
- the European Union

WHO office in Lyon and its local and regional partners

Since its creation in 2001, the WHO Lyon Office has benefited from the committed support of the Government of France, the Institut Pasteur, the Institut de Veille Sanitaire, the Rhône-Alpes Region, the Rhône Department, the Grand Lyon and the Fondation Mérieux, who was instrumental in establishing the Office. The financial and technical support of these partners is critical to the successful implementation of the department's wide-reaching activities to help counties strengthen their public health systems. Each year the WHO Lyon Office collaborates with the local Lyon and greater Rhône-Alpes Region in outreach activities to raise awareness of priority public health issues and activities to face these challenges.

Highlights in 2011 included :

BioVision roundtable, co-organized with the Fondation Mérieux and the Institut Pasteur : *Securing Global Health in the 21st Century: epidemic intelligence, identification of risks and opportunities for control*. Speakers included Nobel Prize winner Professor Françoise Barré-Sinoussi, Doctor Guénaél Rodier, Director of the Division of Communicable Diseases, WHO Regional Office for Europe, and Doctor Robert Breiman, Country Director, CDC-Kenya and Head, Global Disease Detection Division, CDC-Kenya. The roundtable included 160 experts from the scientific community of the Grand Lyon, the greater Rhône-Alpes Region, and national and international institutions.

The IHR i-course: one of the most wide-reaching awareness raising vehicles, each year the course trains up to 40 public health professionals from around the world on IHR implementation. These IHR professionals then transfer their IHR expertise to staff in their national health institutions, thus broadening and strengthening the network of IHR partners (described in more detail on page 35). Since the course was launched in 2009, the Fondation Mérieux has provided much needed support to this wide-reaching and ambitious programme, making it possible for participants to be hosted at its conference centre Les Pensières at Veyrier-du-Lac during the face-to-face sessions of the course.

European heritage days: each year the Musée Dr. Mérieux welcomes 250-300 participants, including scientists, university students and school groups, during this event focusing on challenges to public health and advances in the scientific community to meet these challenges. During this event, the WHO office in Lyon hosts an information stand, inviting questions and exchanges with visitors to the event. In addition, each year WHO experts participate in the museum's temporary exhibitions. This year featured exhibitions on Calmette-Guérin and their discovery of the TB/BCG vaccine, and the commemoration of Global Rabies Day.

Structure of this report

Previous IHR Coordination Department activity reports described the activities during the preceding year according to the responsibilities of each technical team. This year's report lays out activities not by technical team, but by core capacity, thereby highlighting the support to countries to strengthen their national public health capacities. This new structure also echoes the more harmonized approach between technical teams, across departments and the entire WHO to meet its commitment to the global community for a safer world.

The report focuses on the core capacities 1-9, which fall under its mandate. Preparedness, core capacity 5, however, is an activity that is carried out in all technical units throughout WHO. Therefore, under this section the report highlights a selection of activities with the provision that all activities in the Department and across the HSE cluster include preparedness components in their work. Additional work on whole of society preparedness has just started in the HSE cluster. Activities to face the challenges of all hazards (core capacities 10-13) are led by the Food Safety and Public Health and Environment Departments in close collaboration with the IHR (now GCR) Department.

Finally, the work of assessing existing core capacities and identifying gaps in countries must begin with a situation analysis; therefore, the next section of this report begins with the activities to monitor IHR implementation in countries and to accelerate implementation in the countries where this is needed.

IHR core capacities

01. National legislation
02. National Focal Point communications and coordination
03. Surveillance
04. Response
05. Preparedness
06. Risk communications
07. Human resources
08. Laboratory
09. Points of entry
10. Food safety events
11. Chemical events
12. Nuclear events
13. Radiological events

Review of activities 2011

Core Capacity

Development

Monitoring

Strong national public health systems and capacities are the core of the international system for coordinated response to events that might constitute a public health emergency of international concern. All States Parties are required to have or develop minimum core public health capacities to implement the IHR (2005) effectively.

Assessment of IHR core capacities

With regards to assessment and monitoring tools, WHO has developed a number of generic and core-capacity specific guidance for IHR. These include in-depth assessment protocols, specific assessment tools (points of entry, laboratory, risk communications, legislation, etc.), monitoring checklists, States Parties questionnaires, and other guidance. WHO regional offices also have ongoing regional strategies such as the the Integrated Disease Surveillance and Response (IDSR), the Emerging Infectious Diseases (EID) and the Asia Pacific Strategy for Emerging Diseases (APSED) on which countries need to build when developing the IHR core capacities.

In 2011, following the Review Committee recommendation to accelerate IHR implementation in countries, a desk review planning and advocacy guide was developed to support States Parties in fulfilling the core capacity requirements. This guide is an intermediary tool which identifies gaps and strengths, permits the development of robust plans, while validating the quality of the States Parties reports, within a short timeframe.

WHO HQ and regional offices have assisted a number of countries to assess their IHR core capaci-

ties using the assessment tool or the desk review and planning guide, to develop or update plans of action based on gaps or weaknesses identified, and to develop specific core capacities.

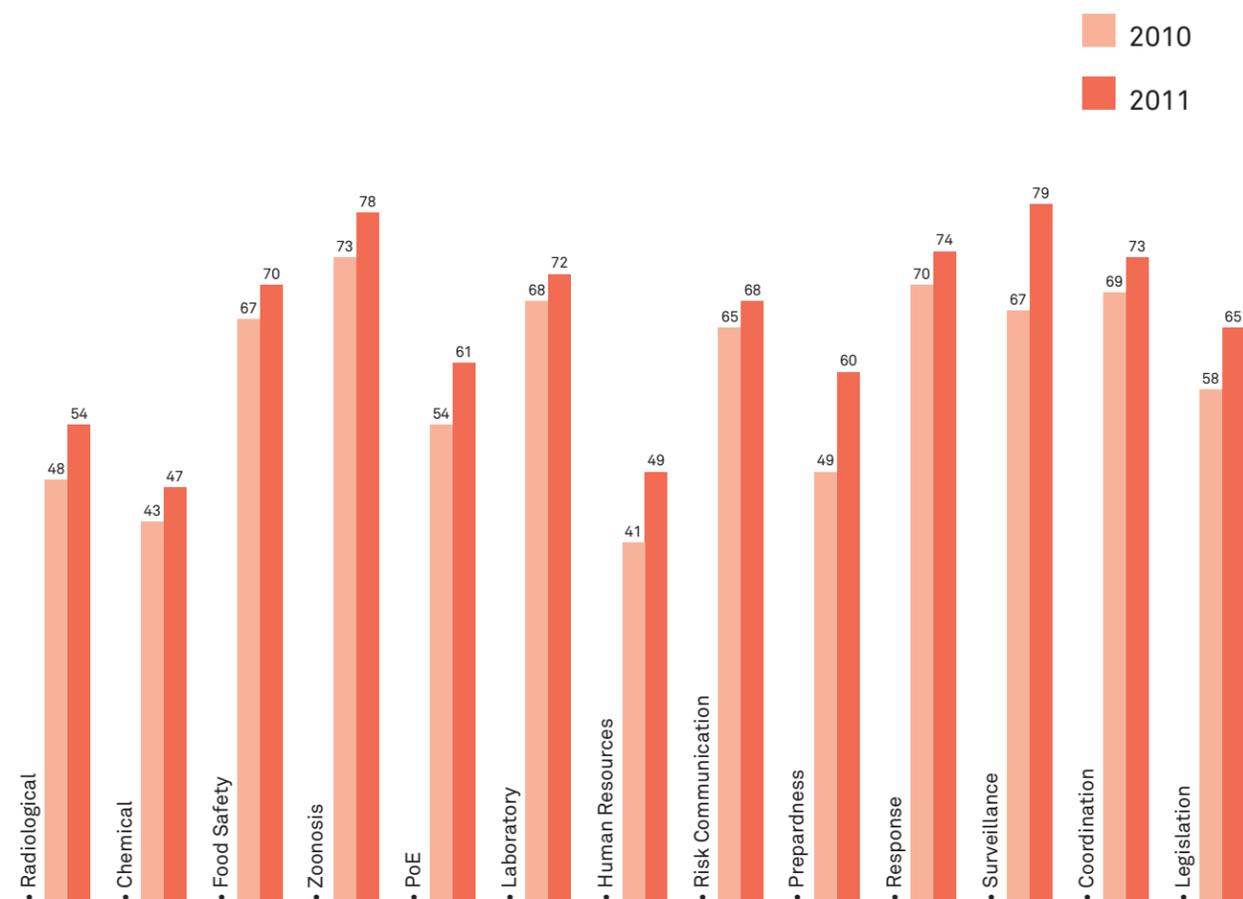
Monitoring of IHR core capacity development

A monitoring framework and corresponding tools have been made available to allow States Parties to monitor the status of their national core capacities, in accordance with the requirements set out in Annex 1 of the Regulations, and to identify areas that require action. This framework takes into account the States Parties' obligation to report on the implementation of the IHR to the World Health Assembly. The status of IHR core capacity development has been monitored by WHO through the annual States Parties questionnaire, which is self-reported data. The IHR monitoring process assesses the status of development of eight core capacities, as well as capacities development at points of entry for IHR-related hazards (biological, i.e. zoonotic and food safety; chemical, radiological and nuclear) through a checklist of twenty global indicators.

Status

The revised States Parties questionnaire was sent to Member States in 2010 and 2011, and solicited 128 and 150 completed responses respectively. The data for 2011 showed States Parties making fair progress for a number of core capacities, notably those for **surveillance** (with a global average score of 75%), **response** (with a global average of 73%), **laboratory** (with a global average of 71%), and **zoonotic events** (with a global average of 77%). On the other hand, most regions reported relatively low capacities in **human resources** (with a global average of 46%), at **points of entry** (with a global average of 59%) and for **Chemical events detection and response** (with a global average of 45%).

In comparing¹ core capacity status for countries reporting in both years (as shown in the graph below), there is overall progress across all core capacities, with the increase ranging from 3% to 12%. The most noticeable progress is in **surveillance** (from 67% to 79%) and **preparedness** (from 49% to 60%), while there is relatively slower progress in **coordination** (from 69% to 73%) and **risk communication** (from 65% to 68%).



1. In order to make valid comparison between 2010 and 2011, data of 109 countries that reported in both years were used. This is why the scores in the paragraph and graph on comparison might differ from those in the paragraph which shows scores of 156 countries that reported in 2011.

Tabletop exercises

In order to support States Parties in their ability to ensure that their core capacities are functional at the required level, to validate plans, and to contribute to the building of relationships and operational confidence across relevant stakeholders, an exercise design handbook and accompanying five-day workshop platform has been developed. Working within the context of the core capacities, participants in the workshop use the exercise design handbook as a base text and through a series of interactive sessions learn to apply a standard process to develop a tabletop exercise around a chosen topic.

