

ACTIVITY REPORT

2010



International Health Regulations
Coordination Department



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→ Acronyms

ACI	Airports Council International
AFRO	WHO Regional Office for Africa
AMRO/PAHO	WHO Regional Office for the Americas
BTWC	Biological and Toxin Weapons Convention
CAPSCA	Cooperative Agreement for Preventing the Spread of Communicable Diseases through Air Travel
CDC	United States Centers for Disease Control and Prevention
CLSI	Clinical and Laboratory Standards Institute
EIS	IHR Event Information Site
EMRO	WHO Regional Office for the Eastern Mediterranean
EQA	External Quality Assessment
EU	European Union
EURO	WHO Regional Office for Europe
FAO	Food and Agriculture Organization of the United Nations
FETP	Field Epidemiology Training Programme
GLaD	Global Laboratory Directory
IATA	The International Air Transport Association
ICAO	International Civil Aviation Organization
IAEA	International Atomic Energy Agency
IHR	International Health Regulations
IPC	Infection Prevention and Control
IVB	WHO Immunization, Vaccines and Biologicals Department
LBS	Laboratory Alliances and Biosafety Team
LQS	Laboratory Quality and Management Strengthening Team
NCM	National Capacity Monitoring Team
NFP	National IHR Focal Point
NSS	National Surveillance and Response Strengthening Team
OIE	International Office of Epizootics
PAG	Ports, Airports and Ground Crossings Team
PAGnet	Public Health and Ports, Airports and Ground Crossings Network
PHEIC	Public Health Emergency of International Concern
PoE	Points of Entry
REACT	Reaction to Emergency Alerts Using Voice and Clustering Technologies
RPI	Regulations, Procedures and Information Team
SEARO	WHO Regional Office for South-East Asia
SSC	Ship Sanitation Certificate
TEPHINET	Training Programmes in Epidemiology and Public Health Intervention Network
UNWTO	United Nations World Tourism Organization
USAID	United States Agency for International Development
WER	Weekly Epidemiological Record
WHO	World Health Organization
WPRO	WHO Regional Office for the Western Pacific

→ Foreword



↑ Sixty-third World Health Assembly 2010, Committee A on IHR implementation

For the World Health Organization, 2010 was a year of great challenges. In 2009, for the first time since their entry into force in June 2007, the revised International Health Regulations (IHR) were put to the test by pandemic H1N1 2009. And at the start of 2010, as the pandemic continued to make its way around the globe, the external review of WHO's response to the pandemic began its deliberations.

WHO, led by Director-General Dr Margaret Chan, welcomed the external review of the IHR, seeing this as a unique opportunity for the Organization to receive a frank and critical assessment of how the IHR have functioned and how the international community responded to the pandemic. Throughout the process, we have been seeking lessons about what worked well as well as what did not work, and ideally why. We believe this will help us to strengthen the management of future public health emergencies of international concern.

Throughout 2010 the IHR coordination department worked to facilitate the mission of the Review Committee, hosting meetings and providing the Committee with all the documentation needed to enable Committee members to make the most thorough and comprehensive review possible. The preliminary report of the Committee will be presented to the Executive Board in January and the final report to the World Health Assembly in 2011. It will provide WHO with valuable information and recommendations on

how to make the IHR work better at helping the world contain potential public health events of international concern at the source.

While the pandemic continued and the Department supported the pandemic review process, we continued our support to countries to meet the next major deadline for implementation of the IHR in 2012. By that time the 194 States Parties to the Regulations are to have met the core capacity requirements set out in the IHR. This is the commitment that States Parties have made; in turn, WHO has committed to provide the appropriate tools, guidance and support to achieve these goals.

The IHR coordination department does not work alone. As part of the Health Security and Environment Cluster, it works closely with the Department of Global Alert and Response, the Global Influenza Programme, Food Safety Zoonoses and Foodborne Diseases, Public Health and Environment and the Polio Eradication Programme. It also relies closely on the commitment of the six WHO regional offices and 147 country offices around the world.

This report highlights key activities of the IHR coordination department over the past year in collaboration with the above-mentioned WHO Regional Offices, departments, programmes and partners.



→ Introduction

In 2010 the International Health Regulations Coordination Department was tasked with support to the work of the International Health Regulations Review Committee. This followed the agreement of the WHO Executive Board with the proposal of the Director-General to convene an IHR Review Committee to carry out a detailed evaluation of the international preparedness and response to the H1N1 influenza pandemic as well as the functioning of the IHR since their entry into force in 2007. This is the first Review Committee to be convened under the IHR and a number of Departments at WHO Headquarters (HQ), as well as from the Regional Offices have been supporting the Committee's work.

The influenza pandemic continued until August 2010, and the International Health Regula-

tions continued to provide a framework for key aspects of the global response. Notably, the IHR Emergency Committee met on three occasions to review and advise the WHO Director-General regarding the temporary recommendations issued under the IHR in response to the pandemic and, in the later meetings, advise on the issue of declaring the end of the pandemic and terminating the public health emergency of international concern. While all six IHR Coordination teams were involved in supporting the external review of pandemic H1N1 2009, the Regulations, Procedures and Information team was involved in assisting in the review process on a daily basis. This work continued throughout the end of the year and will be ongoing until the Review Committee presents its findings and recommendations to the World Health Assembly in May 2011.

External Review of the response to pandemic H1N1 2009

The terms of reference for the Committee are:

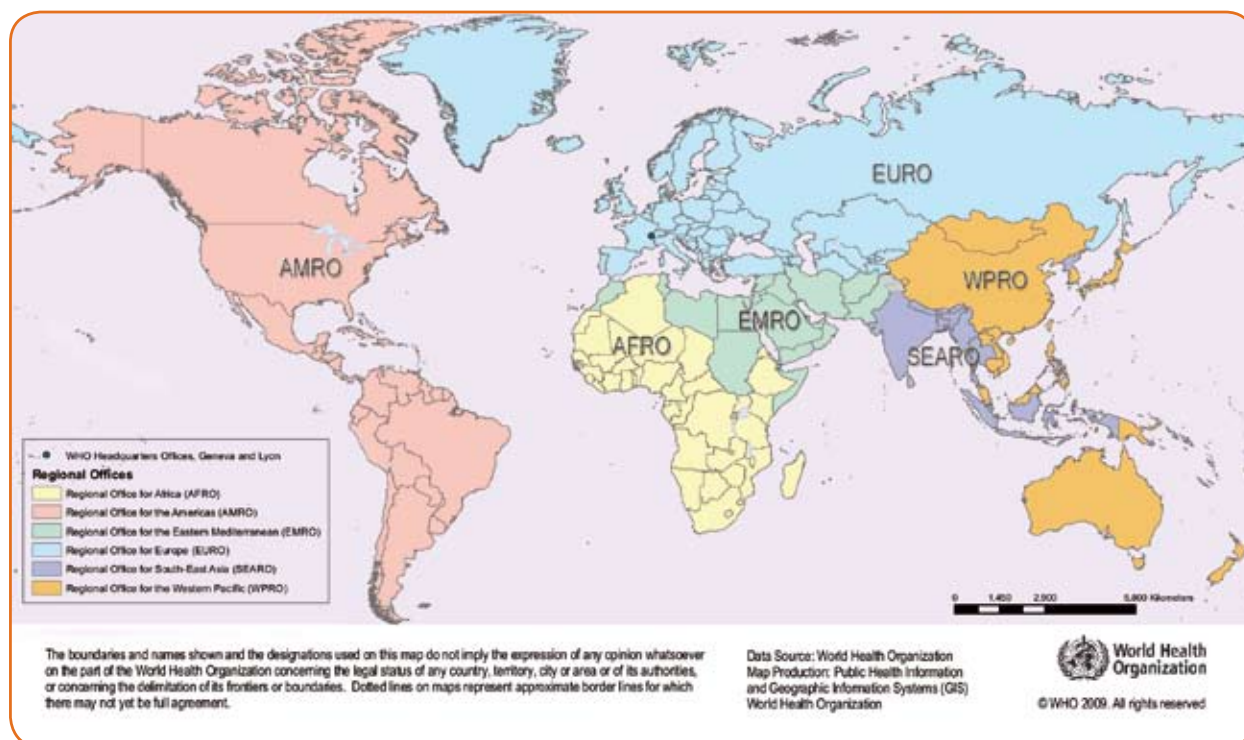
- 1 - to assess the functioning of the International Health Regulations (2005) in relation to the current pandemic (H1N1) 2009 and other public health events;
- 2 - to review the scope, appropriateness, effectiveness, and responsiveness of global actions as well as the role of the WHO Secretariat in supporting pandemic preparedness, alert and response in relation to the pandemic;
- 3 - based on the above, to identify and review the major lessons learnt from the global response to the current pandemic and to recommend actions to be taken by Member States and the Director-General to strengthen the preparedness and response to potential future influenza pandemics and other public health emergencies.

The Committee has met in full session on three

occasions since April 2010 and has conducted intersessional work through teleconferences, electronic exchanges and face to face deliberations. Testimony has been solicited from WHO and external organizations and individuals in writing and by interviews either face to face or by telephone. A large amount of documentation relating to both the pandemic and IHR implementation has been reviewed by the Committee.

The Committee proposes to finalize its report in the first quarter of 2011 before meeting again in full session after which the Director-General will present their report to the World Health Assembly in May. The recommendations coming from the Committee are expected to provide strategic direction for WHO's continuing efforts to prepare the world for future pandemics and support countries in implementing the IHR.

↓ World Health Organization:
193 Member States, 6 regional offices and 147 country offices



Supporting countries to assess national core capacities

Throughout the review process, the technical teams, in collaboration with the WHO Regional Offices, continued their activities to support States Parties in the goal to meet by 2012 the core capacity requirements for surveillance and response and for designated ports, airports and ground crossings set out in the IHR. The work of the teams is described in this report by technical area. However, the main focus this year was on assisting countries in the assessment of their existing national surveillance and response capacities in accordance with Annex 1A of the Regulations.

The work was carried out in all six teams, with one team, National Capacity Monitoring, tasked with

the overall assessment of existing national capacities across all technical areas. This assessment is being used to determine a baseline of surveillance and response capacities in accordance with Annex 1A of the Regulations.

Once the national baseline capacity has been determined and plans of action developed, the next step is to monitor progress in the implementation of IHR core capacities using a monitoring tool developed in 2010. More information about country assessments and the monitoring tool can be found on page 29.

IHR implementation timeline, at a glance

15 June 2007

The IHR (2005) came into force

from 15 June 2007 to 15 June 2009

assessment by States Parties of their existing national structures and resources and development of national action plans

from 15 June 2009 to 15 June 2012

States Parties shall meet the IHR core capacity requirements for surveillance and response and for designated ports, airports and ground crossings*

* *Legislation and policy, coordination, surveillance, response, preparedness, risk communication, human resources, laboratory*

IHR implementation course

Another activity to support overall IHR understanding and implementation in countries is the IHR implementation course (IHR i-course). The IHR implementation course aims to train public health professionals working on IHR implementation and is a collaboration between WHO, the University of Pretoria, South Africa, the Georgetown University Law Center, USA and the University of Geneva, Switzerland.

