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**EPISOUTH
SECOND TRAINING MODULE**

Health crisis management : Preparedness and response

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**EPISOUTH
SECOND TRAINING MODULE**

Health crisis management : Preparedness and response

- Health crisis: general issues
- Experience from crisis management
 - “Mad cows” disease
 - Avian influenza
- Preparedness and response plans
- Lessons learnt

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Definitions (EC)

- **Rapidly evolving Public Health Threat**
 - event (incident), condition or agent, which by its presence has the potential to **rapidly** harm, directly or indirectly, an exposed population, **sufficiently** to lead to a crisis.
- **Public Health Crisis**
 - sequence of events following a public health threat, where the **limited time available** for deciding and the large degree of **uncertainty** leads to overburdening the normal response capacity and undermining of authority.

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Definitions (WHO)

- **Health risks/ threats** involve
 - emotional connotation and uncertainty regarding health and economic effects.
- **Risks may develop into a crisis:**
 - either when public trust in decision-makers' control is at stake (*SARS epidemic Canada*)
 - or when health risks lead to notable attention in the press and thus the awareness of the population (*BSE UK*),

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Definitions (WHO)

- **Crisis:**
 - unstable situation of extreme danger or difficulty.
 - It indicates a turning-point, usually a deterioration of a situation.
 - It arises when local health systems on which people depend are overwhelmed and cannot or do not respond to the demands or needs.
 - Crisis is an imprecise term.
 - It can also stand for failures in communication that cause crises.
 - In health, crisis and communication are closely linked.

All health crises are also communication crises

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Crisis, emergency, disaster

- The terms **crisis**, **emergency** and **disaster** all define critical situations with different and common features.
- Different economic and political cultures use these terms differently.
- **Disaster/Emergency**
 - (WHO): disastrous event in which the needs and available resources are imbalanced. Mostly applied to developing countries.
 - Western European countries: often events that have a more certain epidemic potential vs **crises**, which have a **political connotation**.

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Crisis

- Often leave **uncertainty** about the epidemic potential of an event.
- In countries with a high level of health literacy, crisis is often accompanied by the health-literate **public blaming decision-makers**.
- In addition, **emotional connotations** such as fear and panic are often elements of a crisis because each person is uncertain about how a crisis might affect his or her life.
- The **mass media** typically trigger these dynamics.

Epidemics can evolve without a crisis,
and crisis can evolve without an epidemic

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Crisis - Characteristics:

Exaggerated public & media attention

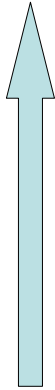
- “0 tolerance” for infections
 - Health seen as a priority
 - Infections account for dirty and uncontrollable
 - Existential confrontation
- Why worse than other infections?
 - Previous healthy status of cases
 - Occurrence among young children and adolescents
 - Fear for permanent complications (15-25%)
 - No perception of exposure

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Perception of risk

Lower Perceived Risk

Trustworthy sources
 Substantial benefits
 Voluntary
 Controllable
 Fair/equitable
 Natural origin
 Familiar
 Not dreaded
 Certain
 No children as victims



Higher Perceived Risk

Untrustworthy sources
 Few benefits
 Involuntary
 Not controllable
 Unfair/inequitable
 Man made origin
 Unfamiliar/exotic
 Dreaded
 Uncertain
 Children as victims

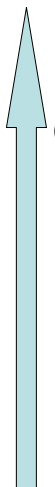


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Perception of risk

Lower Perceived Risk

Not memorable
 Moral/ethical
 Clear non-verbal message
 Responsive
 Random/scattered
 Little media attention
 Victims statistical
 Immediate effects
 Effect reversible
 Scientifically well understood



Higher Perceived Risk

Memorable
 Immoral/unethical
 Mixed non-verbal message
 Unresponsive
 Catastrophic
 Much media attention
 Victims identifiable
 Delayed effects
 Effect irreversible
 Scientifically poorly understood



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Risk acceptance

- Risk acceptance is a function of
 - The individual perception
 - The society
 - The cultural environment
 - The benefits (of the hazard)
 - The costs (of prevention the hazard)
- Safety is relative:
 - it is a judgment of the acceptability of risk
 - an activity is considered safe if it's risks are considered acceptable

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Estimated risk of death to an individual

- Communicable disease 1 in ?
- Automobile Accident 1 in 4,000
- Drowning 1 in 30,000
- Air Travel 1 in 100,000
- Lightning 1 in 2,000,000
- Nuclear Reactor Accident 1 in 5,000,000,000

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Crisis - Characteristics

- **Uncertainty:** Cause, evolution, risks...
- **Precautionary principle:**
 - Acting to reduce risk in advance of a complete scientific understanding, by extension of evidence and in the exercise of reasonable foresight
- **Biologic plausibility:**
 - Changing paradigm: guilty until proven innocent
- **Media-amplification:**
 - Public health in line of fire
 - Conflicting results in the media
 - Amplification of the events by the media