In 2011 two workshops were held, the first in Ankara, Turkey and the second in Nairobi, Kenya. Participants from each of these workshops will conduct exercises in 2012. The Ankara workshop included participants from Bosnia and Herzegovina, Georgia, the Islamic Republic of Iran, Jordan, Kosovo, Lebanon, Morocco, Oman, Pakistan, the Republic of Albania, the Republic of Armenia, the Republic of Macedonia, the Republic of Moldova, Serbia, Syria, and Turkey. The Kenya workshop included participants from Cameroon, Congo, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Mauritius, Mozambique, Namibia, Swaziland, Tanzania and Uganda. Afghanistan, Iraq, Lebanon and Uganda have all expressed a desire to conduct an IHR-related exercise in 2012.

Web-based tools

In order to facilitate the data collection and feedback process, a web-based tool has been developed, allowing States Parties to submit and update their data online, and generate reports charts and tables after data submission. It also allows States Parties to update their information throughout the year on progress made in the implementation of IHR. This monitoring tool has undergone several revisions, including a "talking presentation" during 2011, and will foresee support for all six official languages in 2012. The IHR Portal, introduced in late 2010, originally designed to give IHR National Focal Points a "one stop shop" for accessing the applications and data they need, has been revised and is now available to subject matter experts, IHR regional contact points, IHR NFPs as well as WHO staff. Virtual meeting software will facilitate the contact with IHR regional contact points and subject matter experts as the 2012 deadline approaches.

AFRO: IHR experts briefing and launch of desk review for accelerated IHR implementation in the African Region

The IHR desk review consultant briefing meeting, organized by HQ and AFRO in October was part of the plan to support Member States to accelerate the development of national IHR core capacities. The Harare briefing brought together 25 IHR experts from WHO country offices, key staff in the ministry of health and from other relevant institutions in the African Region

to prepare for the IHR desk review, to take place in Benin, Côte d'Ivoire, Equatorial Guinea, Eritrea, Guinea, Liberia, Mauritania, Nigeria, Sao Tome & Principe, Senegal, Togo, Zambia and Zimbabwe. Zimbabwe led the process with its desk review. Desk reviews have since been carried out in all of the countries listed above.



National Legislation

Legally-oriented aspects of IHR implementation cover a range of activities supported by WHO, including implementation of the IHR in national legislation and other areas of legal advice on IHR implementation. With the many new or expanded rights and obligations for States Parties under the IHR (2005), States Parties have been strongly advised since adoption of the IHR to assess their existing legal frameworks in all relevant areas to ensure full implementation - including any legal instruments necessary to support the additional technical capacities being developed in connection with Annex 1 of the IHR. In some States Parties, implementation of the IHR may require that they adopt implementing or enabling legislation for some or all of these obligations and rights. Even where new or revised legislation may not be specifically required it can facilitate implementation in a more efficient or effective manner, can serve to institutionalize and strengthen the role of IHR (2005), and facilitate coordination among the different national entities involved in implementation.

Country requirements

All States Parties have been legally bound to implement the IHR since their entry into force in 2007 (excepting those who became WHO Member States after IHR adoption). To fulfill this obligation, sufficient national legislation needs to have been and continue in place for fulfillment of all IHR State Party obligations and all important State Party rights.

efficient implementation of the IHR (2005) in national legislation, and provides additional advice and guidance concerning IHR application nationally.

General status in countries

The IHR monitoring data shows that, in 2011, 71% of reporting countries indicated having carried out legislative assessments and 51% of responding States Parties reported having implemented recommendations after conducting such assessments.

WHO commitments

WHO is supporting States Parties in their assessments and follow-up actions, as necessary, for full and

HIGHLIGHTS

In the context of national legislation, WHO has supported States Parties in 2011 through: individual missions involving national legislation (e.g. Iran and Saudi Arabia); a teleconference concerning national legislation issues (Sudan), preparation of presentation on legislative assessment and revision for lawmakers (to be presented by colleagues in Uzbekistan) legislation facilitation of expert consultant advice (East Timor), preparation of legislative and the continued availability of the extensive IHR national legislation guidance materials. WHO also presented and spoke on national legislation and other legal issues to the students at the WHO i-course on implementing the IHR (2005), and substantially revised and contributed to the related written materials prepared by Georgetown University.

WHO held two interactive workshops on assessment and revision of national legislation for IHR implementation on 24-26 and 28-30 November in Harare, Zimbabwe, with the combined participation of 17 States Parties of the African Region. For the first time, both legal/legislative and technical/IHR officials were invited from each country so that the guidance would focus on these two key sectors for legislative assessment and revision for IHR implementation to prepare them for completing these actions, and to facilitate establishment of a network of legal and IHR officials in the African Region familiar with the process and methodologies for legislative assessment and review to share their knowledge with officials in other national governments as well as their own.

NFP Communications and Coordination

The effective implementation of the IHR at both global and national levels is dependant upon multisectoral and multidisciplinary collaboration to achieve alert and response systems that function across a broad range of public health risks. The National IHR Focal Point (NFP) plays a critical role in such coordination within a State Party, as well as being the national centre for IHR communications with WHO. The designation of National IHR Focal Points by virtually all States Parties was recognized as an important achievement by the IHR Review Committee that reported to the World Health Assembly in May 2011. The NFP is established under the IHR as a centre rather than an individual and must be accessible at any time to communicate with the WHO IHR contact points and with the relevant government sectors and other stakeholders in the country.

Country requirements

Countries are required to establish a mechanism for the coordination of relevant sectors in the implementation of IHR. These coordination functions are frequently the responsibility of the State's NFP and the WHO guide to the NFP role makes reference to some aspects of this coordination. National standard operating procedures or equivalent are encouraged to facilitate the coordination between IHR National Focal Points and relevant sectors.

The NFPs have a critical communications function with WHO in both urgent situations relating to public health events and risks, and regular administrative communications relevant to IHR implementation (e.g. submission of monitoring data, requests for extensions to the capacity deadline or lists of ports providing ship sanitary certification). It is important

that the contact details of NFPs are updated and maintained to ensure effective communication during a public health emergency. To facilitate updating the Secretariat provides NFPs with an internet interface link each month, using which NFPs can easily confirm or update their contact details including their 24/7 access information.

WHO commitments

The WHO IHR Contact Points in the six regional offices provide the closest support to, and communication with the NFP functions in States; working with the NFPs in the management of public health events and organizing regular meetings to update NFPs and facilitate learning from regional experiences. GCR supports such meetings with materials, information and presentations from a global perspective.

The IHR Review Committee recommended that countries ensure that NFPs "have the authority, resources, procedures, knowledge and training to communicate with all levels of their governments and on behalf of their governments". WHO will update its guide on the NFP role to support the implementation of this recommendation.

General status in countries

Analysis of the IHR monitoring data shows that around half of the 150 States Parties providing data by January 2012 score between 75 and 100 in the capacity area of coordination, with the average score in this capacity area being 69. These figures are very similar to those from the 2010 data when only 125 States reported on this aspect of implementation. In earlier reports in 2008 and 2009 countries had indicated increasing levels of collaboration between NFPs and a broadening spectrum of national sectors and partners.

In a quantitative study of the use of Annex 2 of the IHR in notification of events to WHO, among 133 NFPs, 88% reported having excellent or good knowledge of the contents of Annex 2, 77% reported always or usually using Annex 2 for assessing public health emergencies, and 76% indicated their country had some legal, regulatory or administrative provisions relating to the use of Annex 2.

HIGHLIGHTS

Event information site

It is important to note that this work was carried out by the Alert and Response Operations Unit (ARO), which was not part of the IHR department in 2011. As of 1 December 2011, ARO and IHR are merged in the new GCR department. For more about this see page 7.

WHO is obliged to provide to States Parties timely information on relevant public health risks of international importance while respecting the sensitivity and potential confidentiality of such information. To that effect, WHO has developed a password-protected web site for secure communications with national IHR focal points. The Event Information Site (EIS) is managed centrally. GCR ensures access to site by a small number of individuals designated by each NFP, as well as

staff from the Secretariat and by a limited number of other international organizations. When there is a new acute public health event or a significant update on an event posted on the secure web site, WHO sends an e-mail alert message to the users.

An online user satisfaction survey of the event information site has been carried out with a view to improving the service provided to States Parties. The results of the survey have been published on the site. Survey responses supported three ongoing actions for WHO: firstly, the redesign of the site to enhance user access and utility of the information shared; secondly, to augment value-added information provided such as public health risk assessments or event relevant guidelines or best practices; and thirdly, a cohort of EIS-registered users comprising NFP staff and staff from all levels of the Organization self-identified as willing to participate in improvements to public health event-based information sharing through the Event information site.

Early notifications by NFPs

The NFPs do provide WHO with early notifications of events that might become public health events of international concern (PHEIC). During the 2009/10 influenza pandemic the NFPs provided the Organization with early notifications of cases as well as continuing aggregated information that allowed the evolution of the global emergency to be monitored. Although it has been noted by the Review Committee that "NFPs are not yet a timely source of initial, early information on events that might constitute a potential PHEIC" the NFPs are already providing important verification and additional information on events identified through WHO's surveillance activities.

Surveillance and Response

The IHR require the rapid detection of public health risks, as well as the prompt risk assessment, notification, and response. To this end, a sensitive and flexible surveillance system is needed with an early warning function. The structure of the system and the roles and responsibilities of those involved in implementing the system need to be clear and preferably should be defined through public health policy and legislation. Chains of responsibility need to be clearly identified to ensure effective communications within the country, with WHO and with other countries as needed.

Command, communications and control mechanisms are required to facilitate the coordination and management of response operations to outbreaks and other public health events. Multidisciplinary/multisectoral Rapid Response Teams should be established and be available 24 hours a day, 7 days a week. They should be able to rapidly respond to events that may constitute a public health emergency of national or international concern. Appropriate case management, infection control, and decontamination are all critical components of this capacity.

Country requirements — surveillance

Indicator-based surveillance includes an early warning function for the early detection of a public health event. Countries have committed to keeping a list of priority diseases, conditions and case definitions for surveillance available as well as designating a specific unit for surveillance of public health risks. Surveillance data on epidemic-prone and priority diseases should be analysed at least weekly at national and sub-national levels. Countries must also establish event-based surveillance by identifying a responsible unit as well as operating guidelines. Country experiences and findings on implementation of event-based

surveillance, and the integration with indicator-based surveillance, should be documented and shared with the global community. Countries should also use the decision instrument in Annex 2 of the IHR (2005) to notify potential public health events of international concern to WHO. The IHR national focal point should respond to 100% of verification requests from WHO within 24 hours.

Country requirements — response

Countries should establish public health emergency response mechanisms such as case manage-

ment guidelines for priority conditions as well as rapid response teams to respond to events that may constitute a public health emergency available 24 hours a day, 7 days a week. Case management guidelines must be available for priority epidemic-prone diseases. Efficient outbreak investigation must be ensured through trained personnel using specific guidelines and collaborating effectively with laboratories. Appropriate and rapid measures for disinfection, decontamination and vector control should be taken. Infection control and biosafety must be reinforced at hospitals and other health facilities.

WHO commitments

WHO shall assist States Parties, upon request, to develop, strengthen and maintain these capacities. WHO shall collect information regarding events through its surveillance activities and assess their potential to cause international disease spread and possible interference with international traffic. WHO may take into account reports from sources other than State Parties' notifications or consultations and shall assess these reports according to established epidemiological principles and then communicate information on the event to the State Party in whose territory the event is allegedly occurring. Before taking any action based on such reports, WHO shall consult with the State Party and attempt to obtain verification in accordance with the procedure set forth in Article 10. To this end, WHO shall make the information received available to the States Parties and only where it is duly justified may WHO maintain the confidentiality of the source.