Thus far the course has brought together 59 participants from 48 countries in the six WHO regions. Participants include public health professionals working at the National Focal Points for IHR implementation as well as professionals from other related sectors from national or international organizations and WHO staff from country and regional offices. The members of this growing network of IHR professionals are taking the expertise gained in the course back to their countries and are actively sharing it within their public health institutions. More information about the first IHR i-course is available on page 13 of this report.

The technical areas of work

The IHR Coordination Department provides IHR-related legal and technical coordination and services to WHO Member States, relevant international organizations and across the entire WHO. The department develops and disseminates IHR-related tools and information, monitors progress and directly supports WHO regional and country offices in their effort to strengthen national core capacities required under the IHR.

The specific role of the WHO Lyon Office is to support the six WHO regional offices in strengthening national public health capacities in countries through the following three areas:

National Surveillance and Response Strengthening (NSS): provides support for IHR implementation through technical assistance on early warning, surveillance and response, and through training on the IHR, such as the online briefings for National IHR Focal Points (NFPs) and training packages to strengthen human resources for IHR implementation.

Ports, Airports and Ground Crossings (PAG): brings together public health and transportation expertise to develop standard operating procedures that may be applied at all points of entry (PoE) in all countries.

Laboratory Quality and Management Strengthening (LQS): seeks to strengthen laboratory capacity through the development of quality management and external quality assessment, the development of laboratory training modules and the establishment of twinning projects between resource limited laboratories and specialized institutions.

The activities carried out in Geneva focus on the following three areas:

Laboratory Alliances and Biosafety (LBS): promotes and supports common cross-cutting laboratory based activities with the goal of ensuring global connectivity through networking, harmonization, and commitment to ensuring a safe and secure laboratory environment.

National Capacity Monitoring (NCM): supports Member States in implementing the IHR through the development of guidelines and tools throughout the assessment and planning, monitoring and evaluation stages.

Regulations, Procedures and Information (RPI): coordinates and supports IHR implementation by fulfilling key WHO IHR obligations, such as reporting to the World Health Assembly on IHR implementation, supporting the development of national legislation consistent with the IHR and strengthening public health activities related to both travel and trade.

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



→ Review of activities in 2010

→ National Surveillance and Response Strengthening (NSS)

Disease prevention, surveillance and response are fundamental in order to enhance public health security. By strengthening national public health systems, particularly in the area of surveillance and response and human resource development, countries will be able to detect, assess and respond to public health risks in a timely manner and prevent their international spread.

The NSS team supports countries in strengthening their national strategies for disease surveillance and response via three strategic axes:

- **Supporting WHO regional strategies for disease surveillance and response** by assisting countries in assessment, planning and strengthening of core public health capacities under the scope of the IHR and promoting and assisting the development of inter-country surveillance and response networks.

- **Developing human resources to strengthen core public health capacities under the IHR** by identifying training needs in relevant fields linked to IHR implementation. Training courses and materials are tailored to each target audience, together with information for trainers. The team supports training activities to all the IHR teams as well as to other WHO departments.



↑ SURVAC project meeting, Douala, Cameroon, October 2010

- **Supporting Member States in the acquisition and maintenance of risk communication capacity for public health emergencies.** Key elements include developing guidelines, training courses and materials and facilitating professional networking and coordination in this newly emerging field.

Development of inter-country surveillance networks

Demonstration project in Central Africa Improving disease control by strengthening surveillance and response

This project aims to improve disease control by strengthening the surveillance and response capacity in three countries in Central Africa: Cameroon, the Central African Republic and the Democratic Republic of Congo. Central Africa is an area of epidemiological importance in terms of disease outbreaks and emerging infections, with significant gaps in the capacity to generate and use epidemiological data for decision-making aiming at controlling spread of diseases and epidemics. Vaccine-preventable and epidemic-prone diseases are prioritized in this project.

Funded by the Bill and Melinda Gates Foundation the project started in 2009 and will continue for five years. The work is jointly coordinated by the WHO IHR Department and the WHO Programme for Immunization, Vaccines and Biologicals in collaboration with the WHO Regional Office for Africa, the WHO Intercountry Support Team

Central Africa (based in Libreville), the WHO Country Office in each of the three countries, the US Centers for Disease Control and Prevention and the CDC Foundation.

The IHR office in Lyon is involved in all the four components of the project: strengthening of epidemiological surveillance, strengthening of laboratory management (see page 22 of this report) as well as strengthening of data management and communication and training in epidemiology. In 2010, the project facilitated the establishment of national surveillance coordination bodies and the development of standard operating procedures for surveillance in all three countries after national workshops had been held in each of the countries.

The communication infrastructure and equipment at all the sites involved in the project were assessed in 2010, and strengthening of the system started. The first phase of a web platform is established; this will enable communication, coordination, sharing of resources and experiences between the different stakeholders.

With a strong focus on training in-country epidemiologists and laboratorians through field epidemiology laboratory training programmes, the objective is to leave countries with highly trained personnel as well as established plans, policies, and procedures to sustain quality surveillance activities. This year the project implemented short courses for epidemiology and laboratory staff at central and regional level in each of the three countries, and launched a 2-year training programme.



↑ TEPHINET 6th Global Scientific Conference, Cape Town, South Africa, December 2010

TEPHINET global conference

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. In 2010 TEPHINET's sixth global scientific conference took place in Cape Town, South Africa. The IHR department contributed to the scientific committee work and co-organized with CHORDS (Connecting Health Organizations for Regional Disease Surveillance) a workshop on the «Coordination of inter-country surveillance networks». This workshop originated in the context of the revised International Health Regulations, which require that countries acquire capacities for surveillance and response before May 2012. WHO must assist States Parties to develop, strengthen or maintain these capacities which consist in the detection, notification and reporting health events. Since assets are limited, sharing of resources, experiences and protocols between countries located in a similar environment is believed to facilitate and accelerate the improvement of surveillance systems. WHO has contributed to the building of surveillance networks involving several countries. CHORDS brings these networks into a dialogue.

EPISOUTH

EPISOUTH — a network for the control of public health threats and other bio-security risks in the Mediterranean region and the Balkans — began its work in October 2010. The IHR department is one of many collaborative partners. The objective is to increase health security in the Mediterranean area and Balkans by strengthening the preparedness to common health threats at national and regional levels in the countries of the existing EpiSouth Network for IHR implementation, which includes 27 Countries; 9 EU and 18 non-EU countries.

The IHR department is co-leading one of the working areas of this project together with the Italian National Institute for Health, aiming to identify aspects in core capacity implementation that can be improved and analyze a limited number of them in depth in the context of the structure of health systems in the region, the level of achievement of the IHR core capacities and solutions adopted.

Other key areas of the project are: establishment of a Mediterranean regional laboratories network able to support the priority diagnostic needs relying on the existing facilities and capacities, and risk management among the countries involved in the network, strengthening of the Mediterranean early warning systems allowing alerts and epidemic intelligence information sharing among EpiSouth countries and developing interoperability with other European early warning platforms, production of a strategic document, with guidelines based on assessments and surveys, aimed at facilitating IHR implementation.

In addition to the 27 participating countries, the following institutions are partners in this project: the European Centre for Disease Prevention and Control, the European Commission, the Italian Ministry of work, health and social policies, the WHO Regional Office for the Eastern Mediterranean, the WHO Regional Office for Europe, the WHO Department of International Health Regulations Coordination.

Human resource development and training

IHR implementation course

This year saw both the launch and the completion of the first IHR implementation course, as well as the launch of the second course. The objective of the course is to train public health officials working with WHO on IHR implementation. The course is a collaboration between WHO, the University of

Pretoria, South Africa, the Georgetown University Law Center, USA and the University of Geneva, Switzerland.

The first course came to a close after participants completed the four-month distance on-the-job training as well as the two-week face-to-face session. This first IHR implementation course comprised 32 participants from 30 countries from all the six WHO regions and a survey at the end of the course showed a very high satisfaction among the participants.

The course targets public health professionals, mainly staff working at the National Focal Points for IHR implementation, but also professionals from other related sectors from national or international organizations. WHO staff from country and regional offices also participate in the training. The second IHR implementation course started in September 2010 with the distance-learning module and is planned to be completed in February 2011.



↑ IHR course face-to-face session, Veyrier-du-Lac, July 2010

This training helps participants implement the IHR in the course of their daily work and they become part of a network of IHR professionals that share practical experience and solutions in the face of today's public health challenges. They will also be better prepared to effectively manage a public health emergency in their country and their region. The participant's institution will benefit from the training the participant will be able to give to his/her colleagues as well as a strengthened institutional capacity to coordinate the response to a public health emergency.

Morocco: Evaluation of training needs in epidemiology

WHO participated in a CDC mission to assess the needs and capacities for the implementation of a field epidemiology and laboratory training programme in Morocco. This is done in collaboration with Moroccan health authorities. WHO is also collaborating with the Moroccan Ministry of Health to assess the needs for epidemiological training among the staff working at regional and peripheral levels. The purpose is to map the current human resources in this surveillance system, evaluate the impact of epidemiological training already received and identify the gaps. The

project should also suggest ways to provide training in applied epidemiology. The work started with a survey targeting all 16 Moroccan regions and will be followed by a visit to a selected number of regions early 2011. Future plans include to establish a strategic plan for training in epidemiology and develop training curricula.

Lab4Epi on web

The training programme Laboratory issues for Epidemiologists contains a basic set of training materials and recommendations to help trainers organize their training sessions. In 2010 the NSS team launched the web version of this programme. The main objectives of the training module are to facilitate communication and understanding between the two disciplines of epidemiology and laboratory medicine for disease surveillance and outbreak investigation; to provide the field epidemiologist with a better understanding of basic microbiology techniques and analysis and interpretation of results, and finally to convey the laboratory perspective of public health investigations to field epidemiologists in order to improve collaboration between these two disciplines.

www.who.int/ihr/lyon/surveillance/laboratory



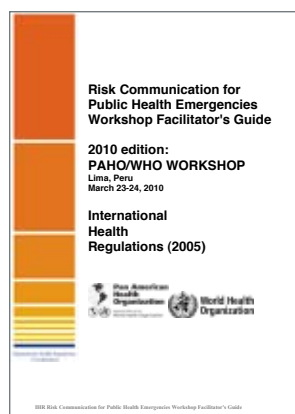
through global meetings, regional training workshops and development of a set of core materials for use in online, as well as, face-to-face learning environments.

Following the publication of the Outbreak Communication Planning Guide in 2009, work began in 2010 on a new and expanded version of the guide, which is to be released in 2011. This version will include elements of risk communication in the context of non-infectious disease events, as well as, guidance for assessing and enhancing the core capacities in risk communication.

The Global Health Security Communication Network (GHSCN) was established in 2007 with the objectives of promoting global professional collaboration, ensure consistent messaging, and allow effective sharing of communication materials to leverage resources during outbreaks. The network has more than 240 members. During 2010 the network has been reviewed and the results of this will form the basis for planning the future direction, re-positioning and re-launch of the GHSCN in 2011.