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SARS

- Human toll: from 1 Nov, 2002 to 17 June, 2003
 - No of Countries: 32
 - Total Cases: 8464
 - Deaths 799
- Estimated economic loss

	Growth reduction in % of annual GDP	
• China	0.6%	\$7.2 billion
• Taiwan	0.9-1.9%	\$2.5-5.3
• Hong Kong	1.8-4.0%	\$3.0-6.6
• Rep of Korea	0.2-0.5%	\$1.3-3.0
• Asia region	0.4-1.0%	\$16-30 billion

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The costs of SARS

- Tourism was reduced in China by 40%
- In Hong Kong, retail sales down about 50%
- Airline bookings down by 85%
- Hotel occupancy in Asia reduced by 25%
- Visitors to Singapore down by 61%
- Canada hotel occupancy dropped 47%=\$100m
- SARS cost Canada \$30 million a day
- GDP growth of China declined by 0.6%

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SARS: Characteristics

- Media-transmitted epidemic of *concern for personal safety*
 - Perception of risk became function of media exposure
- Early containment was main measure available
- Rise of lobby groups from pharmaceutical and diagnostic companies
- Capacity for societal disruption
 - Cross-sectoral approach

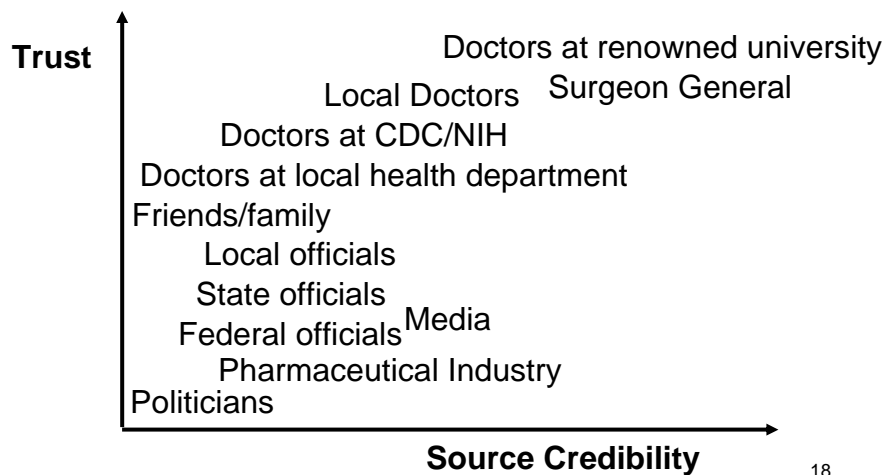
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SARS: Response

- Fast international reaction (compared to other diseases)
 - **Fear and uncertainty:** rapid geographic spread created a sense of urgency to respond
 - **Stronger Leadership:** WHO took an active role in sounding the alarm and mobilizing the global response
 - **Scientific Advances:** new tools and techniques better and faster research
 - **Biological threat preparedness.** Concerns about the threat posed by biological weapons enhanced the ability and speed of many countries to identify new infectious diseases
 - **Concern About Missing “Another” AIDS.**

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Who does the public believe in health questions?



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Crisis - Questions to politicians

- How are those who are ill getting help?
- Is this thing being contained?
- What can we expect?
- Why did this happen?
- Why wasn't this prevented?
- What else can go wrong?
- When were you notified about this?
- What does this information/results mean?
- What bad things aren't you telling us?

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Health crisis from the "media" perspective (I)

- News sequence:
 - Crisis becomes public due to evident harm or report by affected people. A problem is always known.
 - Hypothesis on its origin and possible social/ health consequences start to be published
 - Causal agent/s is identified
 - Control measures are explained
 - Claim for retributions (penalties) and indemnities
 - Effects and consequences are described and evaluated
 - Follow-up of adopted measures
 - Cessation of measures is explained

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Health crisis from the “media” perspective (II)

- Difficulties a journalist may confront:
 - Initial confusion
 - No one knows. No one answers. No spokesperson. PH? What’s that? *The last expert to be contacted is the PH expert.*
 - Media editors press to have something published before the close-down (*where’s the responsible person for health info?*)
 - Health authorities usually don’t speak, minimize the problem or hide data, facts...