General status in countries

A self assessment of core capacity fulfillment in 2011 shows a global average score of 75% of reaching the requirements of surveillance. The score by WHO region shows for Africa: 63%, the Americas: 76%, the Eastern Mediterranean: 80%, Europe: 81%, South-East Asia: 69% and the Western Pacific: 83%.

For response capacity, the global average score is 73%, and the average by region is the following: Africa: 54%, the Americas: 77%, the Eastern Mediterranean: 73%, Europe: 78%, South-East Asia: 74% and the Western Pacific: 89%.

HIGHLIGHTS

Central Africa Surveillance (SURVAC) Project

Funded by the Bill and Melinda Gates Foundation, the project started in 2009 and is jointly coordinated by the WHO IHR Department and the WHO Regional Office for Africa, the WHO Intercountry Support Team based in Libreville, the WHO Country Office in each of the three countries, as well as the US Centers for Disease Control and Prevention. The SURVAC project comprises Cameroon, the Central African Republic and the Democratic

Republic of Congo, countries that share similar epidemiological profiles, similar gaps in the capacity to detect and control health threats, and the French language. Epidemic-prone and vaccine-preventable diseases are prioritized, in line with national priorities in the three countries.

Surveillance by mobile phone: Developing a model system for efficient electronic data transmission and management in routine national epidemiological surveillance

Part of the SURVAC programme, this project is developing a model system of data transmission that uses mobile and wireless technologies. The background is rapid advance in mobile technology and a continued growth in coverage of mobile phone networks, which now extend far beyond the reach of electricity grids, especially in developing countries.

A first field pilot test was carried out in the Central African Republic, where surveillance data generated at remote locations was sent via SMS using mobile phones. The surveillance data is collected at peripheral health facilities and transmitted to a district office, which is responsible for the basic surveillance actions and transmission of data to an intermediate or regional surveillance office, which in turn forwards to the central level. Common problems in the current surveillance systems are incomplete

data, poor validity and timeliness, and undertrained staff with too heavy a workload. At district level, data was verified and imported in a data analysis application, and finally, aggregated district data was transmitted to the central level. The only technology required in the peripheral health facility is a mobile phone, sometimes with a small solar panel for power. In the upper levels, a computer manages data received by SMS, launching automated checks and generating responses to the senders. A surveillance operator checks and validates the data, and imports it into the surveillance database with user-friendly procedures. All the processes are automated, but users can keep control at every step. In this way, multiple benefits are foreseen, time is saved between the occurrence of health events and the availability of information for analysis and action.

EPISOUTH Plus Project

Based on the experience gained during its first years, EpiSouth entered a second phase called "EpiSouth Plus" in October 2010. EpiSouth Plus is a 33-month project funded by the European Union (EU), which aims to increase health security in the Mediterranean area and south-eastern Europe by enhancing preparedness to health threats and bio-security risks at national or regional levels in the framework of IHR implementation. The project involves 27 countries from the European, the Eastern Mediterranean and the African WHO Regions. Activities are organized in seven Work Packages (WP), jointly led by EU and non-EU countries. Work Package 7 is co-led by WHO and the Italian National Institute of Health. In 2011 the WP7 steering team was consolidated and the specific objective of the WP was identified: coordination of surveillance and response between points of entry and national systems, and a cross-cutting topic to be approached by all work packages: surveillance, identification and management of health events caused by vector-borne diseases.

Training in field epidemiology: biostatistics

A new version of a self learning CD-ROM on biostatistics was launched in 2011 in collaboration with the Agence de Médecine Préventive (AMP). The main learning objective of this programme is to understand the purpose of biostatistics through realistic cases and to acquire basic biostatistics skills. The target audiences of this training are medical and biomedical students, laboratory specialists and other professionals who need to use or understand basic biostatistics. However, it may also be a helpful reminder to epidemiologists. It has been designed and developed in such a way that trainees can work independently using only the CD-ROM when no book or tutor is available. Since its launch this tool has been in high demand, and its translation into French is planned for 2012.

Accreditation of Field Epidemiology Training Program (FETP)

TEPHINET is a non-profit, professional alliance of all field epidemiology and laboratory training programmes with the aim of strengthening international public health capacity through the support and networking of field-based training programmes. TEPHINET Field Epidemiology Training Program (FETP) directors have agreed to implement an FETP accreditation process. The primary purpose of accreditation is to improve the quality of FETPs, their effectiveness in increasing global field epidemiology capacity, and therefore in the acquisition of surveillance and response capacity as required by IHR. In 2011 "Accreditation Reference Document for Field Epidemiology Training Programs" was launched.

Morocco: Assessment of training needs for health staff contributing to the epidemiological surveillance system

This project is part of a process in which WHO supports countries in the region to build national strategies for training the human resources to strengthen epidemiological surveillance.

The Moroccan assessment has been done through a survey by questionnaire to all staff involved in the surveillance system in the countries 16 regions, followed by a visit to five regions as well as to key health ministry structures at central level. The following method was used to describe the situation by

region and by type of surveillance structure: the type of training received by the staff, their perception on the training gaps and their opinion on the most appropriate modalities for training in their particular context. The study revealed a number of factors, directly or indirectly linked to training, which affect the motivation of staff to stay and to excel in their performance. In Morocco, this course of action is set to continue in 2012 within the consensus of the health authorities and collaborating agencies.

Preparedness

Preparedness includes the development of national, intermediate and community/primary response level public health emergency response plans for relevant biological, chemical, radiological and nuclear hazards. Other components of preparedness include mapping of potential hazards and hazard sites, the identification of available resources, the development of appropriate national stockpiles of resources and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency.

Country requirements

Countries have committed to develop a multi-hazard national public health emergency preparedness and response plan which should be tested in actual emergency or simulation exercises and updated as needed. Country experiences and findings on emergency response and in mobilizing surge capacity, should be documented and shared with the global community. Countries have also committed to map priority health risk and resources and develop a directory of experts in health and other sectors to support a response to the IHR-related hazards.

General status in countries

A self assessment done by State Parties in 2011, shows a global average score of 58% of reaching the requirements of preparedness. If we break the scores down to average by WHO region, we find the following results: Africa: 35%, the Americas: 57%, Eastern Mediterranean: 61%, Europe: 70%, South-East Asia: 58% and the Western Pacific: 73%.

HIGHLIGHTS

The work within the area of preparedness has during 2011 been carried out by many departments and covers a wide range of technical areas.

Towards the end of 2011 the responsibility was consolidated into one team under the supervision of the Assistant Director-General for the Health Security and Environment cluster. Some examples of the work carried out by the IHR Department during 2011 are described below.

WHO Biorisk Management Advanced Trainer Programme

In 2011, three further sessions of the training course for trainers were organized to strengthen the biorisk management capacities and capabilities of trainers of the polio network; Czech Republic, Switzerland for countries of the eastern European Region, and in Mali for French-speaking African countries. Shorter biorisk management courses for users were also organized: within the African TB network in Tanzania, for

the Caribbean sub-Region in Trinidad and Tobago, for English-speaking African countries in Ghana and for the influenza network in the Maldives.

International Travel and Health - book and web site

Almost 900 million international journeys were undertaken in 2009. Global travel on this scale exposes many people to a range of health risks, many of which can be minimized by precautions. The yearly editions of the ITH book and website explains how travellers can stay healthy and provides WHO guidance on vaccinations, malaria chemoprophylaxis and treatment, personal protection against insects and other disease vectors, and safety in different environmental settings. It covers all the principal risks to travellers' health, both during their journeys and at their destinations. It describes all relevant infectious diseases, including their causative agents, modes of transmission, clinical features and geographical distribution, and provides details of prophylactic and preventive measures. This information is intended for the medical and public health professionals who advise travelers, but it is also a standard reference for travel agents, airlines and shipping companies – and for travelers themselves. The book is currently translated into French, Spanish, Greek and Italian. → www.who.int/ith

Yellow fever vaccination - revised recommendations

The IHR require WHO to publish regularly a list of countries and areas where there is a risk of yellow fever virus transmission. This list is updated every year in Annex 1 of the WHO publication International Travel and Health. To address the changing epidemiology of yellow fever and the current concerns regarding serious adverse events associated with yellow fever vaccine, a systematic review was undertaken for each country where there is a risk of yellow fever virus transmission. The Department convened consultations on yellow fever and international travel in 2008 and 2010 and selected a working group to systematically assess the risk for yellow fever virus transmission in Africa and South America and to ensure that maps and vaccination recommendations were harmonized on the basis of consistent criteria. Updated information have been published in WHO Weekly Epidemiological Record (WER), on WHO International travel and health website and the Lancet.

Database for electronic archiving of reports on yellow fever epidemiology.

The working group of experts on country-specific mapping of yellow fever risk is continuing its work by means of a review of criteria and methodologies to categorize countries' yellow fever risk status. In order to permit yellow fever risk mapping to be refined, this group has developed a database for electronic archiving of non-published reports on yellow fever epidemiology.

Preparation for mass gatherings : Health conditions for travellers to Saudi Arabia for the pilgrimage to Mecca (Hajj)

The Department prepared with the Ministry of Health of Saudi Arabia the requirements and recommendations for entry visas for the Hajj and Umra seasons in 2011.

These are published in the WHO Weekly Epidemiological Record to inform visitors of the full requirements for entry into Saudi Arabia during the pilgrimage.

Field exercise in Spain: Public health emergency response in air travel

This public health emergency simulation exercise was undertaken by WHO in close collaboration with the Spanish Ministry of Health, joined by observers from the International Civil Aviation Organization (ICAO) EUROPE and public health experts from all WHO regions. The objective of the exercise was to acquire experience, to share lessons learnt, to underpin the emergency planning at points of entry and to contribute to improve technical guidance tools in this matter. The simulation was part of Spain's national efforts to update and develop capacities for responding to public health emergency involving points of entry and international travel and transport, in a multisectoral approach, in line with the IHR requirements and other international agreements, such as the International Civil Aviation Convention. Madrid Barajas airport was chosen to host the field activities of the exercise taking into account that it is the main international airport in Spain, and that it had undergone assessment and development of IHR core capacities and has previous experience (Pandemic (H1N1) 2009)) in developing and implementing protocols for responding to public health events integrated at the airport emergency plan. As a result from this experience, other airport public health emergency exercise is being planned in Spain for 2012 and lessons learned shared nationally and at international fora during 2011.



Risk Communication

Risk communication is an integral part of managing public health emergencies. Experiences at the community, national and international level in responding to disease outbreaks, natural disasters and other acute events have demonstrated the negative impact when communication has not been integrated, strategically planned, and well executed.