Risk communication



Under the IHR, WHO is committed to supporting 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 carried out over the past several years

→ Ports, Airports and Ground Crossings (PAG)

Meeting the IHR requirements in international travel and transport will provide a key benefit for countries by leading to better global public health protection and economic development, without unnecessary and undesirable interference with international traffic and trade. The objective of implementing the IHR requirements at points of entry, is 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 infection or contamination. This is done by maintaining public health response capacity and routine health control measures at designated airports, ports and ground crossings. This includes possible interventions with travellers, conveyances, cargo, goods and postal parcels as well as vectors and reservoirs.

The activities of the PAG team in 2010 included coordination, advocacy, international collaboration and networking, both with the aim of preventing the spread of disease, which is the aim of the CAPSCA-agreement, and the EU REACT project as well as the aim of training and human resource development by providing courses for professional seafarers offered by the SHIPSAN TRAINET project. The team supports the network for port health officials and their partners via the PAGnet project and supports countries in their development of core capacities. Numerous guidelines and tools have been produced in a broad range of the team's working areas.

Coordination, advocacy, international collaboration and networking

Collaboration and coordination among international organizations, public health authorities and experts responsible for global IHR implementation is essential in order to meet the IHR requirements for travel and transport. Close working relationships have been developed with other organizations of the United Nations System, regional organizations and international agencies for travel and transport, for example with the Cooperative Agreement for Preventing the Spread of Communicable Diseases through

Air Travel (CAPSCA) under the leadership of the International Civil Aviation Organization (ICAO) in Asia, Africa and the Americas. In the area of ship sanitation, WHO works in partnership with the European Union (EU) on the project for training in ship sanitation inspection, SHIPSAN TRAINET. In the area of ground crossings, WHO also works with the EU on the Reaction to Emergency Alerts; the REACT project.

CAPSCA

The 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 aims to help reduce the risk of spread of communicable diseases through air travel by means of cooperative arrangements between participating states. This involves the development and implementation of public health emergency response 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. The WHO and ICAO-CAPSCA collaboration also works towards the harmonization of technical guidance and procedures for the development

and implementation of preparedness plans for public health emergencies involving air transport. In 2010 the Region of the Americas was included in this cooperative agreement and the plans for 2011 comprise the inclusion of both the European and the Eastern Mediterranean regions.

Response to emerging infectious diseases with the assessment and development of core capacities and tools: the EU REACT project

Speed, coordination and transfer of knowledge are key to emergency services in Europe and all over the world in providing effective response to an emergency. The EU REACT project aims to provide evidence and tools towards a common European standard for the response to emerging public health threats. Organized in work packages, the project addresses specific areas where the need for harmonization at the EU level has been identified such as contact tracing for public health events at ground transportation among others.

The EU SHIPSAN project

The overall aim of the EU SHIPSHAN project is to develop a common European strategy and training network on ship sanitation inspections, outbreak investigations, surveillance and control of communicable diseases on board cruise ships and ferries and to facilitate IHR implementation. The IHR coordination office in Lyon is a collaborative partner on the editorial working group and advisory board. 2010 was a pilot phase for SHIPSAN TRAINET, a training course for professional seafarers that consists of a train the trainers' module and training module for seafarers took place in September 2010 in Spain, the project will be continued in 2011.

ECDC - outbreaks on ships

In 2010 the IHR coordination office in Lyon collaborated with the European Centre for Disease Prevention and Control, ECDC, to harmonize the information related to outbreaks on ships and increase synergies among existing health surveillance communication systems and networks.

Support to the Tourism emergency response network

The Tourism emergency response network was created to foster international collaboration to harmonize response and dissemination of information during emergencies. It was launched

in April 2006 under the auspices of the United Nations World Tourism Organization. The IHR coordination office in Lyon continued the support of this network during 2010. Lessons learned from the pandemic (H1N1) 2009 were discussed in a international workshop in Madrid in December 2010 to collect, discuss and review with the major travel and tourism stakeholders the experiences made during pandemic (H1N1) 2009. The results of this exercise will be included in the global report the UN system is preparing with the aim to improve regional and global efforts of general disaster preparedness.



↑ UNWTO workshop, Madrid, Spain, December 2010

PAGnet

PAGnet is a network that brings together public health officials responsible for port health and key partners to coordinate public health 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.

The second meeting on partnership building for public health and international travel and transportation — ports, airports and ground crossings network (PAGnet) — was held in Lyon, France, 8-9 July 2010. The meeting focused on planning activities for the key technical groups an on obtaining consensus on the network's administration and contents, such as including rules and terms of reference of participation and levels of membership. In all, 39 participants from 18 countries attended, including representatives from Member States from all the six WHO regions,

leading public health experts familiar with issues related to points of entry, UN-organizations such as the International Civil Aviation Association and UN World Tourism Organization, academic scientists and WHO representatives. The network also launched its own web site in 2010, which is in pilot phase: www.pagnet.info

Guidelines and tools

The PAG team develops guidelines and tools to help implement the IHR. In 2010 eight publications and technical tools were revised and/or developed in collaboration with WHO technical areas, regional, country offices, other international organizations and national authorities.

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 administrative areas and territories) to issue the following Ship Sanitation Certificates:

- 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 2010.

Published guidelines and tools

An assessment tool for core capacity requirements at designated ports, airports and ground crossings was published in English in 2009. In 2010 the French and Spanish versions of this document were published in collaboration with regional offices, country offices and national authorities. The translation of this document into other languages will continue in 2011.

The public consultation version of the recommended procedures for inspection and issuance of Ship Sanitation Certificates was published in English in 2010. The finalized version is expected to be published in the beginning of 2011. The public consultation version of the revised Guide to Ship Sanitation, 3rd edition, was published in 2010. The finalized version is expected to be published early 2011 under the leadership of WHO Public Health and Environment (PHE) Water Sanitation and Health programme in cooperation with PAG.

The English version of Case management of Influenza A (H1N1) in air transport was published in 2009. This document served as the basis for two new documents: *WHO Technical advice for case management of public health events on board ships* and *WHO Technical advice for case management of public health events in air transport, to be published in 2011*.

Guidelines and tools under preparation

During 2010 the team also developed a draft Technical Recommendations for IHR implementation at Ground Crossings and cross border Collaboration. This work was carried out during international consultation meetings organized in collaboration with AMRO/PAHO and El Paso-USA and Brazil country offices and national authorities. The final version of this document is going to be published in 2011.

Vector surveillance and control guidelines

To assist Member States to implement Annex 5 of IHR, related to specific measures for vector-borne diseases, several WHO guidance documents are under revision and development to address vector surveillance and control activities at points of entry, specially air transport, such as: the WHO review on aircraft disinsection risk assessment models using chemical insecticides, under the leadership of the WHO International Programme on Chemical Safety (IPCS) and efficacy testing of insecticides for aircraft disinsection under coordination of the World Health Evaluation Scheme, in coordination and support from PAG. First drafts were developed and published for public consultation in 2010. Further guidance tools supporting State Parties to develop vector surveillance and control plans for ports, airports and ground crossings and WHO support for global vector identification at points of entry web-based platform are in the planning phase for public consultation and publication in 2011.

A draft version of WHO Guidelines for development of contingency plans for points of entry was prepared by WPRO in February 2010 in collaboration with the IHR coordination department. This document is currently being field tested.

Core capacity development: Assessment and training

In close cooperation with the regional offices PAG provides technical advice and support for the planning, assessment, development and maintenance of core capacities for routine risk control 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 (SSCs), introduced by the IHR 2005, as well as updating the list of designated ports authorized to issue SSCs.

Core capacity field test in China

Field test exercises were conducted of the point of entry assessment tool at Shanghai Yangshan seaport. The objective was to provide technical advice for national authorities and obtain feedback for consideration by WHO of the use of the assessment tool and to provide guidance for future work at designated points of entry, regarding assessment, development and maintenance core capacities for the IHR.

Production of ship inspection DVD with French partners



A bilingual version (English/French) of the interactive DVD training tool for ship inspection and issuance of ship sanitation certificates was developed in collaboration with the French Ministry of Health. A global version of this training tool is planned.

Global human resource development strategy

A global strategy for human resource development and training to support IHR implementation at points of entry is in planning phase. This plan aims to identify target audiences for training, to identify relevant training approaches and potential partners.

PoE training activities and field exercises held in several regions

During 2010 trainings and field exercises were held in several regions. A meeting on ship inspection and a workshop on issuance of ship sanitation certificates were arranged in Fortaleza, Brazil.

Target audiences were Spanish and Portuguese speaking countries in the PAHO/AMRO as well as the EURO, AFRO and SEARO Regions. The meeting and workshop were hosted by the Brazil WHO Country Office in collaboration with the health authorities in Brazil, Portugal and Spain as well as PAG.

A meeting on IHR core capacity requirements as well as ship inspection and issuance of ship sanitation certificates was organized in Colombo, Sri Lanka for the countries in the SEARO Region.

An annual training meeting and simulation exercise for public health emergency at ports FAMEX exercise, for Spanish public health officers at points of entry was held in Las Palmas in the Canary Islands with international observers and technical support from PAG.

Other activities

Emergency response and preparedness

Public health measures taken at international borders during early stages of pandemic influenza A (H1N1) 2009

During a global public health event, the potential for disrupting international travel and trade by implementing measures to control the introduction and spread of infectious diseases is high. In the early stages of pandemic (H1N1) 2009, there was heightened concern about international transmission of the disease and public health authorities in many countries took measures to prevent or delay introduction of the virus. A survey was developed and preliminary results published (WER No. 21, 2010, 85, 185-196) in collaboration with the US CDC, the Hamburg Port Health Centre (Germany), the International Civil Aviation Organization and « International transportation Industry Associations»: the International Shipping Federation, the Cruise Lines International Association, the Airports Council International and the Air Transport Association.

→ Laboratory Quality and Management Strengthening (LQS)

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 requires accurate and sufficiently detailed laboratory results, produced either domestically or through collaborating centres. 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.

Three guiding principles of LQS

- **Quality assurance:** promoting laboratory quality systems that ensure reliable results, thus strengthening confidence in laboratory services. International efforts can help resource-limited countries reach quality laboratory standards.
- **Cross-cutting horizontal activities:** providing expertise on issues common to all laboratories, cutting across disease-specific programmes.
- **Laboratory environment:** considering the regulatory aspects, infrastructure and overall organization of laboratory quality systems within the broader context of health care delivery and public health systems.

The objective is to bring laboratories back to the centre of the public health system. To this end, activities are carried out according to three strategic axes:

- Laboratory quality systems
- Strengthening human resources
- Networking

In 2010, the LQS team provided support in laboratory capacity building via global and regional projects on quality systems, human resource strengthening and networks to facilitate sharing of resources, knowledge and expertise. Highlights in 2010 include support to national laboratory policies and systems at global and regional level.

Laboratory quality systems

Quality Systems aim at ensuring good standards, accuracy, timeliness and compatibility across laboratories in all countries. Among the quality systems components, External Quality Assessment (EQA) programmes play an important role to monitor the laboratory performance and quality. However, most of the EQA programmes are expensive and organized in the developed world. Many developing countries, reference laboratories cannot afford to participate in such programmes.



