WHO’s response in the case of an alleged use of a biological agent

Global Alert and Response

....A world on alert and ready to respond rapidly and effectively to epidemics and other acute public health emergencies

Dr. Mike Ryan, Director
Article 1, WHO Constitution (1946)

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WHO

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Epidemic Threats in 2010: Context

- **Emergence** of new or newly recognised pathogens (e.g. Avian flu (H5N1), SARS, Ebola, Marburg, H1N1)

- **Resurgence** of well characterized outbreak-prone diseases (e.g. cholera, dengue, measles, meningitis, shigellosis, yellow fever)

- **Release** (accidental or deliberate) of a biological agent (e.g. BSE /v CJD, smallpox, SARS, anthrax)
Globalization of pathogens
- Global travel: people, animals, vectors
- Global trade: animal and their products, vaccines, medical products, etc.

Amplification of pathogens
- Successful H2H transmission,
- Nosocomial transmission in health care centers
- New introduction from animals
- Urbanization, mass gatherings
- Agricultural intensification
- Technology and Industry
- Accidental or deliberate use of biological agents

Emergence of pathogens
- Encroachment introduction, “Spill over”
- At-risk behaviour
- Human encroachment, ex-situ contact, ecological manipulation
- Translocation of wildlife
The reality – we are vulnerable!

- Epidemic diseases and other public health threats will continue to occur because of
  - Efficient adaptation of the microbial world
  - Vulnerability and poor adaptation of the human world,

- Epidemics and other public health emergencies present a major threat to life, economies and security in an increasing inter-connected and inter-dependant world

- These events often
  - expose existing weaknesses in public health and systems; and the need for rapid response drains resources, staff, and supplies away from other health priorities.
  - Stress social and political systems, often leading to inappropriate and ineffective adaptive behaviours.

- Convergent risks require coherent responses
Epidemic Control has Changed!!

Social Mobilization
Health Education

Media Information

Coordination

Logistics
Security
Communications

Diagnosis
Surveillance
Investigation

Case Management
Infection control

Barrier
nursing

IN / OUT

Clinical
Care

Burial/
funerals

Infection
Control

COMBI *

Traditional
healers

Medical
Anthropology

Psycho
Social
support

Transport
Vehicles

Finance

Find Cases

Track
Contacts

Sampling
+ Testing

Finance

Track
Contacts

Data
Analysis

Epi/lab
Studies

_environmentcontrol

Life
Support

Field
Comms

Mobile teams

(* COMBI = communication to change behaviors)
No single institution has all the capacity!
The legal framework has changed:

International Health Security
IHR(2005), an international paradigm shift

International traffic, trade and tourism

From **three diseases** to **all public health threats**

From **preset measures** to **risk assessment response**

From **control of borders** to, also, **containment at source**
WHO and its Member States have new and explicit obligations to collectively approach the prevention, detection, and timely response to public health emergencies of international concern.

IHR defines a risk management process where Member States work together and through WHO to collectively manage acute public health threats.

Increased responsibilities, greater scrutiny!

The key functions of this global system are to:

- Identify
- Assess
- Assist
- Inform

........Plus, in extra-ordinary circumstances, DG can declare a PHEIC and make global recommendations.
Effective Global Alert and Response

- **Strong national public health systems** able to maintain active surveillance of diseases and public health events; investigate detected events; report; assess public health risk; share information; and implement control measures.

- **Effective global systems, networks and tools** for containing public health threats, able to carry out continuous global risk assessment, and prepared to respond to unexpected events with the potential for international relevance.
Transforming Gaps into Opportunities

- Build strong national and international public health systems that reduces the threat but also improves detection, assessment and response (e.g. bio-safety, diagnostic networks)
- Build strong networks of excellence for capacity strengthening, alert, readiness and response
- Develop tools and interventions for severe epidemic and emerging diseases through scientific and public health collaboration in the field
- Adapt emerging technologies for enhanced control of severe and unpredictable disease emergencies
- Share guidance and assemble knowledge on high-consequence or high visibility events such as mass gatherings (Hajj, FIFA World Cup, Olympics..)
Responding to the intentional release of a biological agent

- WHO's role will be to manage the public health consequences and communicate real-time public health risk assessments and recommendations.

- WHO has developed and tested specific SOPs for response to an alleged use, including specific indicators of non-natural sources of infection.
WHO is developing internal strategies,
- Alert and response procedures would be largely the same in cases of natural vs. deliberate events. Context of the intervention changes…

Differentiating between a natural and deliberate events
- Alert signals (claims and hoaxes)
- Clinical and epidemiological findings
- Laboratory findings
- Specific high-risk diseases
- Evidence of biological agent dissemination (munitions)

Decision-making for deliberate events treatment:
- Treat as deliberate event
- Increased preparedness and monitoring
- Treat as natural event
WHO and alleged use

- WHO is the specialized UN agency for health with the technical and scientific capacity for detection, characterization, risk assessment and containment of epidemics.

- WHO has a commitment (WHA 54.14 and WHA55.16) to build capacity towards CBRN preparedness in Member States. WHO's approach is through public health system improvement and implementation of the capacity strengthening component of IHR.

- In addition WHO recognizes its role to provide technical support to the UN and international community in the investigations of alleged use as well.

- The UN Office for Disarmament Affairs (UNODA), has been mandated by the UN General Assembly Resolution 60/288 (2006) to coordinated the activities to strengthen the secretary-general’s capabilities, emphasizing the need for strengthening the biological area.