Effective management of public health emergencies relies on the coordinated actions of individuals, groups and organizations to rapidly identify the source, provide appropriate care and treatment to those affected and to prevent further exposure and loss of life through promoting appropriate risk reduction and health protective behaviours to those affected and/or at risk. Often, these actions and the decisions which produce them, are taken when information is scarce, and uncertainty and anxiety are high. These conditions have reinforced the value and necessity of making sure that risk communication procedures, protocols, mechanisms and human resources are in place and functional well ahead of an event, especially against the backdrop of a changing media landscape with the explosion of social media and alternative sources of "authoritative" knowledge.

Subsequently, there has been a recognition that capacity building in risk communication must be broader in scope and address a range of communication functions and roles; consider the socio-cultural, economic and political contexts of health emergencies; take into account the realities, needs and priorities of developing countries and build on what already exists; be able to offer practical tools and methodologies; and be linked to existing body of science, knowledge and good practice from health communication and relevant disciplines such as anthropology, psychology and sociology.

The activities highlighted in this report reflect these findings and mark the continued progress that is being made to integrate risk communication within routine public health preparedness.

Country requirements

The States Parties have committed to establish policy and procedures for public communications as well as mechanisms for effective risk communication during a public health emergency. This includes identifying risk communication stakeholders and partners, as well as a unit responsible for coordination of public communications during a public health event. States Parties should also develop risk communication policies and plans and exercise these. Risk communication carried out during a public health event should be evaluated.

WHO commitments

Under the IHR, WHO is committed to support Member States in the acquisition and maintenance of core risk communication capacity for responding to public health emergencies. Capacity-building for risk communication has been delivered over the past several years through a number of constantly evolving and responsive mechanisms: global meetings to develop and refine core capacities and abilities; regional training workshops to test methodologies for enhancing skills and competencies in risk communication at country levels; and the development of a set of core materials for use online as well as face-to-face.

General status in countries

A self assessment done by State Parties by the end of 2011 shows a global average score of 64 % of reaching the requirements of risk communications. If we break the scores down to average by WHO region, we find the following results: Africa: 43%, the Americas: 70%, the Eastern Mediterranean: 67%, Europe: 68%, South-East Asia: 68%, and the Western Pacific: 84%.

HIGHLIGHTS

AFRO

Workshop on strengthening Risk Communication Responses

This workshop was held in December 2011 in Harare, Zimbabwe and focused on strengthening risk communication responses to support epidemic

preparedness and response in the African Region. It was an internal WHO strategic thinking and planning workshop to establish consensus on risk communication in public health emergencies relevant for the African Region. This working meeting brought together staff from the three levels of WHO to better support and respond to the needs and priorities of WHO country offices. The outcome is a product document that outlines a framework for risk communication and strategic actions at the three levels of WHO.

AMRO/PAHO

In the Americas, the risk communication group focused on strengthening capacity at the national levels with workshops designed for health ministry communicators, epidemiologists and hospital directors. The training centered on case studies and the need to create National Risk Communication Strategies weighted heavily on planning and preparation.

At the same time, AMRO introduced a six-month certified on-line risk communication course in Spanish. The programme, hosted on PAHO's Virtual Campus, enabled 20 health professionals from throughout the Region to work on actual projects related to public health events in their countries. The participants also learned skills to share their training at the local levels.

Given the need to sustain the training and move from theory to action, PAHO formed a Regional risk communication task force to produce a field guide in English and Spanish.

EMRO

Risk communication was recognized as a key area that requires support and capacity building. EMRO through the IHR Department conducted an assessment of the IHR core capacities and organized a regional workshop in order to assess the needs for capacity building. During the workshop several recommendations were suggested to strengthen risk communication including building capacity of national focal points of IHR and be able to:

- conduct comprehensive IHR awareness and advocacy activities at all levels (risk detection and communication, joint response and emergency planning and preparedness)

- develop/strengthen national risk communication strategies

- establish coordination with other sectors.

Internal discussion is being held to collaborate and agree on a framework to further expand training opportunity in the area of risk communication

EURO

Central Asia: sub regional training workshop

This workshop held in Ashkabad, Turkmenistan from 29 November to 2 December 2011, was a planned follow-up to the outcomes of the Central Asia sub regional IHR core capacity meeting held in Tashkent, Uzbekistan spring 2011. Both the workshop and the meeting were jointly organized by WHO EURO and WHO HQ. This was the first risk communication workshop held in the sub region, and for the five participating countries Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. The overall purpose of the training workshop was to support the IHR implementation process and core capacity development in the participating countries as well as provide inputs for strengthening risk communication structures, communication channels and coordination mechanisms to respond to public health emergencies. It also acted as a platform for exchange of best practices and lessons learned in risk communication among the participating countries. About 30 persons participated representing all the participating Member States, UN agencies as well as regional public health institutions.

SEARO and WPRO Workshop on risk communications for public health emergencies

This workshop was organized by SEARO and WPRO and held in Manila, Philippines in November 2011. Risk communication focal points from 19 countries participated to: share and reflect on national experiences from past health emergencies; distill lessons learnt and best practice; and develop work plans for national and regional capacity development in line with the Asia Pacific Strategy for Emerging Diseases (APSED 2010).

The participants concluded that health emergency communications is a fundamental component in managing public health emergencies and in ensuring a sense of trust during times of uncertainty and needs to be institutionalized. As part of the International Health Regulations core capacity requirements, participants agreed that developing sustainable health emergency communications capacity is essential within the Ministry of Health. Suggestions and recommendations from the workshop are to be incorporated into the APSED work plan on risk communications.



Human Resources

Strengthening the skills and competencies of public health personnel is critical to the sustainment of public health surveillance and response at all levels of the health system and the effective implementation of the IHR.

Country requirements

Through the revised IHR, it is requested that all Member States have the capacity to detect and report events that may constitute a potential public health emergency of international concern. Sufficient human resources are key to achieve this goal.

States Parties are required to have the sufficient human resources available to implement IHR core capacity requirements. This includes the identification of a unit responsible for the development of human resource capacity including for the IHR. Countries are advised to conduct a needs assessment to identify gaps in human resources and training to meet IHR requirements and develop a workforce or training plan that includes human resource requirements for IHR. Countries should also develop a strategy or plan to access field epidemiology training for one year or more in-country, regionally or internationally. Countries are also encouraged to allocate a specific programme and budget to train workforce for IHR-relevant hazards.

WHO commitments

Strengthening the public health personnel through development of appropriate knowledge, skills and competencies is critical for effective implementation of the IHR. Development of human resources

should enable sustainable practice of public health surveillance and response at all levels of the health system. Although being cross-cutting by nature, human resources have therefore been defined as one of the eight essential capacities that States Parties need to strengthen to achieve compliance with IHR requirements.

General status in countries

For 2011, 150 Member States have done a self assessment, which shows a global average score of 46% of reaching the requirements of human resources. If we break the scores down to average by WHO region, we find the following results: Africa: 33%, the Americas: 58%, the Eastern Mediterranean: 55%, Europe: 35%, South-East Asia: 56% and the Western Pacific: 61%. Whereas 58.3% of the respondent Member States declare to have a strategy to access field epidemiology training (one year or more) in-country, regionally or internationally, only 40.9% confirm to having a workforce development or training plan that includes human resource requirements for IHR.

HIGHLIGHTS

The development of tools and strategies to support the reinforcement of human resources is a responsibility of every technical team in the Department. One team in the department however, has a specific expertise in HR development and training and provides support as required to the technical teams by giving guidance, developing tools as well as designing and implementing courses (i.e. highlighted IHR i-course).

The work of the Department regarding HR development and training can be seen along four axes:

01. Development of generic curricula and/or training materials

Generic curricula are often referred to as training toolkit or packages and consist of a collection of files to build a training module or course. All components can be modified to fit as much as possible the needs and the context of the training course (i.e. language). Training materials can be designed for face-to-face training or e-learning.

Examples of projects:

- **Laboratory Quality Management Systems: development of a training toolkit**
→ www.who.int/ihr/training/laboratory_quality/en/
- **SURVAC- project: design of generic course on surveillance for professionals at intermediary and peripheral levels** (see p.22)
- **Ship Sanitation Certificates: design of a training toolkit** (see p.42)
- **Infectious substances shipping training: design of a course for shippers** (see p.39)
- **Biostatistic CD-ROM for self learning** (see p.24)

02. Organization of specific courses

These activities target a specific group of trainees at a specific time and place. The courses are often organized in collaboration with external institutions and sometimes operated through them. Some of these courses later lead to the development of generic curricula.

Examples of projects:

- **IHR implementation course** (see p.35)

- **Leadership and management for laboratory directors** (see p.38)
- **Biorisk management** (see p.25)
- **Table top simulation exercises** (see p.15)

03. Partnerships and networks

The activities aim at pooling resources and efforts from different institutions for the development and implementation of HR development and training strategies and tools.

Examples of projects:

- **Participation in the Third Influenza Training Network meeting: lessons learned on capacity building during pandemic influenza** (4-8 April 2011)
- **Support to TEPHINET** (see p.24)

04. Guidance and support for strategy development

Providing guidance and support for developing HR strengthening and training strategies in relevant areas of work; i.e. definition of key functions and related professional categories; development/promotion of competency frameworks for those categories; inventory of existing resources and planning for needed workforce; assessment of pre-service and in-service training needs; identification of education and training resources; etc.

Examples of projects:

- **Epidemiological surveillance: evaluation of training needs in Morocco** (see p.24)
- **Ship inspection: development of a competency framework for ship inspection and delivery of ship sanitation certificates** (see p.42)
- **Risk Communication: development of competency framework**

IHR implementation course

The IHR implementation course aims to strengthen critical human resources engaged to set-up and manage systems for securing global public health under the IHR implementation framework, as well as to develop communication capacities for efficient international collaboration. This on-the-job training targets public health professionals, mainly belonging to National IHR Focal Points, but also professionals from other related sectors from national or international organizations, in the public and private sectors.

The third global IHR implementation course, which started in 2011 enrolled 37 participants from all the WHO regions. The course is operated by the HR development and training team, in collaboration with the University of Pretoria, South Africa, Georgetown University Law Center, USA, the University of Geneva, Switzerland and Institut Bioforce Développement, France. During all three IHR i-courses 89 public health professionals have been trained, coming from 59 different Member States from all the six WHO regions.

A post-training evaluation of the first and second IHR i-courses was conducted during 2011 showing that the course is valuable to the students. The participants report that in relation to their day-to-day work, the course content was relevant to their work and has given them a global understanding of IHR, allowing them to be more confident when dealing with the topic. Most competencies learned have been put into practice in their daily work and material from the course re-used. Being able to exchange with peers during and after the course is underlined as especially valuable.

The IHR i-course is now being adapted for use both at national and regional levels. The first regional adaptation will be for Russian speaking countries, and planning has started in collaboration with EURO. The needs analysis will be carried out in Spring 2012 after the end of the 3rd global course, together with the identification of collaborating institutions for design and delivery.

Based on the model of the global "IHR Implementation Course", the course is currently being adapted to the national level in Indonesia, targeting specifically port health staff and surveillance staff at regional level. Other Member States have expressed interest in adapting the course to their needs, and discussions are ongoing.