↑ Microbiology EQA programme review meeting, Johannesburg, South Africa, December 2010

WHO/NICD Microbiology EQA Programme in Africa

Since 2002, the WHO Regional Office for Africa and the LQS team have jointly coordinated an African microbiology external quality assessment programme (EQA). Technical organization of the programme is carried out by the National Institute of Communicable Diseases (NICD) in South Africa. Several fields are covered: general bacteriology (including bacterial enteric diseases, bacterial meningitis, antibiotic susceptibility testing, plague), malaria microscopy and Acid-Fast Bacilli microscopy. The programme consists in shipments of EQA materials, mainly simulated specimens, three times per year. Referee laboratories are used to control the quality of the EQA materials. These referee laboratories are located in renowned institutions such as Centers for Disease Control and Prevention (CDC), USA, Pasteur institutes or other reference centres. The number of participating laboratories is now extended to 93 in 46 African countries. The consultative meetings in January 2010, end of Year 7 of the programme, and December 2010, end of Year 8 of the programme, made it possible to define areas of improvement and priorities in the EQA results, and to organize corrective actions for participating laboratories such as a training on plague diagnostic in September 2010 in Madagascar, and an on-site visit by NICD in June 2010 in Uganda.

The WHO Microbiology EQA programme in the Eastern Mediterranean Region

One of the major recommendations issued from the public health laboratory directors of the WHO Eastern Mediterranean Region Member States meeting held in Cairo in May 2004, was the organization and implementation of a regional EQA scheme for communicable diseases. Under the joint management of the WHO Regional Office for the Eastern Mediterranean and the IHR coordination office in Lyon, the Eastern Mediterranean Region Microbiology EQA Programme was launched in 2005. The first survey covered bacteriology: enteric and meningial pathogens and antibiotic susceptibility testing, parasitology: stool parasites, leishmaniasis and mycology. Technical organization of the programme is done by two Eastern Mediterranean Region country reference laboratories: the reference health laboratories of Iran and the Oman Central public health laboratory. Four referee laboratories from Europe, Africa and the Eastern Mediterranean Region provide guidance

and external quality control of materials sent to participating laboratories. Following structural and logistical refinements in 2006, one survey per year was sent out in 2007 and 2008. In 2009 and 2010, following recommendations of the yearly review meetings for this programme, two surveys per year were sent and the programme has been extended to viral hepatitis and HIV serologies. The number of participating laboratories is now extended to 23 in 19 EMRO countries.

Global survey of laboratory quality standards and external quality assessment schemes

In support of EQA programmes, WHO, in collaboration with the World Organisation for Animal Health (OIE), the Food and Agriculture Organization (FAO) and the International Atomic Energy Agency (IAEA), launched in August 2009, an inventory of the existing written laboratory quality standards and guidelines, as well as national and international laboratory external quality assessment schemes available worldwide. The deadline for reception of responses was end of March 2010 and during the review meeting in May 2010, it was decided to streamline the questionnaire on laboratory quality standards to gather additional information. The data from the second part on EQA schemes is to be published as an EQAS providers' database on the web sites of the four organizations (WHO, OIE, FAO and IAEA). This publication is planned to be released in 2011 and will be the result of a joint activity and a common will to promote the importance of EQAS. This global survey exercise will allow WHO, OIE, the FAO and IAEA to better identify the resources and/or needs for developing laboratory quality standards and EQAS, and guide the provision of support to Member States where significant gaps are identified.

Health Laboratory Services Assessment Tool

Many public health programmes are conducting laboratory assessments for different purposes and objectives including mapping of their laboratory capacities as part of the IHR-related core capacities. Some assessments focus on specific diagnostic tests or on technical capacities of a restricted number of laboratories. Other initiatives are aiming at assessing laboratory services widely across a country in a cross-cutting manner. Many laboratory assessment tools or checklists have already been developed to meet the needs of these various purposes. However, many countries or programmes still lack a generic laboratory

assessment tool covering both the assessment of individual laboratories and an assessment of the laboratory system structure and organization. The IHR coordination office in Lyon has developed a document that provides guidance for the assessment of national health laboratory services. This document named Health Laboratory Services Assessment Tool is based on 2 complementary questionnaires:

→ Assessment of the structure, organization and regulations of the national laboratory system(s) through the collection of data at the central level (e.g. Ministry of Health).

→ On-site assessment of laboratories at central, intermediate or peripheral levels.

Both questionnaires are generic and may require adaptation in the field according to the regional or local specificities and needs. The document also includes the user manual containing guidance on carrying out an assessment, and practical information on how to use and adapt the questionnaires. Draft versions of this document have been field-tested in more than 25 countries these past years. A review by experts in laboratory assessment in September 2010 was required in order to finalize the document. The publication of this document is planned to be released in the next months.

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. A quality laboratory system is a key factor to ensure timely diagnostic of epidemic-prone diseases. In spite of numerous initiatives to improve laboratory quality, many countries still lack a national framework to run and strengthen their national laboratory system. To avoid fragmentation and strengthen national laboratory services, IHR coordination office in Lyon has cooperated actively with the WHO regions to initiate and reinforce work in this area.

Draft guidelines for strengthening national laboratory systems in the African Region have been developed and reviewed by a group of experts under AFRO coordination during a meeting in Burkina Faso in October 2010. The document will guide countries in their efforts to set up comprehensive national policies and strategic plans to strengthen their national health laboratory services. Next steps are finalization of

the guidance document, pilot implementation in selected countries and development of a regional strategy to widely implement the guidelines.

In the context of the WHO Asia Pacific strategy for strengthening health laboratory services (2010-15) which was endorsed at the WHO Regional Committee for the Western Pacific in 2009, WHO has supported six selected countries in the Region in developing through a consultative process their draft national laboratory policy and plans. A regional workshop was held in September 2010 to share experiences, revise and adopt two documents («Guidance to develop a national laboratory policy and plan» and «Regional Pacific laboratory standards») and explore ways forward to implement this strategy in the Pacific Island countries.

A training of trainers on Laboratory Quality Management System (LQMS) was also organized with the WHO Regional Office for Europe in Serbia in December 2010. This 4-day workshop gathered 19 representatives of national influenza



↑ LQMS training, Belgrade, Serbia, December 2010

centres and reference laboratories from South East Europe. They were able to acquire knowledge and understanding of the principles of improving and assuring quality in laboratories, of the basic principles and processes for assessing quality in laboratories, including accreditation, certification and licensing, and provided know-how on organization of trainings in laboratory quality management system. This activity is part of the global roll-out strategy of the Laboratory Quality Management System Training toolkit of WHO, Centers for Disease Control and Prevention (CDC) and The Clinical and Laboratory Standards Institute (CLSI).

Strengthening human resources

Training and Mentoring Programme on leadership skills for health laboratory directors and managers

In order to increase laboratory quality, a training and mentoring programme on leadership and management skills for leaders in health laboratories is being developed. The course seeks to enhance the ability of laboratory directors to better manage and develop their staff. The programme has been presented at WHO regional meetings. Further steps include involving experts in a review of the curriculum and to enrol the first group of participants before the end of 2011.

Networking

Collaboration in the SURVAC project (subregional project for strengthening surveillance and response in Central Africa)

Within the scope of the five-year demonstration project in Central Africa supported by the Bill and Melinda Gates Foundation (see p. 11), LQS is involved in strengthening laboratory capacity in three selected Central African countries.

Key findings in the assessment carried out in 2009 were a lack of formalized and operational laboratory networks with standard operating and quality procedures, a need for improving infrastructure as well as a need for strengthening the links with surveillance systems. The work in 2010 therefore focused on capacity building through establishing national laboratory networks in the three project countries (the Republic of Cameroon, the Central African Republic and the Democratic Republic of the Congo). In June 2010 a sub-regional laboratory network workshop was organized with senior responsible staff from each country. The group developed consensus documents adapted from the AFRO guidelines to strengthen laboratory networking for Integrated Diseases Surveillance, and planned national laboratory workshops to be able to implement the networks. In September and October 2010, joint laboratory and epidemiology workshops were conducted in each country and these countries are now all in the process of operationalizing the national networks. Laboratory twinning projects have also been initiated allowing a reference laboratory from each country to develop diagnostic capacity by pairing with a recognized quality laboratory which acts as

a mentor. During 2010, three such laboratory twins were set up within the scope of this programme. Equipment and reagents for diagnosing of priority- and vaccine-preventable diseases have also been ordered after a needs assessment and delivery of these materials to the laboratories will take place in early 2011.

The WHO Laboratory Twinning Initiative

The International Laboratory Twinning Initiative began in 2006 with the objective of contributing to the sustainable improvement of resource-limited public health laboratory services through the establishment of twinning projects with developed laboratories. The twinned laboratories work on specific collaborative projects that address competencies needed to achieve this objective, 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. In 2010, six projects were completed, ten are under way, two are approved to start up and five new proposals are under development. The laboratory twinning programme is currently being reshaped in order to be optimized and better synergized with other LQS activities. This includes refining of indicators, project monitoring and reporting process as well as update of the twinning brochure for advocacy and fundraising purposes.

The PulseNet Middle East Network

Foodborne illnesses associated with microbial pathogens, biotoxins and chemical contaminants in food represent a serious threat to the health of millions of people in the world. PulseNet Middle East was established in 2006, in collaboration between WHO and the PulseNet International Network as a molecular surveillance network for food-borne infections to support the Food Safety regional plan and promote technical collaboration between countries. It is now a full member of the PulseNet global early warning detection system for food borne diseases. During the annual meeting in 2010 a plan for national PulseNet activities for 2010-11 were developed as well as a list of priority pathogens to be studied closer for each country was determined. In order to facilitate active communication among network members, the network is also working towards establishing a secure, web-based discussion board for participating members. A newsletter is being

developed to improve information sharing between the participating laboratories. The network also provides training for laboratory staff.



↑ PulseNet Consultation, Muscat, Oman, April 2010

Human-animal interface: Strengthening laboratory capacities

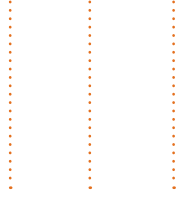
USAID Emerging pandemic threats programme and the IDENTIFY project component on laboratory capacity building

The Emerging Pandemic Threats (EPT) 5-year programme designed by the United States Agency for International Development (USAID) started in 2009 and aims at finding and implementing mechanisms to detect disease emergences, especially from wild life. This umbrella programme is composed of the following four areas: PREDICT: wildlife surveillance, IDENTIFY: laboratory strengthening, RESPOND: field epidemiology and PREVENT: communication and behaviour change. The programme is linked with the USAID's DELIVER project (supply systems strengthening). It focuses on several areas of the world defined by the USAID as «hot spots» for emerging diseases where they are more likely to happen: Congo Basin, Southeast Asia, Amazon Basin and Gangetic Plain.