- WHO is working to support UNODA in this area.
WHO-UNODA collaboration

Development of the collaboration
- June 2008 – May 2009 exchange of letters between ODA and WHO agreeing support
- May 2009 - endorsement of agreed WHO-UNODA roadmap
- August 2010 - signing of MoU between WHO and ODA

Roadmap
- Harmonization of relevant operational procedures.
- Educational/ Training activities.
  - Exchange of invitations to observe/participate in the respective training.
  - Exchange of visits to share experience, information and promote cooperation on a working level:
  - Identification of skills and expertise in relevant Rosters
- Endeavor to assist in conducting field operations including equipment, information, and seconding technical experts
WHO-UNODA collaboration (cont.)

The Memorandum of Understanding being signed in August 2010

- Formalizes the areas of collaboration and roles of each Party, which were developed in the roadmap
- Ensures institutionalization of these agreements

Objectives

- Assisting UNODA to develop the technical/operational capabilities to conduct an investigation of deliberate biological events
WHO strengths and structures

- Mandate and International Agreement (IHR 2005)
- WHO Decentralized Structure & Capacity
  - 6 regional and 142 country offices
- Our collective Experience in managing public health events
- The Networks and Partnerships that we have developed and rely on (e.g. GOARN, regional and sub-regional networks, specialist networks, WHO CCs, GISN.....)

World Health Organization
Public Health Event Response under the International Health Regulations

"Payload and Platform" concept of operations
Substantiated acute public health events, by country (EMS, 1 January 2001 – 9 June 2010, n=1,945) *

* Excludes pandemic (H1N1) virus 2009 events.

** China: number includes acute public health events in the special administrative regions of Hong Kong (30) and Macau (2), and in Taiwan (14).

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
Map Production: Public Health Information and Geographic Information Systems (GIS)
World Health Organization

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GOARN is a partnership of over 190 technical institutions and networks coordinating actions and resources to respond to public health events of international concern.

GOARN partners have provided experts for over 104 operations in 75 countries.
GOAR N and Specialist Networks

Multinational responses have best illustrated the need for specialised craft network in a variety of disciplines: epidemiology, modelling, clinical management, infection prevention and control, Health promotion (COMBI), risk communications, logistics, laboratory, ICT, facility design, mass gathering, Ops centres, ecology…
Key Activities - Assess

- Others sources
- Informal/Unofficial Information
- IHR National Focal Points (Member States)
- Notifications/Consultations
- Verification
- Initial screen
- Event Risk Assessment
Key Activities – Assist

- Others sources
  - Informal/Unofficial Information
  - IHR National Focal Points (Member States)
    - Notifications/Consultations
      - Verification
        - Initial screen
          - Event Risk Assessment
            - Assistance / Response
Key Activities - Inform

- IHR National Focal Points (Member States)
  - Informal/Unofficial Information
  - Notifications/Consultations
    - Verification
    - Event Risk Assessment
      - Assistance / Response
      - Disseminate Public Health Information

Others sources

WHO

World Health Organization
Risk/Event Management Process

- IHR National Focal Points (Member States)
- Informal/Unofficial Information
- Event Risk Assessment
- Verification
- Assistance / Response
- Disseminate Public Health Information
- Public Health Emergency of International Concern (PHEIC) Assessment
- Others sources

WHO

World Health Organization
Global Summary

Go to Country

Choose Country

Global Summary Map

Overview of Ongoing Events

Events: 128
Public Health Risks: 97
PHEICs: 0
Countries Affected: 73
Requests for Assistance: 8
Deployments: 0

Hazard | Total Events
--- | ---
Infectious | 104
Animal | 7
Food Safety | 6
Undetermined | 4
Disaster | 4
Chemical | 3
Nutritional deficiency | 0
Product | 0
Radionuclear | 0
Key features of the global EMS
(WHO's Event Management System)

- WHO internal tool for public health event-based information management
- Secure platform
- Custom-built for decision support
- Being rolled-out to 3 levels of WHO
- IHR (2005) compliant
- All-hazards approach
- Risk assessment driven
- Phase II enhancements being planned
Risk communication products

- EMS feeds information to the Event Information Site for IHR National Focal Points, the Global Outbreak Alert and Response Network (GOARN) and the public.
WHO activities in the evolving risk management concept of infectious disease

- Enhance the existing Global Alert and Response System (The Operational arm of the International Health Regulations)
- Build Global and Regional Networks for Managing Biological Risks
- Enhance Inter-sectoral Cooperation for Management of Biological Risks
- Strengthen National Capacities in disease prevention, surveillance and response (IHR department)
- Global Health Leadership, Collaboration and Partnership
Conclusions - I

- The convergence of risk creates a need for the coherence in response.

- Sophisticated Tools, Networks and Systems have been developed by WHO and its partners for managing biological risks of any origin.

- WHO's primary role in response to an accidental or intentional release of a biological agent will be to manage the public health consequences and communicate real-time public health risk assessments and recommendations.
WHO is most effective when it works through partnership and in a co-ordinated fashion with
- Member States and other international Organizations
- technical partners in the public, academic and private sector

Effective working relationships have been forged when collaboratively dealing with major threats/events

These relationships have been based on mutual need, collective responsibility, solidarity, transparency, personal commitment, and pride in our organizations and systems

This is not reproducible or sustainable without a major investment in national, regional and global public health infrastructure
THANK YOU!

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