Laboratory

Laboratory services are part of every phase of alert and response, including detection, investigation and response, with laboratory analysis of samples performed either domestically or through Collaborating Centres. States Parties need to establish mechanisms that assure the reliable and timely laboratory identification of infectious agents and other hazards likely to cause public health emergencies of national and international concern, including shipment of specimens to the appropriate laboratories if necessary. Laboratory quality systems ensure the generation of accurate and reliable results and are the keystone of confidence in laboratory results. During disease outbreaks, laboratories are at the very heart of the public health investigation.

Country requirements

Through the revised IHR, WHO requests that all Member States have the capacity to detect and report events that may constitute a potential public health emergency of international concern (PHEIC). This implies accurate and sufficiently detailed laboratory results, produced either domestically or through Collaborating Centres. States Parties are advised to have established policies and strategic plans to improve the national laboratory system and ensure essential public health functions of laboratories. Laboratory diagnostic and confirmatory capacity must be established, and laboratory services available to test for priority health threats. Quality of the laboratory testing should be ensured by the compliance with national or internationally recognized standards. There must be a system in place for collection, packaging and transportation of clinical specimens across the national laboratory network and beyond. Good biorisk management practices must be in place to guarantee laboratory biosafety and biosecurity.

WHO commitments

Under the IHR, WHO is committed to support Member States in the acquisition and maintenance of core laboratory capacity for responding to public health emergencies, including management of biorisk in laboratory and transport environments.

General status in countries

A self assessment done by end of 2011 shows a global average score of 71% of reaching the requirements of laboratory. If we break the scores down to average by WHO region, we find the following results: Africa: 65%, the Americas: 74%, the Eastern Mediterranean: 71%, Europe: 73%, South-East Asia: 67% and the Western Pacific: 75%. It is important to notice, that these data are self reported, and might be inaccurate. This underlines the importance for WHO to keep working with the countries in order to refine and improve the accuracy of the information reported.

HIGHLIGHTS**AFRO and EMRO:
Microbiology External Quality
Assessment Programmes**

In Africa, as well as in the Eastern Mediterranean Region communicable diseases constitute a considerable public health problem, and outbreaks pose prominent health security threats. The economic and social impact of these diseases is enormous. National public health laboratories should generate data to guide disease prevention, control and surveillance activities. However in many countries, reliable confirmation of suspected infectious diseases is hampered by lack of standardized methods among other factors.

The African External Quality Assessment programme was launched in 2002 by WHO and the National Institute for Communicable Diseases, based on proficiency testing of African national public health microbiology laboratories that routinely investigate epidemic-prone and other communicable diseases. Participation in this programme increased from 30 to 46 countries in the African Region between 2002 and 2011 and the number of enrolled laboratories grew from 39 to 93. The external quality assessment programme in Africa assesses national public health laboratories' proficiencies around detection of priority diseases of public health importance: malaria, tuberculosis, plague, enteric and meningitis bacterial diseases.

The WHO Microbiology EQA programme in the Eastern Mediterranean Region was similarly launched in 2005. The programme covers bacteriology: enteric and meningeal pathogens and antibiotic susceptibility testing, parasitology: stool parasites, leishmaniasis, mycology and viral serology. The technical organization of the programme is done by two Eastern Mediterranean Region country reference laboratories: the Health Reference Laboratory of Iran and the Oman Central Public Health Laboratory. Four referee laboratories from the African, European and the Eastern Mediterranean Regions provide guidance and external quality control of materials sent to participating laboratories. The number of participating laboratories is now extended to 23 in 19 Eastern Mediterranean countries.

**Regional approaches to strengthening
national laboratory systems**

Under the IHR, countries are obliged to rapidly detect and report to the international community any event or outbreak of international concern, and a quality laboratory system is a key factor to ensure timely diagnosis of epidemic-prone diseases. Many countries still lack a national framework to run and strengthen their national laboratory system. To avoid fragmentation and strengthen national laboratory services, the WHO office in Lyon has cooperated actively with WHO regions to initiate and reinforce work in this area. The Laboratory Quality Management System Training Toolkit is intended to provide comprehensive materials that will allow for designing and organizing training workshops for all stakeholders in health laboratory processes, from management, to administration, to bench-work laboratorians. During 2011 the handbook of this toolkit was finalized, and is now available both electronically on the IHR web site as well as in hard copy. A French version of the training toolkit was also made available during 2011 and a handbook is under way. A Russian version of the toolkit will be made available in 2012.

Global Laboratory Directory - GLaD

The scope of developing a Global Laboratory Networks Directory (GLaD) was initially to map and connect laboratory networks that can be mobilized to support epidemic-prone diseases alert and response. The initial project had three main parts: GLaDMap listing and mapping networks, GLaDResource offering tools and documents to manage networks and GLaDSupport linking networks and sharing information. An international consultation between the stakeholders was organized in December 2011 to revisit the project, identify priority areas of work and suggest alternative approaches.

**The Leadership and Management Training
Course for Laboratory Directors**

The WHO office in Lyon organized a meeting in May 2011 with potential partner institutions and technical experts to discuss the concept of a leadership and management training course for laboratory directors and other senior staff. The objectives were to raise awareness of the project and to enable collective discussion of the expected competencies of laboratory directors in terms of leadership and management skills;

and to explore ways of developing and implementing an appropriate training course to address these needs based on a draft terms of reference. The outcomes of the meeting included defining the leadership and management skill competencies for laboratory directors to be achieved by the training course; recommendations on how these competencies would be achieved in terms of type of training programme(s) and content of the programme(s); and input on a draft Terms of Reference for the training programme.

The PulseNet Middle East Network

PulseNet International Network is an early warning system for outbreaks of foodborne disease which includes a network of national and regional laboratory networks dedicated to tracking foodborne infections and information sharing worldwide. As a member of PulseNet International, PulseNet Middle East is a regional network of public health and food regulatory agency laboratories that use molecular typing methods for rapid analysis and comparison of DNA "fingerprints" of bacteria for better detection and investigation of outbreaks of foodborne illnesses. During 2011 the fifth strategic planning consultation on PulseNet Middle East was organized in Muscat, Oman. Microbiologists and epidemiologists from ten Eastern Mediterranean countries participated in the consultation to discuss progress, challenges and barriers encountered in implementing activities and to develop countries' action plans for 2012. All member laboratories are now certified by the US Naval Medical Research Unit 3 (NAMRU-3) in Cairo, Egypt for BioNumerics software analysis and several laboratories have already obtained certification for PFGE of Salmonella and Shigella pathogens.

The WHO Laboratory Twinning Initiative

The International Laboratory Twinning Initiative aims to contribute to the strengthening of public health laboratories which often have limited resources. The project twins laboratories with scarce resources with more developed laboratories, working on specific collaborative projects, based on an assessment of needs and mutually agreed priorities. Through laboratory twinning, reference laboratories from specialized institutions help resource-limited laboratories strengthen their diagnostic capability and scientific expertise so they can build their own capacities at the national level. The funding granted for laboratory twinning is limited, and often used as seed money to get the project started. A number of the twinned laboratories have in addition been able to attract additional funding from other donors to prolong and expand the project. Around 50 laboratories have participated in the laboratory twinning initiative since it started in 2006, and one has been able to obtain ISO 15189 accreditation.

**WHO transport of infectious substances training and
certification (ISST)**

The number of competent shippers of infectious substances keeps growing. In 2011, a total of 164 shippers of infectious substances has been certified. Face-to-face infectious substances shipping training courses were organized in many places: Benin, Brazil, Ghana, the Maldives, Mauritius,

Tanzania, and Trinidad and Tobago. The courses were held in several languages, including English, French, Spanish and Portuguese. The electronic refresher course is approaching completion.

EU project on Biorisk Management

At the end of 2011, the Joint Action entitled Support of WHO activities in the area of biosafety and biosecurity in the framework of the European Union Strategy against the proliferation of Weapons of Mass Destruction was completed. With the support of the EU, the series of regional and national outreach workshops on biorisk management for various regions in a variety of venues could be continued. Workshops were organized in Brazil, Ghana and the Maldives. Biorisk management needs assessment visits were organized in Bolivia, Indonesia and Sri Lanka.

WHO Biorisk Management Advanced Trainer Programme

Further sessions of this training course for trainers was arranged in 2011. Read more on page 25.

Support to other WHO programmes and external partners

Collaborations with the Stop Tuberculosis Programme for the development of guidance on biosafety related to tuberculosis laboratory diagnostic procedures is ongoing. For the containment of variola virus, the new protocol for the regular biosafety assessment visits of the two WHO repositories in the Russian Federation and the United States of America is being reviewed, in preparation for the next visits planned in 2012.

Human-animal interface: Strengthening laboratory capacities

The IDENTIFY project, which is part of the USAID-funded Emerging Pandemic Threats programme is being jointly implemented by the Food and Agriculture Organization of the United Nations, the World Organisation for Animal Health, and WHO. The project aims to strengthen laboratory capacity to detect known pathogens responsible for disease in humans and animals in three geographic regions determined by USAID to be at higher risk of emergence of novel pathogens: the Congo Basin in Central Africa, Southeast Asia and selected countries in South Asia. Most of the activities supported by WHO are being implemented by the relevant regional and country offices. As the regional offices have already established their own platforms for capacity-building, and since the objectives of those platforms in terms of laboratory capacity are fully consistent with IDENTIFY, it has been decided that IDENTIFY will contribute to, and be implemented as, part of these existing platforms. This secures WHO presenting a single message on capacity building to Member States. IDENTIFY commenced activities in Africa in 2010 and in 2011, the project was introduced to stakeholders in Southeast Asia at a number of meetings. A joint meeting of public health and animal health counterparts was held in Kuala Lumpur in October 2011. The project is seen as providing a strong impetus for closer cooperation between the public health and animal health sectors in the Region.

Points of Entry

The objective of implementing the IHR requirements at points of entry, is to prevent and contain international spread of diseases, and provide response to events commensurate to public health risks related to international travel and transport. The IHR core capacities at points of entry aims to ensure that conveyances travelling internationally and facilities used by travellers at points of entry are maintained in a sanitary condition and kept free of sources of infection or contamination and if public health events occurs, they are detected early and contained in a timely and adequate manner. This is done by maintaining routine health control measures and developing public health response capacity at designated airports, ports and ground crossings and for travel and transport operations. This includes possible coordinated multisectoral interventions at points of entry facilities and with travellers, conveyances, cargo, goods and postal parcels, as well as specific control measures for vectors and reservoirs.

Country requirements

Through the revised IHR, all States Parties shall designate the international airports and ports, and where justified for public health reasons, may designate ground crossings, which will develop specific capacities for application of the public health measures required to manage a variety of public health risks and related events. Also State Parties shall identify competent authorities for its application at each designated point of entry. Countries with international shipping traffic, should also identify ports authorized to inspect ships and issue ship sanitation certificates, according to IHR model and requirements and this information should be sent to WHO for worldwide dissemination, especially among shipping industry and port health authorities. Relevant national legislation, regulations, administrative acts, protocols, operational procedures

and other government instruments should be updated as needed. State Parties shall also be capable to furnish to WHO, as far as practicable, when requested in response to specific potential public health risk, relevant data concerning sources of infection and contamination, including vector and reservoirs, at its points of entry, which could result in international disease spread.