The IDENTIFY project is implemented jointly by the Food and Agriculture Organization of the United Nations (FAO), the World Organization for Animal Health (OIE), and the World Health Organization (WHO), and is intended to support the development of laboratory networks spanning animal and human sectors, and to strengthen diagnostic capacities for emerging diseases. As the focal point for the WHO Health Security and

Environment Cluster, the LQS team is leading the IDENTIFY project, contributing to the objective of pre-empting, or combating at the source, emerging diseases of animal origin that could threaten human health. The hot-spot areas targeted for the first year of the project were the Congo Basin and Southeast Asia. Tripartite meetings were organized to introduce the project in these two regions (Brazzaville, June 2010; Bangkok, June 2010). Moreover, the Congo Basin stakeholders' meeting was held in Entebbe, Uganda, 2-4 November 2010, to engage regional stakeholders in laboratory capacity building and networking activities – not only within the individual animal or human health sectors, but also across them – to better prepare the region to respond to disease outbreaks. Similarly, a Southeast Asia stakeholders' meeting is planned in early 2011. Specific IDENTIFY activities began in 2010, including a laboratory mapping exercise in the Congo Basin region. The Amazon Basin and Gangetic Plain hot-spot areas will be targeted for programme start during the second year of the programme.





→ Laboratory Alliances and Biosafety (LBS)

The Laboratory Alliances and Biosafety (LBS) team promotes and supports common cross-cutting laboratory-based activities with the goal of ensuring global connectivity through networking, harmonization, and commitment to the management of biorisks in laboratory environments.

LBS achieves this goal by connecting laboratory-based networks and supporting organization-wide laboratory working groups, ensuring global commitment to biorisk management principles in the laboratory and transport environments, developing cross-cutting collaborative projects that build IHR core capacities.

Four strategic axes

- **Building laboratory connectivity:** using the Global Laboratory Directory (GLaD) platform as a support system for building, connecting and sustaining laboratory and laboratory-based surveillance networks.

- **Consensus building among the WHO programmes with laboratory components:** supporting the WHO organization-wide laboratory working group to articulate and formulate strategies to strengthen laboratory systems.

- **Biosafety and laboratory biosecurity:** supporting Member States in implementing strategies to manage biorisks in laboratory and transport environments.

- **Providing assistance to WHO programmes and developing cross-cutting projects:** working with stakeholders to conceptualize and develop projects that contribute to implementation of laboratory-related IHR capacities.

Laboratory alliances and networks

The LBS team promotes and supports global alliances and collaboration through the GLaD platform. The initial GLaD project supports the operational capacity of laboratory networks,

providing a system that encourages networks to be part of a global community of peers, with three key components:

- 1 - maintaining a directory of global laboratory networks (GLaDMap),
- 2 - initiating, facilitating and providing guidance to laboratory networks (GLaDNet), and
- 3 - archiving resources including lessons learned, protocols and templates related to network operability (GLaDResource). This work continued during 2010 with the launch of pilots of GladMap. The project is now entering into the second phase of development.

Biosafety and laboratory biosecurity

In 2010, WHO addressed the management of biorisks in laboratory environments proposing the following activities:

WHO transport of infectious substances training and certification

While an electronic refresher training tool is being developed, which will be accessible to those who have received infectious substances certification, several face-to-face training sessions were organized in various Regions (New Delhi, Oman,

Singapore) and a total of 99 shippers of infectious substances have been certified.



WHO Biorisk Management Advanced Trainer Programme

In 2010, a new training course for trainers was launched and organized in all six regions: this is an advanced course in biorisk management. The course introduces the new concept of biorisk management, which combines risk assessment, risk mitigation, and performance systems. It targets professionals in biosafety, biosecurity training and education. The course gives participants an opportunity to use a robust methodology to identify and control the biosafety and biosecurity risks of laboratories. In addition, the course includes a cutting-edge training component based on the latest science and theory behind accelerated and adult learning. This highly interactive workshop builds the knowledge and skills of individuals who train and educate others in the biorisk management community. The workshop is intended to increase the number of qualified trainers able to support biorisk management globally. Participants are empowered with the skills, tools, and confidence to advise and guide on sustainable biorisk management that will ultimately reduce the threat of infectious disease in local laboratory environments.

EU project on Biorisk Management

In 2010, 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 continued through the organization of a series of regional and national outreach

workshops on biorisk reduction management for various regions in a variety of venues, including India, Kazakhstan and Oman as well as a assessment country visit to Afghanistan. This work is done in collaboration with the LQS team.

"193 Ways of Implementing Biosafety: A Strategic Plan for 2010-2014"

In September 2010, the Biosafety and Laboratory Biosecurity programme presented its 5-year strategic workplan to the members of the Biosafety advisory group representing the WHO Biosafety collaborating centres, to representatives of the World Organisation for Animal Health, of the Food and Agriculture Organization and of international biosafety associations, to interested partners and donors. These representatives are critical in promoting the implementation of biorisk management principles and practices, addressing both biosafety and laboratory biosecurity at global level, and to developing a worldwide biosafety culture through consistent, consolidated approaches, activities and messages. Only through international collaboration and adoption of harmonized global strategies can such biorisk management objectives be developed and achieved within the given time-frame. Suggestions for improvement will be considered and the Plan will be finalized in early 2011.

Support to other WHO programmes and external partners

In 2010, collaborations continued with the WHO Global Polio Eradication Initiative in the development and implementation of post-eradication containment guidelines (Global action plan III). For the containment of Mycobacterium tuberculosis and with the Stop Tuberculosis Programme in the development and implementation of guidance on biosafety related to tuberculosis laboratory diagnostic procedures. For the containment of variola virus, in the refinement of the new protocol for the regular biosafety assessment visits of the two WHO repositories in the Russian Federation and the United States of America. With the office in Lyon, LBS collaborates on the development of the Laboratory Assessment Tool (LAT).

LBS collaborates with ICAO, IATA and the airline industry in the development of guidance for the disinfection of aircraft; LBS also works

in cooperation with OIE in the revision of the biosafety chapter of the OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2010.

Under the scope of Interpol's work to prevent bioterrorism and the spread and use of biological weapons, LBS organized a series of workshops and trainings in 2010. WHO's role as expert trainer was to raise awareness among participants on proper preparedness and response to public health events of international concern within the framework of the IHR.

August 2010, Geneva, Switzerland: WHO Workshop on the Implementation of the International Health Regulations (IHR)

The purpose of the workshop was to raise awareness and understanding of the IHR as a unique global instrument for public health capacity building and response to international spread of

disease with particular focus on the notification requirements under the IHR. The target audiences of the workshop were the delegations of BTWC States Parties, particularly IHR National Focal Points. One of the main messages conveyed in the workshop using two case studies was the importance of awareness and understanding of the IHR and that its implementation enhances the capacities of all countries individually to detect and control risks within their own borders, and the ability of the global community to protect against the international spread of disease.





→ National Capacity Monitoring (NCM)

The NCM team supports Member States with IHR implementation through the development of guidelines, standards and tools, IHR core capacity assessment and planning, monitoring and evaluation, and operational research.

● **Assessment:** the first step in implementing the IHR is determining a baseline of existing national surveillance and response capacities in accordance with Annex 1A of the Regulations. Based on this assessment, a plan of action for strengthening national IHR core capacities can be developed.

● **Monitoring:** once the national baseline capacity has been determined and plans of action developed, NCM supports Member States in monitoring progress in the implementation of IHR core capacities. In 2010, a monitoring tool, including a checklist and indicators for monitoring progress in the implementation of IHR core capacities was put to use.

● **Evaluation:** evaluation will be necessary to ensure that core capacities are present and functioning. This phase of NCM activity is foreseen in the coming years.

IHR Monitoring framework

With the entry into force of the revised International Health Regulations (IHR), all IHR States Parties are required to assess the ability of their national structures and resources to meet minimum national core capacities for surveillance and response as specified in the IHR and to develop a plan of action to ensure that these capacities will be present and functioning throughout their territories by 2012. WHO is mandated to provide appropriate tools, guidance and support to States Parties to achieve these goals.

In accordance with Article 54 of the IHR, and related resolution WHA61.2 States Parties and WHO are required to report annually to the

World Health Assembly, on the implementation of the Regulations. For this purpose, a monitoring framework was developed by NCM using technical expert views drawn globally from WHO Member States, technical institutions, partners, and from within WHO.

The IHR monitoring process involves assessing, through a checklist of indicators for each core capacity, the following:

→ status of implementation of eight core capacities*

→ development of capacities at points of entry

→ development of capacities for four IHR-relevant hazards: biological (including infectious, food safety and zoonoses), chemical and radio-nuclear.

These core capacities reflect the operational meaning of the capacities required to detect, assess, notify and report events, and to respond to public health risks and emergencies of national and international concern as stipulated in Articles 5 & 13, and Annex 1 IHR (2005). This monitoring framework provides a set of 20 global indicators for monitoring the development of IHR core capacities for annual reporting to the World Health Assembly (WHA) by all States Parties and a further eight indicators for countries which choose to implement more comprehensive monitoring.

The monitoring framework was field tested in 11 countries in 6 WHO regions, and in 2010, this new format of the State Party Report was introduced, based on the monitoring framework which asks for more detailed and specific data compared with the

* Legislation and policy, coordination, surveillance, response, preparedness, risk communication, human resources, laboratory

previous two years. It was distributed to all States Parties for data collection and submission to WHO in 2010. A total of 127 completed questionnaires were received from Member States, representing 65% of the 194 Member States. All regions have submission rates of above 50%, and SEARO and

EMRO have submission rates above 80%.

In order to facilitate the data collection process from 2011 onwards, a web-based tool has been developed, enabling States Parties to submit data on-line on a secure site, and generate outputs.

INDICATORS FOR MONITORING IHR IMPLEMENTATION

The following 20 indicators have been selected for reporting to WHA:

1. Legislation, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of obligations under the IHR.
2. A mechanism is established for the coordination of relevant sectors in the implementation of the IHR.
3. IHR NFP functions and operations are in place as defined by the IHR (2005).
4. Indicator-based surveillance includes an early warning function for the early detection of a public health event.
5. Event-based surveillance is established.
6. Public health emergency response mechanisms are established.
7. Infection prevention and control (IPC) is established at national and hospital levels.
8. multi-hazard National Public Health Emergency Preparedness and Response Plan is developed.
9. Priority public health risks and resources are mapped.
10. Mechanisms for effective risk communication during a public health emergency are established.
11. Human resources are available to implement IHR core capacity requirements.
12. Laboratory services are available to test for priority health threats.
13. Laboratory biosafety and laboratory biosecurity (biorisk management) practices are in place.
14. General obligations at PoE are fulfilled.
15. Effective surveillance and other routine capacities is established at PoE.
16. Effective response at PoE is established.
17. Mechanisms for detecting and responding to zoonoses and potential zoonoses are established.
18. Mechanisms are established for detecting and responding to foodborne disease and food contamination.
19. Mechanisms are established for the detection, alert and response to chemical emergencies.
20. Mechanisms are established for detecting and responding to radiological and nuclear emergencies.

Tabletop exercises for the active assessment and functional evaluation of country preparedness to respond to public health events in compliance with the requirements of the International health regulations (IHR)

This project aims to create tools, training modules and guidance to assist countries to assess and evaluate their preparedness to respond to public health events according to the requirements of the International Health Regulations (IHR). The goal is to ultimately prepare countries to detect, assess, confirm, control and prevent a health threat, in particular to stop it from spreading to other parts of the world.