WHO commitments

The implementation of IHR at points of entry requires a multisectoral approach and WHO leadership as well as advocacy, networking and coordination with international organizations and other stakeholders involved in public health, travel and transport. It seeks global harmonization of IHR requirements and WHO

guidance tools with other international instruments and operational procedures for conveyance operators and points of entry management. WHO is committed to promote international cooperation with other sectors, as well to support countries in their work to comply with the core capacities of points of entry. In close cooperation with the regional offices WHO provides technical advice, training tools and support for the planning, assessment, development and maintenance of core capacities for routine preventive and control measures and public health emergency contingency plan development at designated points of entry. This involves the implementation of ship inspection and issuance of the new ship sanitation certificates, introduced by the IHR 2005, as well as the dissemination of technical guidance and IHR related information, such as updating the list of authorized ports, to issue ship sanitation certificates, and promoting and supporting the specialized network on public health and ports, airports and ground crossings, for instance PAGNet.

General status in countries

A self assessment performed by Member States at the end of December 2011 shows a global average score of 59% of reaching the overall national requirements of points of entry (communication and coordination, routine capacities and capacities to respond to public health events). If we break the scores down to average by WHO region, we find the following results: Africa: 48%, The Americas: 55%, the Eastern Mediterranean: 58%, Europe: 67%, South-East Asia: 67% and the Western Pacific: 58%.

HIGHLIGHTS

Core Capacity assessment

During 2011, WHO regional and country offices supported several core capacity assessments in countries, and the IHR Department participated in nine missions; to Barbados, Bhutan, China, Egypt, Equatorial Guinea, Lebanon, Saudi Arabia, South Africa, and Turkey. In addition two regional meetings were held in Manila and for Gulf Cooperation Council countries in Riyadh, Saudi Arabia to support work at regional offices. Workshops were also held in Spain and Uzbekistan.

Coordination and cooperation among Public Health and International Civil Aviation Sector

The cooperation with the aviation sector is increasing and main partners are the UN Agency International Civil Aviation Organization (ICAO) and industry associations, such as the International Air Transport Association (IATA) and the Airports Council International (ACI). WHO and ICAO have been working together in the harmonization of IHR requirements with international standards and recommendations and technical guidance and procedures related to public health and air travel, such as for the development and implementation of preparedness plans for public health emergencies involving air transport.

CAPSCA Project

— Cooperative Agreement for Preventing the Spread of Communicable diseases through Air travel — under the leadership of the ICAO and in coordination with WHO and other partners is a global cooperation with the civil aviation sector. This project aims to help reduce the risk of serious spread of communicable diseases through air travel by means of cooperative arrangements between participating states. This involves seminars, workshops and assistance visits by aviation and public health experts for the development and implementation of contingency plans at airports. WHO supports CAPSCA while assisting states to implement public health emergency response plans for air transport as part of the IHR core capacity requirements for points of entry. This Project was first implemented in Asia-Pacific (2006) and Africa (2007), while the Region of the Americas was included in 2010. The first meetings for the European and Eastern Mediterranean Regions were held in 2011.

Public health emergency response in air travel: field exercise in Spain

This emergency simulation exercise was undertaken by WHO in close collaboration with the Ministry of Health, Spain, joined by observers from ICAO Europe and public health experts from all WHO regions. Read more about this on page 27.

Ship Sanitation

EU SHIPSAN

WHO collaborated closely with the EU SHIPSAN project, which was completed in October 2011. It developed an integrated programme on sanitation and control of communicable diseases on passenger ships including a training programme and a communication network. The last phase of this initiative, the EU SHIPSAN TRAINET developed a European manual for hygiene standards and communicable diseases surveillance on passenger ships. Training material was developed and training given to port health officers in EU and EUROMED countries, as well as managers and crew members of passenger shipping lines. During 2011, pilot hygiene inspections were conducted on passenger ships sailing in EU waters based on the European manual for hygiene standards and communicable diseases surveillance on passenger ships. In parallel, the project developed and operated a communication network for sharing information related to public health events among EU competent authorities, used during real public health events as well as large scale pilot exercises. An information system for recording Ship Sanitation Control Exemption Certificates/Ship Sanitation Control Certificates was developed based on the WHO Handbook for inspection of ships and issuance of ship sanitation certificates and there has been an increasing growing interest by many port health authorities, both within and outside the EU, in using this database. EU is building on the results and experiences from this project in their priorities for 2012 under the EU Public Health Programme.

Contact tracing after exposure to infectious diseases in public ground transport

EU REACT Project

This project supports assessment and development of core capacities and tools in response to emerging infectious disease and addresses some issues related to IHR implementation and specifically the package 6, aimed to produce a risk assessment profile for contact tracing related to exposed ground transport passengers. An initial proposal for a disease-specific risk assessment tool has been developed to support decision making whether or not to initiate contact tracing after exposure to infectious diseases in public ground transport, with participation of WHO experts. This tool still calls for further development and validation for reaching consensus in its use.

Public health emergency response to radionuclear event

Radionuclear accident - earthquake Japan

WHO continues to strengthen its cooperation with other international and intergovernmental organizations. This was particularly important during the Fukushima nuclear emergency in Japan, during which the Organization collaborated extensively with international partners, and with the transport sector (see page 49).

Specialized network on public health and ports, airports and ground crossing - PAGNet

PAGNet is a network that brings together academic institutions and national authorities on the matter of public health, travel and transport related issues, responsible for implementing public health related activities at ports, airports and ground crossings. This includes helping preparedness for response to health emergencies affecting international travel and transport. PAGNet aims to contribute to protecting the health of populations and the prevention, detection and control of international spread of disease and its agents through international travel and transport. PAGNet kicked off its pilot phase in July, 2010, bringing together 127 members from 43 countries till now. It provides a global platform for information sharing, experience and lessons learned exchanging, advancing knowledge of international travel and transport related public health issue, particular during public health emergency, which in turn adds values to strengthening IHR implementation at points of entry. The 3rd PAGNet meeting was arranged in 2011, attended by 57 participants from WHO regional offices, international organizations related to international travel and transport as well as from national institutions. PAGNet pilot phase web site: → www.pagnet.info

List of authorized ports

All States Parties to the IHR are required to send to the World Health Organization a list of all ports authorized by the State Party including authorized ports in all of its applicable administrative areas and territories to issue the following Ship Sanitation Certifi-

cates: ship sanitation control exemption certificates, ship sanitation control certificates, and, extensions to the ship sanitation certificates. This list of authorized ports was updated on a weekly basis during 2011 and the number of ports is increasing year by year. At the end of 2011, the list included around 1600 ports in 78 countries. Work is ongoing to launch a searchable database for all points of entry in 2012.

Handbook for inspection of ships and issuance of ship sanitation certificates

This handbook, published in 2011, is intended to be used as reference material for port health officers, regulators, ship operators and other competent authorities in charge of implementing the IHR (2005) at ports and on ships. The handbook is based on the IHR (2005) provisions regarding ship inspection and issue of ship sanitation certificates.

Guide to ship sanitation - third edition

This guide is the global reference on health requirements for ship construction and operation. The primary aim of the revised guide is to present the public health significance of ships in terms of disease and to highlight the importance of applying appropriate control measures. The guide is intended to be used as a basis for the development of national approaches to controlling the hazards that may be encountered on ships, as well as providing a framework for policy-making and local decision-making. The guide may also be used as reference material for regulators, ship operators and ship builders, as well as a checklist for understanding and assessing the potential health impacts of projects involving the design of ships.

Review of activities 2011

WHO

Global IHR

Commitments

WHO Global IHR Commitments

As required by IHR (2005), WHO is required to develop and maintain a global framework to detect, assess and provide a coordinated response to events that may constitute a public health emergency of international concern. The framework is based on strong national public health systems and capacities and an effective international system for coordinated response. This international system must be able to continuously assess the global context of public health risks (global risk assessment) and be prepared to respond rapidly to unexpected, internationally-spreading events and to contain specific public health threats.

HIGHLIGHTS

Decision instrument: Annex 2

When assessing public health events for notification to WHO, States Parties are required to use the decision instrument contained in Annex 2 of the Regulations. The purpose of the WHO guidance on Annex 2 is to help national authorities to use the decision instrument. The guidance document is targeted to National IHR Focal Points and others responsible for assessing the need to notify WHO of public health events under the Regulations.

A summary of the studies on the evaluation of the functioning of Annex 2 of the IHR was provided to the first IHR Review Committee for consideration. The aggregated results helped the Review Committee in formulating recommendations to guide WHO in providing support to States Parties in implementing the IHR event assessment and notification process. These recommendations are reflected in the Review Committee's report to the 64th World Health Assembly. In addition, results about the reliability and validity of

the notification assessment process utilizing Annex 2 have been published in the WHO Bulletin. Moreover, information about the level of awareness and knowledge among NFPs of Annex 2, the practical use of the tool, their activities taken to implement it, and its perceived usefulness and user-friendliness is soon to be published in the peer-reviewed journal *Globalization and Health*.

IHR Roster of experts

The IHR Roster of Experts, required by the IHR to provide a pool of expertise to serve on IHR committees, was first established in 2007 and in 2011 new procedures were developed and implemented for the renewal or discontinuation of those roster experts whose initial four year term had expired. In follow-up of the recommendations of the IHR Review Committee, the areas of expertise represented in the roster are being reviewed and expanded so that the roster can offer the best possible selections when setting up an Emergency or Review Committee. Similarly the procedures to screen for potential conflicts of interests have been

revised to assist the earlier identification of such potential conflicts during the establishment of any IHR committee.

IHR Emergency Committee

The International Health Regulations oblige WHO to establish an emergency committee that shall provide its views on whether an event constitutes a public health emergency of international concern; the termination of a public health emergency of international concern; and the proposed issuance, modification, extension or termination of temporary recommendations. The Emergency Committee shall be composed of experts selected from the IHR expert roster and, when appropriate, other expert advisory panels of the Organization. No emergency committee was convened during 2011.

IHR Review Committee

The International Health Regulations have a provision that calls for a review of their functioning no later than five years after their entry into force. In 2008, the World Health Assembly decided that this first review should be undertaken by the Sixty-third World Health Assembly in May 2010. This provision and this decision were in place prior to the onset of the 2009 H1N1 influenza pandemic, and, during the January 2010 session of the Executive Board, it was decided that the scheduled IHR review should also be used to assess the international response to the influenza pandemic.

The 2010 IHR Activity Report described the convening and work of this IHR Review Committee established to provide an external evaluation of the functioning of the IHR and global responses to the Influenza pandemic of 2009¹. The fourth and final meeting of the IHR Review Committee took place in Geneva with a plenary session on 28 March² followed by deliberative meetings of the Committee members to finalize their report. This final report³ was transmitted to the World Health Assembly by the WHO Director-General where Member States endorsed the Committee's work including its findings and recommendations. Key findings of the IHR Review Committee were: i) the IHR helped better prepare the world to cope with public health emergencies; ii) WHO

performed well in many ways during the pandemic, confronted systemic difficulties and demonstrated some shortcomings; iii) the world is currently ill-prepared to respond to a severe pandemic or to any other public health emergency on a similarly global and threatening scale. The recommendations were presented to the Assembly by the Chairman of the Review Committee, Professor Harvey Fineberg and are summarized in the box. These recommendations provide an important focus for WHO activities in 2011 and planning for the new biennium 2012-2013.

Summary of IHR Review Committee Recommendations:

a. For the IHR

- Accelerate implementation of core capacities required by the IHR
- Enhance the WHO Event Information Site
- Reinforce evidence-based decisions on traffic and trade
- Ensure necessary authority and resources for all National IHR Focal Points

b. For WHO pandemic preparedness

- Strengthen WHO's internal capacity for sustained response
- Improve practices for appointment of an emergency committee
- Revise pandemic preparedness guidance
- Develop and apply measures to assess severity
- Streamline management of guidance documents
- Develop and implement a strategic, organization wide communications policy
- Encourage advance agreements for vaccine distribution and delivery

c. For the global response

- Establish a more extensive global, public health reserve workforce
- Create a contingency fund for public health emergencies
- Reach agreement on the sharing of viruses and access to vaccines and other benefits
- Pursue a comprehensive influenza research and evaluation programme

1. 2010 IHR Activity Report pages 5-7

2. www.who.int/ihr/4th_meeting/en/index.html

3. http://apps.who.int/gb/ebwha/pdf_files/WHA64/A64_10-en.pdf

Global partnerships

WHO continues to strengthen its cooperation with other international and intergovernmental organizations. This was particularly important during the Fukushima nuclear emergency in Japan, during which the Organization collaborated directly with the IAEA, while also participating as a member of the Inter-Agency Committee on Radiological and Nuclear Emergencies, a coordinating body for the existing international arrangements for preparedness and response to radiological and nuclear emergencies. The nuclear event also stimulated extensive collaboration with international partners in the transport sector (see article below). Progress is also being made on WHO's collaboration with other organizations and partners to tackle health risks at the human-animal-environmental interface. These efforts include the tripartite arrangements with The UN Food and Agriculture Organization (FAO) and The World Organisation for Animal Health (OIE).

Public health emergency response to radio nuclear event

As part of the response efforts to the earthquake and nuclear accidents in Japan in March 2011, several technical areas at WHO HQ, in coordination with WHO West Pacific Regional Office and its global network of experts worked in close collaboration with the Japanese authorities and other International Agencies and stakeholders, at the highest level of the organizations, to gather and disseminate updated information and best risk assessment results. The work of WHO is supported by a global network comprising more than 40 specialized institutions in radiation emergency medicine. A specific transportation working group supported by WHO was organized with different agencies and chaired by the International Civil Aviation Organization (ICAO) arranging weekly conference calls involving ICAO, IAEA, WHO, IMO, WMO, UNWTO, ILO, IATA, ACI. The group exchanged updated information from different sources and produced harmonized notes for public information to websites and press. That collaborative response and 'one voice' public information message with concerned United Nations agencies and travel and transport industry proved successful in reassuring the travelling public and were very important during the event, since the risk perception from different sectors and countries were fear factor and key for overreaction. The existing networks PAGNet and CAPSCA (see more information on pages 42-43) helped in informing and receiving good information from national authorities. Two countries, Canada and Germany issued specific technical advice for dealing with ships and decontamination procedures.



Future Directions

Future Directions

The uniting of the IHR Coordination and Global Alert and Response Departments will ensure better coordination between building the necessary public health core capacities at national level, and global response to public health events that may constitute a public health emergency of international concern.

In the year ahead, GCR will continue to work with the regional offices to assist countries — particularly those who are most vulnerable — to acquire and strengthen the IHR core public health capacities, which are the cornerstone of a strong national public health system. This work is informed by the analysis and recommendations of the External Review Committee, which serves to guide WHO in further strengthening the IHR framework so that it may better protect the world against health events we may face in the 21st century.

However, WHO cannot fulfill this ambition alone; the Organization will continue to work with its international, multi-sectoral network of partners and will strive to engage more partners in its mission to achieve global health security.



Annexes

IHR Publications and Reference Tools

01. General IHR guidance and monitoring tools

Checklist and indicators for monitoring progress in the development of IHR core capacities in States Parties

The revised version of the IHR monitoring framework has been released and is available online. This reference document proposes a framework and processes for States Parties to monitor the development of their core capacities at the national, intermediate and local community/primary response.

→ www.who.int/ihr/IHR_Monitoring_Framework_Checklist_and_Indicators.pdf

IHR key publications 2007-2011

A new leaflet gives an overview of key IHR publications and reference tools developed from 2007–2011 by the IHR Coordination Department and other WHO programmes that support IHR implementation in countries. Many of these tools were developed in partnership with collaborating organizations. The leaflet gives overview of all the language versions of the documents.

→ www.who.int/ihr/publications/ihr_key_publications/en/index.html

IHR core capacities: an introduction in 13 flashcards

This interactive CD-ROM was designed to give an overview of the 13 core capacity requirements laid out in the IHR. Structured as a quiz, the flashcards provide basic information about the capacities as well as links to tools and technical guidance to support IHR implementation. To obtain a copy contact → ihrinfo@who.int

02. Laboratory, biosafety and biosecurity

Laboratory quality management system handbook

This Laboratory quality management system handbook is intended to provide a comprehensive reference on laboratory quality management system for all stakeholders in health laboratory processes from management to administration to bench-work laboratorians. It covers topics that are essential for quality management of a public health or clinical laboratory. They are based on both ISO 15189 and CLSI GP26-A3 documents. The handbook is linked to the training toolkit on laboratory quality management system. It is available both in print and electronic versions.

→ www.who.int/ihr/publications/lqms/en/index.html

Laboratory quality management system training toolkit: French version

Originally released in English in 2010, a French version of this toolkit is now available. It aims to train laboratory managers, senior biologists, and technologists in quality management systems as a step towards obtaining international recognition, a step that all countries should take. This training toolkit is intended to provide comprehensive materials that will allow for designing and organizing training workshops for all stakeholders in health laboratory processes, from management, to administration, to bench-work laboratorians. The toolkit was developed through collaboration between WHO, the US Centers for Disease Control and Prevention (CDC) and the Clinical and Laboratory Standards Institute (CLSI).

→ www.who.int/ihr/training/laboratory_quality/fr/index.html

Infectious substances shipping training - a course for shippers: Revised edition

A revised edition of the Infectious substances shipping training - a course for shippers is now available on the IHR web site. The training is available in English, French, Spanish, as well as Portuguese. WHO contributes to the development of United Nations Model Regulations for the transport of infectious substances. These Model Regulations are the basis for international and national regulations addressing transport by air, road, rail, sea. To ensure that this information is available to shippers of in-

fectious substances, WHO has developed a training course. The course is generally given in a classroom setting, and participants have an opportunity to practice package assembly and completion of shipping documentation. The course is divided into modules addressing the classification, documentation, marking, labelling, packaging of infectious substances, and the preparation of shipments requiring the use of dry ice. The material is available to trainers wishing to provide training courses for shippers of infectious substances.

→ www.who.int/ihr/i_s_shipping_training/en/

Guidance on regulations for the transport of infectious substances: Spanish version

The Guidance on regulations for the transport of infectious substances 2011-2012 (Applicable as from 1 January 2011) already available in English and French, is now available in Spanish. The document provides information for identifying, classifying, marking, labeling, packaging, documenting and refrigerating infectious substances for transportation and ensuring their safe delivery. It also provides practical guidance to facilitate compliance with applicable international regulations for the transport of infectious substances by all modes of transport, both nationally and internationally, and include the changes that apply from 1 January 2011 and replaces the document issued by the World Health Organization (WHO) in 2008 (document WHO/CDS/EPR/2008.10). This publication, however, does not replace national and international transport regulations.

→ www.who.int/ihr/publications/who_hse_ihr_20100801/es/index.html

03. Ports, airports and groundcrossings

Handbook for inspection of ships and issuance of ship sanitation certificates

The print version of this handbook was released in 2011. The handbook serves as a reference tool for port health officers, regulators, ship operators and other competent authorities in charge of implementing the IHR (2005) at ports and on ships. The handbook is based on the IHR (2005) provisions regarding ship inspection and issue of SSCs. They provide guidance for preparing and performing the inspection, completing the certificates and applying public health measures within the framework

of the IHR (2005). Print copies can be ordered by sending an e-mail to WHO Press at: → bookorders@who.int

04. Travel and health

International travel and health - 2011 edition

The yearly publication, International travel and health, is a WHO bestseller. It covers all the main health risks to travelers and includes descriptions of the relevant infectious diseases, including causative agents, modes of transmission, clinical features, geographical distribution and prophylactic and preventive measures.

The 2011 edition includes a global revision of yellow fever risk as well as updates on malaria risk and prevention. It also provides information on infectious diseases and on all vaccine preventable diseases as well as on vaccines. The information for travellers with HIV/AIDS, has also been revised for the new edition.

The web pages of International travel and health, updated throughout the year, now features interactive disease distribution maps, and regular updates for travellers. *International travel and health* is available in print and online. → www.who.int/ith

Revised recommendations for yellow fever vaccination for international travellers

Continued reports of rare but serious adverse events associated with yellow fever vaccine and the changing epidemiology of the disease have highlighted the need to revisit criteria for the designation of areas where there is a risk of yellow fever virus activity, and to revise the vaccine recommendations for international travel. The recommendations of a working group of international experts convened by WHO have been published in the Weekly Epidemiological Record. These recommendations include criteria for the designation of yellow fever risk, specific changes to the classification of areas with risk for yellow fever virus transmission, and revised vaccination maps for international travel.

- **Weekly Epidemiological Record:** www.who.int/wer/2011/wer8637.pdf
- **WER:** www.who.int/wer/2011/wer8637.pdf
- **The Lancet:** www.lancet.com/journals/laninf/article/PIIS1473-3099%2811%2970147-5/fulltext
- **WHO International travel and Health, 2011 edition**
- **Country list:** www.who.int/ith/chapters/ith2011countrylist.pdf
- **Annex 1:** www.who.int/ith/chapters/ith2011annexs.pdf
- **Yellow fever map Africa:** gamapserver.who.int/mapLibrary/Files/Maps/ITH_YF_vaccination_africa.png
- **Yellow fever map Americas:** gamapserver.who.int/mapLibrary/Files/Maps/ITH_YF_vaccination_americas.png

Saudi Arabia - Hajj pilgrimage

Requirements and recommendations for entry visas for the Hajj seasons in 2011 have been published in the Weekly Epidemiological Record (WER).

05. Other training and self-learning tools

WHO training evaluation guide

Training is conducted throughout WHO, targeting both WHO staff members and external health professionals around the world. Yet the follow-up to this training remains a challenge. Evaluating the impact of training often seems second priority, even if donors, partners, participants, as well as the global community increasingly need to know if the training has been effective and made a difference. The WHO evaluation training guide is a document designed to encourage training designers and managers to plan and conduct evaluation. The guide was developed by WHO professionals based on their experiences in conducting and following up training outcomes. It is a work in progress and will be revised based on the feedback from the users of this guide.