In 2010 NCM collaborated with the Laboratory Biosafety and Alliance (LBS) team to support the development of sustainable capacity and capability for effective bio risk management within Afghanistan through the development of a national programme that includes appropriate legislation, guidelines, infrastructure, equipment and training. The report: "Biorisk Management in Afghanistan" was approved by the Afghan Ministry of Public Health and will be used in conjunction with the Afghanistan Public Health Institute to select an IHR-related tabletop exercise to assist in further developing bio risk management capacities. This type of collaboration helps to ensure that the bio risk management project will fit within the needs of the national disaster plan and incorporates IHR core capacities.

NCM also collaborated with the Global Influenza Programme (GIP) to introduce training in the design, development and facilitation of tabletop exercises. This first workshop was attended by representatives from different WHO technical

units to assist them develop their scenarios for tabletop exercises. This workshop will now be further developed and improved based on lessons learned, feedback and evaluation.

NCM supported EURO to assess the capacity of the Turkish public health system to prepare for and respond to a public health emergency.



↑ Centre for Strategic Health Operations, Istanbul, Turkey

Country profiles

In close collaboration with WHO Regional Offices, the National Capacity Monitoring team has developed the IHR Country Profiles 2010 supporting regional offices to monitor the progress of individual States Parties. The profiles provide an overview of countries' planning and implementation achievements, presenting selected elements of the core public health capacities required by the International Health Regulations.





→ Regulations, Procedures and Information (RPI)

The RPI team supports IHR implementation through five strategic areas:

1. fulfilling key WHO IHR obligations;
2. supporting the development of national legislation consistent with the IHR;
3. reporting on IHR implementation to WHO governing bodies;
4. commissioning and carrying out studies on the function of the IHR Annex 2 notification instrument;
5. international travel and health.

Fulfilling key WHO IHR obligations

The IHR provides the legal framework for the management of the global response to acute public health risks including those determined by the WHO Director-General to constitute a public health emergency of international concern (PHEIC).

RPI supports countries in fulfilling key WHO obligations under the IHR by supporting and advising all WHO technical units as well as regional and country offices on the application and implementation of the IHR. The RPI team also advises and supports IHR States Parties on application and implementation of the IHR and maintains the network of National Focal Points (NFP). The team manages access to the secure WHO Event Information Site for NFPs and key partner organizations and manages and develops the NFP contact database and the IHR experts roster. The team ensured the administrative infrastructure relating to the IHR Emergency Committee in the context of the pandemic (H1N1) 2009, and supported the Review Committee on the functioning of the International Health Regulations (2005) in relation to the pandemic (H1N1) in 2009. For more detailed information about the Review Committee see page 7.

Continued work of the pandemic (H1N1) 2009 Emergency Committee and the convening of the first IHR Review Committee

The pandemic of influenza (H1N1) 2009 continued until August 2010. The Regulations continued to provide a framework for key aspects of the global response. Notably the IHR Emergency Committee met on three occasions to review and advise WHO Director-General regarding the temporary recommendations issued under the IHR in response to the pandemic and, in the later meetings, advise on the issue of declaring the end of the pandemic and terminating the Public Health Emergency of International Concern.

The network of National IHR Focal Points continued to play an important role in communicating messages from the Organization to its Member States, as well as allowing national authorities to update WHO on the status of the pandemic within their territory.

The Director-General convened the first IHR Review Committee and RPI provided support to the management of the Committee, its membership and procedures and logistical assistance to its work. In addition RPI has coordinated the provision of data to the Committee on the functioning of the IHR since their entry into force in 2007 as well as during their greatest test to date during the pandemic.

Using the decision instruments

WHO guidance for the use of Annex 2 of the International Health Regulations (2005)

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.

WHO had previously published interim guidance on Annex 2, which was reviewed by a group of experts and users from around the world during a technical consultation held in Geneva in October 2008. In 2010 a revised version of the guidance document was published, based on the recommendations of this consultation and on input from WHO Regional Offices. A number of case scenarios were added to illustrate the application of the assessment criteria, which was an important addition to the document. The guidance document also includes the IHR case definitions for the four notifiable disease entities.

In 2009 and in the beginning of 2010, the functioning of Annex 2 of the IHR was evaluated for the first time since their entry into force, as stipulated by IHR Article 54.3 and World Health Assembly resolutions (WHA58.3 and WHA61.2). The evaluation was guided by a technical consultation in October 2008 and implemented by researchers from the University of Ottawa and the Geneva University Hospitals. The reports of the studies on Annex 2 were presented to the first WHO IHR Review Committee in 2010 for consideration. The overall goal of the Annex 2 studies is to improve our understanding of the strengths and weaknesses of the decision instrument to guide WHO in providing support to States Parties in its use in a consistent manner. The recommendations coming from the IHR Review Committee, which will present its report to the WHA in 2011, may result in further updating of WHO's guidance on Annex 2.

Event Information to NFPs

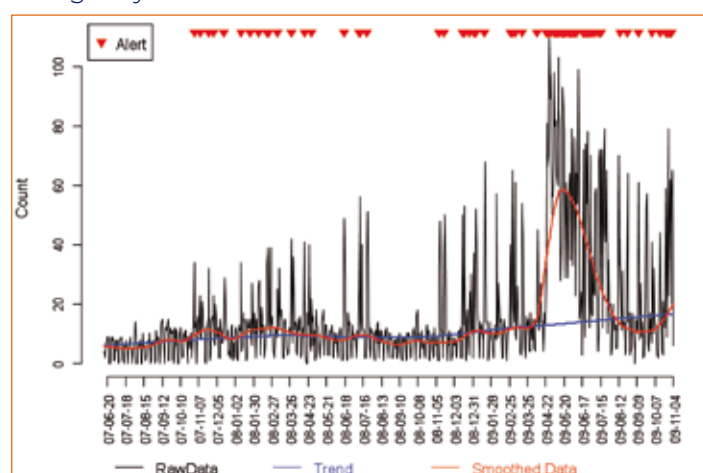
Communication System during H1N1: IHR Event Information Site

Under the International Health Regulations (2005), WHO needs 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 (NFP). The Event information web site (EIS) managed centrally by the WHO Alert and Response Operations group was launched in June 2007.

RPI collaborates, and manages and ensures access to it by a small number of individuals designated by the NFP, selected staff from WHO as well as by a limited number of other United Nations, and 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 all users.

The figure below shows the alert messages sent, and the number of visits to the secure web site by NFPs since June 2007. A continuous gentle increase in the activity count can be seen over time along with sudden peaks of in access corresponding to the alert messages. From March 2009, a large increase in visits to the secure EIS web site is seen accompanied by an increase in the sending of alert messages associated with the start of the H1N1 pandemic. This increase peaked in May and subsequently declined to a level somewhat above the early part of 2009 by August. This graph demonstrates that the IHR communication system was intensively used by NFPs during the H1N1 crisis.

↓ Number of countries (NFP)
login by date between 2007-06-16 and 2009-1-04



Reporting on IHR implementation to WHO Governing Bodies

Article 54 of the IHR and World Health Assembly resolution WHA61.2 requires that States Parties and the WHO Director-General report to the World Health Assembly on the implementation of the Regulations on an annual basis. Reports are first provided to the WHO Executive Board held in January and are then updated and before submission to the Assembly in May. The report reflects the activities undertaken by WHO Headquarters and regional offices during the preceding year as well as key results from the monitoring of national capacity development (described in the National Capacity monitoring section of this report). WHO's Member States comment on and debate the report at the Assembly providing guidance for future activities.

International Travel and health

Travel medicine is a new and growing area of medical specialization and the RPI team provides a focus for these issues in WHO HQ. 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 2010 version of International travel and health is available in English, French, Greek, Italian, Portuguese, Russian and Spanish. The 2011 edition of this publication will be made available on the web in English and French in the first quarter of the year; the Italian and Spanish versions will follow. The web pages of International travel and health, which are updated throughout the year, are currently being remodeled to become more informative, interactive and user friendly. www.who.int/ith

Preparation for mass gatherings

Support has been provided to the national authorities for the preparation of travelers to the South African football World Cup and the Hajj Pilgrimage in Saudi Arabia. The recommendations were widely distributed and posted on national and WHO web sites. A leaflet on health advice for travelers to South Africa for the 2010 FIFA world cup was distributed. Health conditions for travelers to Saudi Arabia for the pilgrimage to Mecca (Hajj) were published in the WHO's Weekly Epidemiological Record (WER) number 43, 2010. www.who.int/wer/2010/wer8543/en/index.html

WHO Collaborating Centres on travel and health

In addition to the two centres already in operation in Europe, based in the United Kingdom and Switzerland, a new WHO Collaborating Centre on travel and health has been designated in the Americas region; based in the United States. These centres contribute to the yearly revision of the ITH publication. In addition they provide expert opinion on international travel and health issues, contribute to training programmes and implement surveillance and research programmes. Plans are underway to designate further WHO collaborating centres on international travel and health centre in Africa and Asia as well as to identify a centre in the Spanish speaking world.





→ Communications and outreach

The main functions of the IHR communications group, based in Lyon, are to support the technical teams in Geneva and in Lyon in the production of their publications and other information tools, update the IHR multilingual web site, raise IHR awareness and continue to identify opportunities for collaboration with the extensive scientific community of Lyon and its region.

Information products and IHR awareness

To support WHO Member States in implementing the IHR, the communications team supports the technical teams to develop a wide variety of on-line training tools, CD-ROMs, videos and an IHR e-library. The objective is to support the technical teams to tailor their information products and use the most appropriate vehicles and formats to meet the needs of their different partners and target audiences. The Department also has an extensive web site which seeks to provide all relevant tools in the six WHO official languages (please see below).

The communications group also develops brochures and other materials targeting general audiences to raise awareness about the IHR, and a quarterly news bulletin targeting National IHR Focal Points and other implementation partners. Finally, ihrinfo@who.int, an information line via e-mail, responds to individual queries from the general public as well as stakeholders and other partners.

A complete list of IHR information products and tools produced in 2010 is in the guidance and global reference tools section on page 39 of this report.

IHR multilingual web site

To ensure access to information and guidance on the International Health Regulations, the communications group manages the IHR web site, which includes an archive of IHR relevant documents as well as new tools and guidance. Making these tools and other materials available in the six WHO languages is a priority, and support from the WHO regional offices and technical partners has proved invaluable in helping to meet the multilingual needs of IHR implementing partners.

The IHR web site also hosted timely, regular updates on the IHR Emergency Committee and on the external review of pandemic H1N1 2009 to ensure transparency and easy access to information about this process.

The WHO Office in Lyon: Then and now

The IHR Coordination Office in Lyon grew out of the vision of the French Government, the Institut Pasteur, the Grand Lyon, the Fondation Mérieux, WHO and joined by the Rhône Alpes Region and the Rhône Department. Lyon was chosen as the site of the WHO Office because of its scientific, institutional and industrial development strategy, centered on vaccinology, immuno-virology and biotechnology. Since its inception, the office has sought to strengthen links with local institutions in Lyon and in France.

A new agreement was signed in June 2010 with the French Ambassador to the UN and WHO Director-General to maintain the WHO Lyon Office for the next five years with an automatic renewal of the agreement.

Outreach with local partners

In 2010, the Lyon office continued to build on existing partnerships with the local scientific community. Highlights of activities over the past year are presented below.

Highlights

World Health Day in Lyon

The WHO World Health Day campaign, "1000 cities, 1000 lives" was celebrated in Lyon this year with a conference on "Cities and children's



↑ Celebration of the World Health Day 2010 in Lyon

health". Around 200 participants from the local scientific community, faculty from the local universities and schools, childrens' health and family associations, gathered at the Hôtel-Dieu, the first hospital established in Lyon, to discuss the challenges of urbanization and its consequences for children's health. This event, which was part of the WHO campaign with over 1000 participating cities from all over the world, was organized by the city of Lyon and the Grand Lyon in cooperation with the office of the World Health Organization in Lyon and the Institute for international strategic research for populations' protection (IRSI-PP).

European Heritage Days

In September the Lyon office participated in the European Heritage days in collaboration with the Doctor Mérieux biological sciences museum by hosting a WHO information stand during this two day event.

Musée des Sciences Biologiques Dr Mérieux

In November on the occasion of the inaugural event for the temporary exhibition Emerging infectious diseases of the Doctor Mérieux biological sciences museum, a senior staff of the office presented the IHR in the context of public health challenges in the current landscape of public health.



→ ANNEXES

→ IHR publications and reference tools

The IHR Coordination Department regularly develops tools to assist countries to strengthen their national capacity and to assist them in implementing the IHR. The development of these instruments is often done in partnership with other organizations. A list of tools released in 2010 is provided below.

General IHR information

IHR E-library - 2010 edition

CD-ROM with the entire e-library as of May 2010 for distribution at the World Health Assembly. While some documents are available in English only, many are available in other languages, particularly French and Spanish.

www.who.int/ihr/elibrary/en/index.html

IHR news bulletin

The WHO quarterly bulletin provides updates on new guidance, tools and other relevant information to assist countries and other implementing partners with IHR implementation. Issues 10-13 were published in 2010.

www.who.int/ihr/ihrnews/en/index.html

Introduction to the IHR

Briefing course on key elements of the Revised IHR. The CD-ROM version of the online self learning module Introduction to the IHR (parts 1 & 2) is now available in Arabic and Chinese in addition to the existing languages (English, French, Portuguese, Russian and Spanish).

extranet.who.int/ihr/training/

IHR implementation, monitoring and legal issues

WHO guidance for the use of annex 2 of the International Health Regulation (2005) - decision instrument for the assessment and notification of events that may constitute a public health emergency of international concern. The purpose

of the WHO guidance on Annex 2 is to help national authorities to use the decision instrument in assessing public health events that may require notification to WHO. 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. Initially published in 2009, it was revised this year.

www.who.int/ihr/revised_annex2_guidance.pdf

IHR monitoring framework: checklist and indicators for monitoring progress in the development of IHR core capacities in States Parties

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. Available in English and French.

www.who.int/ihr/IHR_Monitoring_Framework_Checklist_and_Indicators.pdf

IHR monitoring framework: checklist and indicators for monitoring progress in the implementation of IHR core capacities in States Parties - processes and outputs

This document gives a summary of the processes used in the development of the IHR monitoring framework and indicators. Available in English.

www.who.int/ihr/Processes_of_IHR_Monitoring_framework_and_Indicators.pdf

Protocol for the assessment of national communicable disease surveillance and response systems - guidelines for assessment teams

This document proposes guidance to States Parties on the assessment of their national IHR core capacities for surveillance and response, in accordance with the core capacity strengthening requirements of Annex 1A of the International Health Regulations (IHR) 2005. This in-depth assessment protocol will need to be adapted on a country-by-country basis. The assessment will be supported by WHO with an external team, if requested by the country.

www.who.int/ihr/publications/who_hse_ihr_201007_en.pdf

External review of pandemic response

An assessment of the global response to the pandemic H1N1 is being conducted by the International Health Regulations Review Committee, a committee of experts with a broad mix of scientific expertise and practical experience in public health. Reports of the Committee meetings are accessible on line in all the WHO official languages.

www.who.int/ihr/review_committee/en/index.html

Travel and Health

International travel and health (ITH)

This yearly publication covers all the main health risks to travellers. It describes the relevant infectious diseases, including causative agents, modes of transmission, clinical features, geographical distribution and prophylactic and preventive measures. Available on line in English and French. The document has also been translated into Greek, Italian, Portuguese, Russian and Spanish.

www.who.int/ith/en/

Ports, airports and ground crossings

Recommended procedures for inspection of ships and issuance of ship sanitation certificates

Designed to guide and facilitate the implementation of this new health document by States Parties to the IHR (2005). Currently on line in pilot phase.

List of ports authorized to issue ship sanitation certificates

The latest update of the list of ports and other information submitted by the States Parties concerning ports authorized to issue ship sanitation certificates under the International Health Regulations (2005) created in 2009 can be consulted in English, French, Russian and Spanish at:

www.who.int/ihr/ports_airports/portslanding/en/index.html

Assessment tool for core capacity requirements at designated airports, ports and ground crossings

Developed to support countries in assessing existing IHR core capacities and capacity needs at points of entry. This tool, initially published in English was released in French and Spanish in 2010.

www.who.int/ihr/ports_airports/PoE/en/index.html

Launch of PAGNet pilot web site

PAGNet is a web-based network that brings together public health officials responsible for port health and key partners to coordinate public health activities at ports, airports and ground crossings (PAG) including preparedness for and response to health emergencies affecting international travel and transport. A pilot phase of the interface of this project has been launched.

www.pagnet.info/home

Public health measures taken at international borders during early stages of pandemic influenza A (H1N1) 2009: preliminary results.

Published in WHO weekly epidemiological record N°21, 2010, 85, pages 186-194

www.who.int/wer/2010/wer8521/en/index.html

Laboratory quality and biosafety

Laboratory quality management system training toolkit - French version

Developed by the WHO Lyon Office, the US Centers for Disease Control and Prevention (CDC) - Division of Laboratory Systems: www.cdc.gov/dls/ and the Clinical and Laboratory Standards Institute (CLSI): www.clsi.org

English version available both on CD-ROM and online and French version. Available on line:
www.who.int/ihr/training/laboratory_quality/en/index.html

Infectious substances shipping training - a course for shippers

Online training course for shippers of infectious substances to practice package assembly and completion of shipping documentation.

www.who.int/ihr/i_s_shipping_training/en/index.html

Guidance on regulations for the transport of infectious substances 2011-2012 (applicable as from 1 January 2011)

The document provides information for identifying, classifying, marking, labelling, packaging, documenting and refrigerating infectious substances for transportation and ensuring their safe delivery. It 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.

www.who.int/ihr/publications/who_hse_ihr_20100801_en.pdf

Laboratory training

Laboratory issues for epidemiologists training programme - CD-ROM update of 2007 version

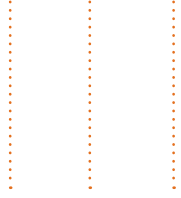
This training programme contains a basic set of training materials and recommendations to help trainers organize their training session on Laboratory issues for Epidemiologists (Lab for Epi).

www.who.int/ihr/lyon/surveillance/laboratory/en/index.html

Report of the workshop: training programmes integrating public health laboratory and applied epidemiology

This workshop was held during the Fifth TEPHINET Scientific Conference, Kuala Lumpur, Malaysia to further work on the integration of epidemiology and laboratory in training programmes.

www.who.int/immunization/documents/tephinet_report_20100920_en.pdf



→ IHR Collaborating Institutions

Institution

Academic Centre for Travel Medicine & Vaccines,
Royal Free & University College Medical School (RFUCMS),
University College

African Biological Safety Association (AfBSA)

African Centre for Integrated Laboratory Training (ACILT)

African Field Epidemiology Network (AFENET)

Agence Française de Développement (AFD)

Agency of Preventive Medicine (AMP)

Airports Council International (ACI)

American Biological Safety Association (ABSA)

American Society for Microbiology (ASM)

Asian Pacific Biosafety Association (A-PBA)

Association française de normalisation (AFNOR)

Association of Public Health Laboratories (APHL)

Association of UK Port Health Authorities (APHA)

Bill & Melinda Gates Foundation (B&MGF)

Bioforce

Biological and Toxins Weapons Convention (BTWC)

Canadian Field Epidemiology Program (CFEP),
Public Health Agency of Canada (PHAC)

Caribbean Epidemiology Centre (CAREC)

Center for Disease Control

Centers for Disease Control and Prevention (CDC)

Central Public Health Laboratory (CPHL)

City University

Clinical and Laboratory Standards Institute (CLSI)

Council of the European Union

Cruise Line International Association, Inc. (CLIA)

Department of Health and Human Services (DHSS)

Det Norske Veritas (DNV) Foundation

Emory University School of Medicine

Epicentre

Epiconcept

European Biosafety Association (EBSA)

City

London

Nairobi

Johannesburg

Kampala

Paris

Paris

Geneva

Mundelein

Washington, DC

Singapore

Paris

Washington, DC

London

Seattle

Lyon

Geneva

Ottawa

Port-of-Spain

Tehran

Atlanta

Muscat

London

Wayne

Brussels

Fort Lauderdale

Washington, DC

Singapore

Atlanta

Paris

Paris

Frankfurt

Country

the United Kingdom

Kenya

South Africa

Uganda

France

France

Switzerland

the USA

the USA

Singapore

France

the USA

the United Kingdom

the USA

France

Switzerland

Canada

Trinidad and Tobago

the Islamic Republic
of Iran

the USA

Oman

the United Kingdom

the USA

Belgium

the USA

the USA

Singapore

the USA

France

France

Germany

Institution	City	Country
European Centre for Disease Prevention and Control (ECDC)	Stockholm	Sweden
European Commission (EU)	Brussels	Belgium
European Programme for Intervention Epidemiology Training (EPIET)	Solna	Sweden
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 (HUG), Department of Internal Medicine, Service for the prevention and control of infections	Geneva	Switzerland
Geneva University (UNIGE), Medical School, Institute of Social and Preventive Medicine (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 (GHSAG) Laboratory Network	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 (HIA) Laveran	Marseille	France
Hospices Civils de Lyon - Hôpital de la Croix-Rousse	Lyon	France
Hospital for Tropical Diseases (HTD), Department of Clinical Parasitology	London	the United Kingdom
Indian Ocean Commission (COI)	Quatre Bornes	Mauritius
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 of Serbia «Dr Milan Jovanovic Batut»	Belgrade	Serbia
Institute of Public Health Research (IPHR)	Tehran	the Islamic Republic of Iran
Institute of Virology and Immunoprophylaxis (IVI)	Mittelhäusern	Switzerland
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