Biostatistics: New CD-ROM for self-learning

A new version of a self-learning CD-ROM on biostatistics is now available. The main objective of the self-learning programme is to understand the purpose of biostatistics through realistic cases and to acquire basic biostatistics skills that can be applied to work. The target audiences are medical and biomedical students, laboratory specialists and other professionals who need to use or understand basic biostatistics. However, it may also be a helpful reminder to epidemiologists. This second version of the self-learning programme has been co-produced by WHO and the Agence de Médecine Préventive (AMP). It has been designed and developed in such a way that trainees can work independently using only the CD-ROM when no book or tutor is available. Trainees can solve the six problems with the resources provided in the CD-ROM through 142 knowledge sheets.

For further information about IHR guidance and reference tools contact:

→ ihrinfo@who.int

Collaborating institutions

Institution	Acronym	City	Country
• Academic Centre for Travel Medicine & Vaccines, Royal Free & University College Medical School, University College	RFUCMS	London	the United Kingdom
• African Biological Safety Association	AfBSA	Nairobi	Kenya
• African Centre for Integrated Laboratory Training	ACILT	Johannesburg	South Africa
• African Field Epidemiology Network	AFENET	Kampala	Uganda
• Agence Française de Développement	AFD	Paris	France
• Agency of Preventive Medicine	AMP	Paris	France
• Airports Council International	ACI	Geneva	Switzerland
• American Biological Safety Association*	ABSA	Mundelein	the USA
• American Society for Microbiology	ASM	Washington, DC	the USA
• Asian Pacific Biosafety Association	A-PBA	Singapore	Singapore
• Association française de normalisation	AFNOR	Paris	France
• Association of Public Health Laboratories	APHL	Washington, DC	the USA
• Association of UK Port Health Authorities	APHA	London	the United Kingdom
• Bill & Melinda Gates Foundation	B&MGF	Seattle	the USA
• Bioforce		Lyon	France
• Biological and Toxins Weapons Convention	BTWC	Geneva	Switzerland
• Canadian Field Epidemiology Program Public Health Agency of Canada	CFEP/ PHAC	Ottawa	Canada
• Carribean Epidemiology Centre	CAREC	Port-of-Spain	Trinidad and Tobago
• Center for Disease Control		Tehran	the Islamic Republic of Iran
• Centers for Disease Control and Prevention, USA	CDC	Atlanta	the USA
• Centers for Disease Control and Prevention Foundation, USA	CDCF	Atlanta	the USA
• Central Public Health Laboratory	CPHL	Muscat	Oman
• Centre Pasteur du Cameroun		Yaoundé	Cameroon
• City University		London	the United Kingdom
• Clinical and Laboratory Standards Institute	CLSI	Wayne	the USA
• Connecting Health Organizations for Regional Disease Surveillance	CHORDS	Washington	the USA
• Council of the European Union		Brussels	Belgium
• Cruise Line International Association, Inc.	CLIA	Fort Lauderdale	the USA
• Department of Health and Human Services	DHSS	Washington, DC	the USA
• Det Norske Veritas Foundation	DNV	Singapore	Singapore
• Emory University School of Medicine		Atlanta	the USA

ANNEXES

COLLABORATING INSTITUTIONS

Institution	Acronym	City	Country
• Epicentre		Paris	France
• European Biosafety Association*	EBSA	Frankfurt	Germany
• European Centre for Disease Prevention and Control	ECDC	Stockholm	Sweden
• European Commission	EC	Brussels	Belgium
• Fondation Mérieux		Lyon	France
• Food and Agriculture Organization of the United Nations	FAO	Rome	Italy
• French Food Safety Agency	AFSSA	Maisons-Alfort	France
• General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China	AQSIQ	Beijing	China
• Geneva University Hospitals, Department of Internal Medicine, Service for the prevention and control of infections	HUG	Geneva	Switzerland
• Geneva University, Medical School, Institute of Social and Preventive Medicine	UNIGE/ IMSP	Geneva	Switzerland
• Georgetown University Law Centre, O'Neill Institute for National and Global Health Law		Washington, DC	the USA
• Global Health Security Action Group Laboratory Network	GHSAG	Ottawa	Canada
• Global Health Security Initiative	GHSI	Washington, DC	the USA
• Hamburg Port Health Center		Hamburg	Germany
• Health Protection Agency	HPA	London	the United Kingdom
• Health Reference Laboratory		Tehran	the Islamic Republic of Iran
• Hôpital d'Instruction des Armées, Laveran	HIA	Marseille	France
• Hospices Civils de Lyon, Hôpital de la Croix-Rousse, Centre de Biologie Nord		Lyon	France
• Hospital for Tropical Diseases, Department of Clinical Parasitology	HTD	London	the United Kingdom
• Ingénieurs sans Frontières	ISF	Brussels	Belgium
• Institut de Médecine Tropicale du Service de Santé des Armées	IMTSSA	Marseille	France
• Institute for Public Health Surveillance	InVS	Saint-Maurice	France
• Institute of Public Health Research	IPHR	Tehran	the Islamic Republic of Iran
• Institute of Virology and Immunoprophylaxis	IVI	Mittelhäusern	Switzerland
• Institut Pasteur de Bangui		Bangui	Central African Republic
• International Air Transport Association	IATA	Geneva	Switzerland
• International Association of Independent Tanker Owners	INTERTANKO	London	the United Kingdom
• International Association of National Public Health Institutes	IANPHI	Atlanta	the USA
• International Centre for Diarrhoeal Disease Research	ICDDR	Dhaka	Bangladesh
• International Civil Aviation Organization	ICAO	Montreal	Canada
• International Council for the Life Sciences	ICLS	Washington, DC	the USA
• International Labour Organisation	ILO	Geneva	Switzerland
• International Maritime Organization	IMO	London	the United Kingdom
• International Shipping Federation	ISF	London	the United Kingdom
• International Society of Travel Medicine	ISTM	Geneva	Switzerland
• International Union of Railway Medical Services	UIMC	Bern	Switzerland
• International Union of Railways	UIC	Paris	France
• Istituto Superiore di Sanità	ISS	Rome	Italy
• Joint United Nations Food and Agriculture Organization International Atomic Energy Agency Programme	FAO / IAEA	Vienna	Austria
• Lausanne University, Institute of Health Economics and Management	IEMS	Lausanne	Switzerland

* location following to the rotation of the presidency

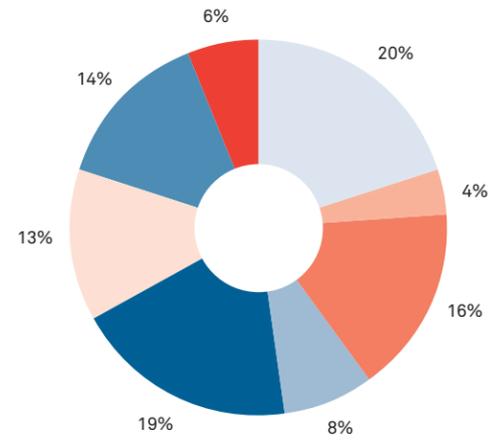
ANNEXES

COLLABORATING INSTITUTIONS

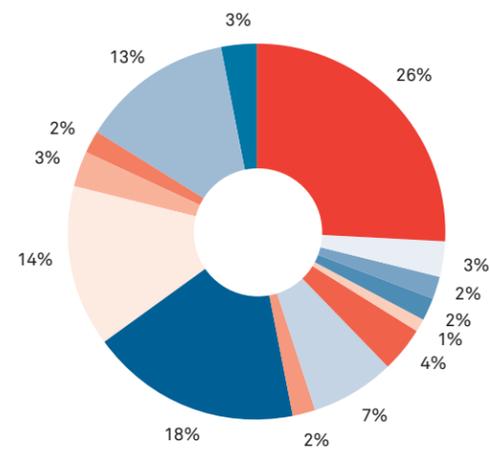
Institution	Acronym	City	Country
• National Biosafety Association of Brazil	ANBio	Rio de Janeiro	Brazil
• National Health Institute Dr Ricardo Jorge	NHI	Lisbon	Portugal
• National Health Surveillance Agency	ANVISA	Brasília	Brazil
• National Institute for Cholera and Enteric Diseases	NICED	Calcutta	India
• National Institute for Communicable Diseases National Health Laboratory Service	NICD/NHLS	Johannesburg	South Africa
• National Institutes of Health	NIH	Bethesda	the USA
• National Microbiology Laboratory	NML	Winnipeg	Canada
• National School of Public Health		Athens	Greece
• National Travel Health Network and Centre	NaTHNaC	London	the United Kingdom
• National University Health System, Division of Infectious Diseases		Singapore	Singapore
• Noguchi Memorial Institute for Medical Research	NMIMR	Accra	Ghana
• Pan American Foot-and-Mouth Disease Center	PANAFTOSA	Rio de Janeiro	Brazil
• Panafrican Institute for Development	PAID	Ouagadougou / Douala	Burkina Faso / Cameroon
• Pasteur Institute	IP	Paris	France
• PathWest Laboratory Medicine	WA	Perth	Australia
• Public Health Agency of Canada		Winnipeg	Canada
• Research Institute for Tropical Medicine, Molecular Parasitology Laboratory	RITM	Muntinlupa	the Philippines
• Robert Koch Institute	RKI	Berlin	Germany
• Royal Tropical Institute		Amsterdam	Netherlands
• Sandia National Laboratories	Sandia	Albuquerque	the USA
• Secretariat of the Basel Convention		Geneva	Switzerland
• Spiez Laboratory		Spiez	Switzerland
• State Research Center of Virology and Biotechnology	VECTOR	Novosibirsk	Russian
• Swedish Institute for Infectious Disease Control	SMI	Solna	Sweden
• Swiss Federal Office of Public Health	FOPH	Bern	Switzerland
• Tehran University of Medical Sciences		Tehran	the Islamic Republic of Iran
• Temasec Life Sciences Laboratory	TLL	Singapore	Singapore
• The Eastern Mediterranean Public Health Network	Emphnet	Amman	Jordan
• The International Criminal Police Organization	INTERPOL	Lyon	France
• The United Kingdom National External Quality Assessment Service for microbiology	UK NEQAS	London	the United Kingdom
• Training Programs in Epidemiology and Public Health Interventions Network, Inc.	TEPHINET	Atlanta	the USA
• United Nations Committee of Experts for the Transport of Dangerous Goods	UNCETDG	Geneva	Switzerland
• United States Agency for International Development	USAID	Washington, DC	the USA
• United States Food and Drug Administration	FDA	Washington, DC	the USA
• United States Naval Medical Research Unit 3	NAMRU-3	Cairo	Egypt
• United States State Department		Washington, DC	the USA
• Universal Postal Union	UPU	Bern	Switzerland
• University of Massachusetts		Massachusetts	the USA
• University of Ottawa	uOttawa	Ottawa	Canada
• University of Pretoria, School of Health Systems and Public Health	SHSPH	Pretoria	South Africa
• University of Sydney		Sydney	Australia
• University of Thessaly		Athens	Greece
• University of Zurich	UZH	Zurich	Switzerland
• World Organization for Animal Health	OIE	Paris	France
• World Tourism Organization	WTO	Madrid	Spain

Financial summary

Expenditure by project area 2010 - 2011



Total contributions for 2010 - 2011 by source of funding USD 36 156 259



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