Institution

International Civil Aviation Organization (ICAO)
International Council for the Life Sciences (ICLS)
International Laboratory Accreditation Cooperation (ILAC)
International Labour Organisation (ILO)
International Maritime Organization (IMO)
International Organization for Standardization (ISO)
International Shipping Federation (ISF)
International Society of Travel Medicine (ISTM)
International Union of Railway Medical Services (UIMC)
International Union of Railways (UIC)
Istituto Superiore di Sanità (ISS)
Joint United Nations Food and Agriculture Organization /
International Atomic Energy Agency (FAO / IAEA) Programme
Lausanne University, Institute of Health Economics and
Management (IEMS)
Mauritius Institute of Health (MIH)
National Association of Testing Authorities (NATA)
National Biosafety Association of Brazil (ANBio)
National Health Institute (NHI) Dr Ricardo Jorge
National Health Surveillance Agency (ANVISA)
National Institute for Cholera and Enteric Diseases (NICED)
National Institute for Communicable Diseases (NICD),
National Health Laboratory Service (NHLS)
National Institute of Epidemiology (NIE) - Field Epidemiology
Training Programme (FETP)
National Institutes of Health (NIH)
National Microbiology Laboratory (NML)
National School of Public Health
National Travel Health Network and Centre (NaTHNaC)
National University Health System, Division of Infectious Diseases
Noguchi Memorial Institute for Medical Research (NMIMR)
P4 laboratory Jean Mérier - National Institute of Health and
Medical Research (INSERM)
Pan American Foot-and-Mouth Disease Center (PANAFTOSA)
Panafrikan Institute for Development (PAID)
Pasteur Centre in Cameroon (CPC)
Pasteur Institute (IP)
Pasteur Institute of Côte d'Ivoire (IPCI)

City

Montreal
Washington, DC
Sydney
Geneva
London
Geneva
London
Geneva
Bern
Paris
Rome
Vienna
Lausanne
Pamplemousses
Sydney
Rio de Janeiro
Lisbon
Brasília
Calcutta
Johannesburg
Chennai
Bethesda
Winnipeg
Athens
London
Singapore
Accra
Lyon
Rio de Janeiro
Ouagadougou /
Douala
Yaoundé
Paris
Abidjan

Country

Canada
the USA
Australia
Switzerland
the United Kingdom
Switzerland
the United Kingdom
Switzerland
Switzerland
France
Italy
Austria
Switzerland
Mauritius
Australia
Brazil
Portugal
Brazil
India
South Africa
India
the USA
Canada
Greece
the United Kingdom
Singapore
Ghana
France
Brazil
Burkina Faso /
Cameroon
Cameroon
France
Côte d'Ivoire

Institution

Pasteur Institute of Dakar (IPD)

Pasteur Institute of Madagascar (IPM)

PathWest Laboratory Medicine WA

Public Health Agency of Canada

Research Institute for Tropical Medicine (RITM), Molecular Parasitology Laboratory

Robert Koch Institute (RKI)

Sandia National Laboratories (Sandia)

Secretariat of the Basel Convention

Spiez Laboratory

State Research Center of Virology and Biotechnology (VECTOR)

Swedish Institute for Infectious Disease Control (SMI)

Swiss Center for Quality Control (CSCQ)

Swiss Federal Office of Public Health (FOPH)

Tehran University of Medical Sciences

Temasec Life Sciences Laboratory (TLL)

The International Criminal Police Organization - INTERPOL

The United Kingdom National External Quality Assessment Service (UK NEQAS) for microbiology

Training Programs in Epidemiology and Public Health Interventions Network, Inc. (TEPHINET)

United Nations Committee of Experts for the Transport of Dangerous Goods (UNCETDG)

United States Agency for International Development (USAID)

United States Food and Drug Administration (FDA)

United States Naval Medical Research Unit 3 (NAMRU-3)

United States State Department

Universal Postal Union (UPU)

University of Massachusetts

University of Ottawa (uOttawa)

University of Pretoria, School of Health Systems and Public Health (SHSPH)

University of Sydney

University of Thessaly

University of Zurich (UZH)

Victorian Infectious Diseases Reference Laboratory (VIDRL)

World Organization for Animal Health (OIE)

World Tourism Organization (WTO)

City

Dakar

Antananarivo

Perth

Winnipeg

Muntinlupa

Berlin

Albuquerque

Geneva

Spiez

Novosibirsk

Solna

Geneva

Bern

Tehran

Singapore

Lyon

London

Atlanta

Geneva

Washington, DC

Washington, DC

Cairo

Washington, DC

Bern

Massachusetts

Ottawa

Pretoria

Sydney

Athens

Zurich

Melbourne

Paris

Madrid

Country

Senegal

Madagascar

Australia

Canada

the Philippines

Germany

the USA

Switzerland

Switzerland

Russian

Sweden

Switzerland

Switzerland

the Islamic Republic of Iran

Singapore

France

the United Kingdom

the USA

Switzerland

the USA

the USA

Egypt

the USA

Switzerland

the USA

Canada

South Africa

Australia

Greece

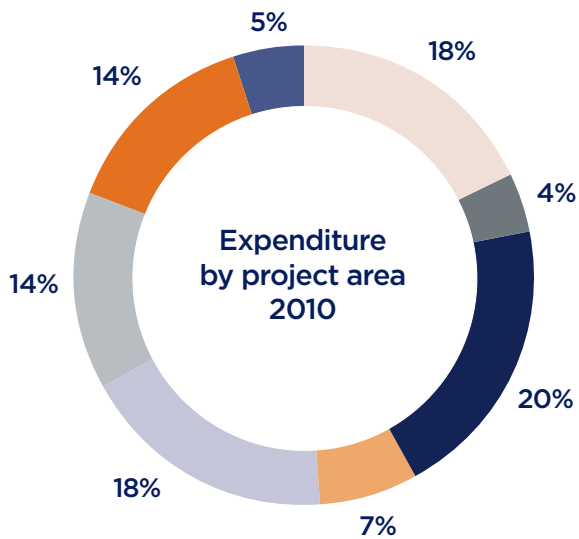
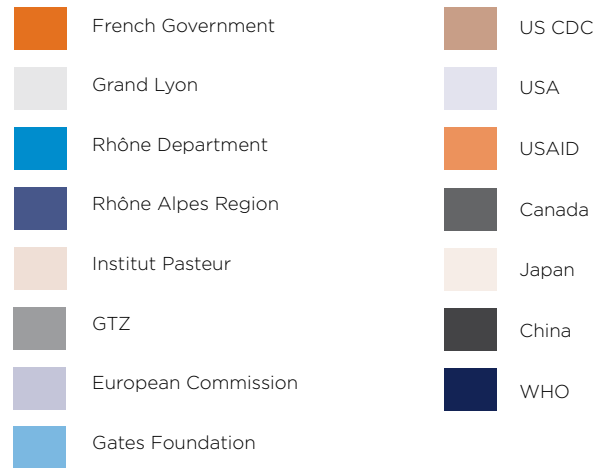
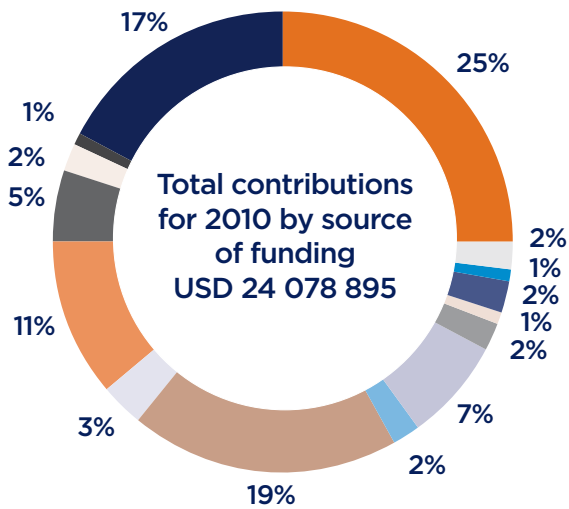
Switzerland

Australia

France

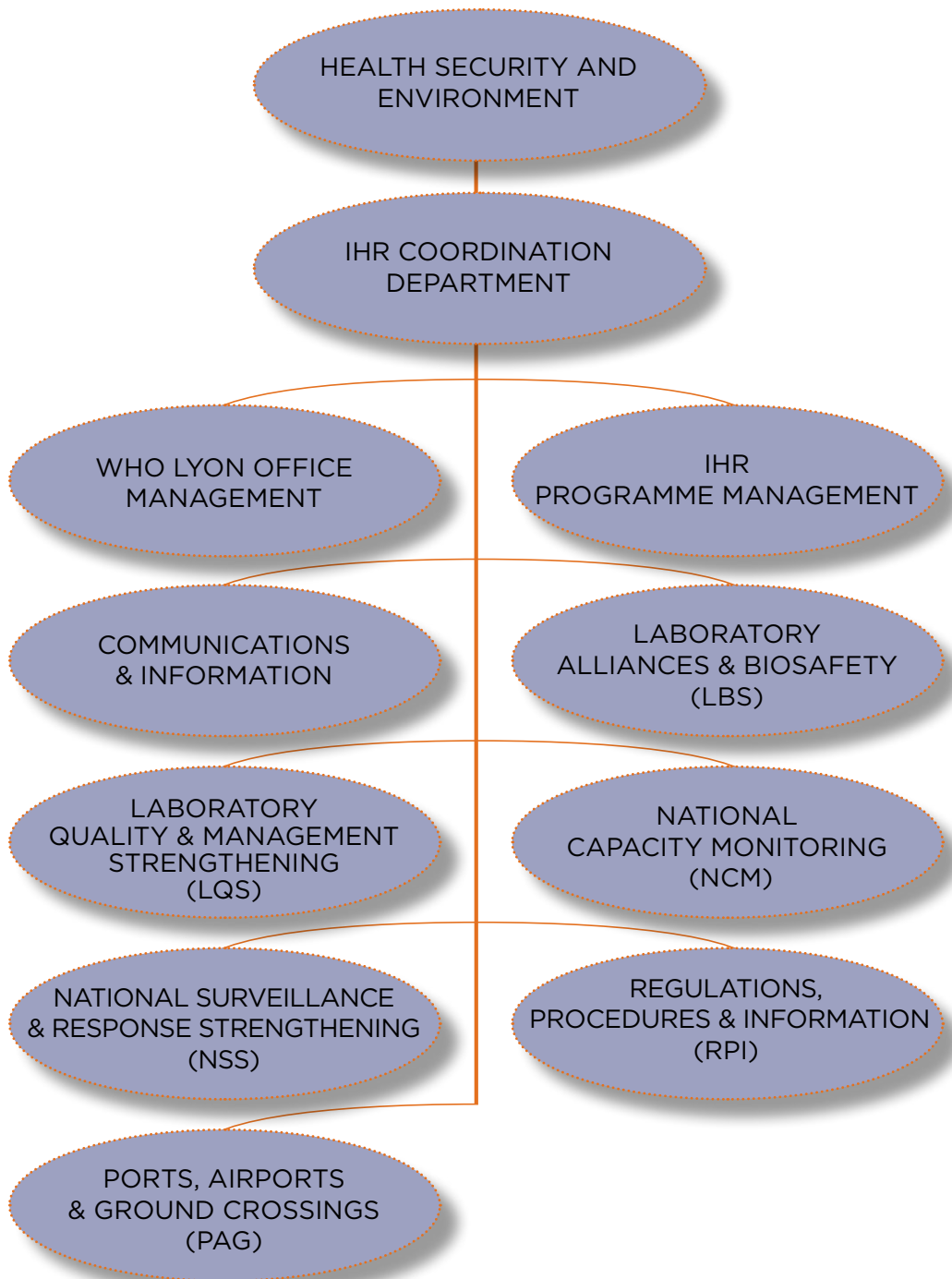
Spain

→ Financial Summary





→ IHR Department Organigramme







ACTIVITY REPORT

2010



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