All these factors increase the risk for media giving wrong or inaccurate information and thus, facilitate unjustified alarm

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Health crisis from the “media” perspective (III)

- Journalist’s duties (*after a journalist*):
 - To report on anything that could pose a health risk
 - To promote notification of new cases
 - To inform on the actors involved in the crisis
 - To enhance investigation on the causative agent
 - Disseminate scientific conclusions
 - Press to have control measures put in place
 - To report on failures to execute them
 - To calm down and educate the population

We may not agree, but... they think its their duty

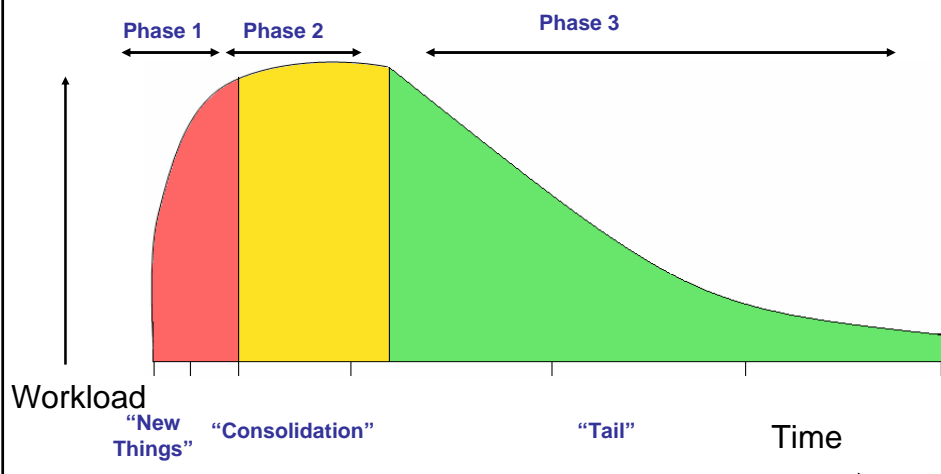
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Risk communication

- Part of crisis communication
- This is two-way communication between stakeholders (decision-makers, experts) & the public
 - about the existence, nature, form, severity or acceptability of risks
- Health risks to a population can be attributed to several causes, including environmental and other external hazards
- Crises have several stages, and different tasks can be attributed to each stage in managing a crisis.
- Crisis communication is only a small part of a crisis.

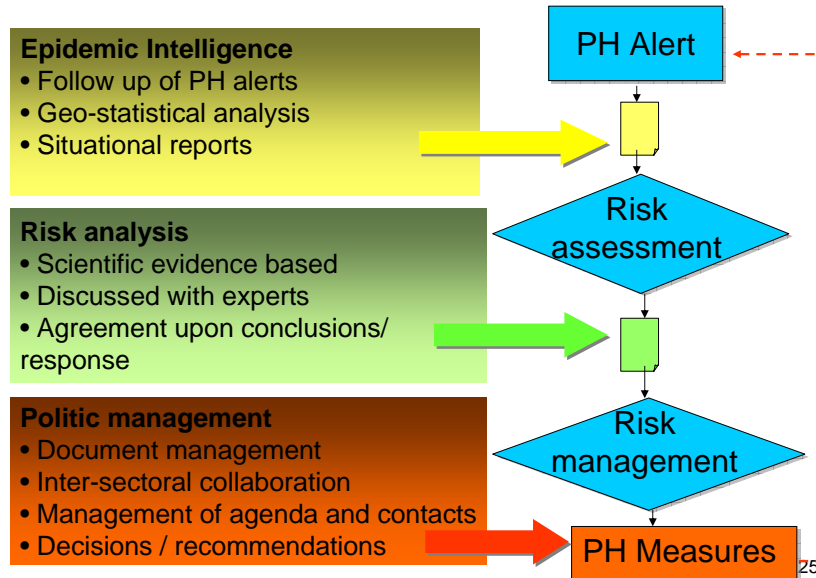
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Phases and workload



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Crisis management- Tasks



Crisis management of PH incidents

- The goal is to minimize the possible impacts.
- The most effective method to minimize impacts is a timely and appropriate response.
- Because crisis usually are complex and require the cooperation of many different agencies, a timely and appropriate response can only occur if the various agencies involved are co-ordinated and properly prepared

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Crisis management of PH incidents

On a national level, the main tasks are to develop:

- National public health coordinating structure
- Public Health Incident Plan (GPP)
- Necessary legislation
- Databases
- Interagency communication mechanism
- Emergency response guidelines
- Incident exercises, training, and audits
- Preventive measures

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Crisis management

MAD COWS DISEASE



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MAD COWS DISEASE

- In 1996, UK announced that meat products from BSE-infected cattle were linked to a new form of incurable human spongiform encephalopathy - new variant Creutzfeldt-Jakob disease (nvCJD).
- From 1985, when a mystery disease now known as BSE emerged in Daisy, a dairy cow from Kent, the annual number of BSE-infected cattle rose to 731 within the space of three years. By 1989, 400 new cases appeared each week, and by 1992, 100 new cases appeared each day
- British authorities began reassuring national and international audiences in 1989 that mad cow disease was under control.

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MAD COWS DISEASE

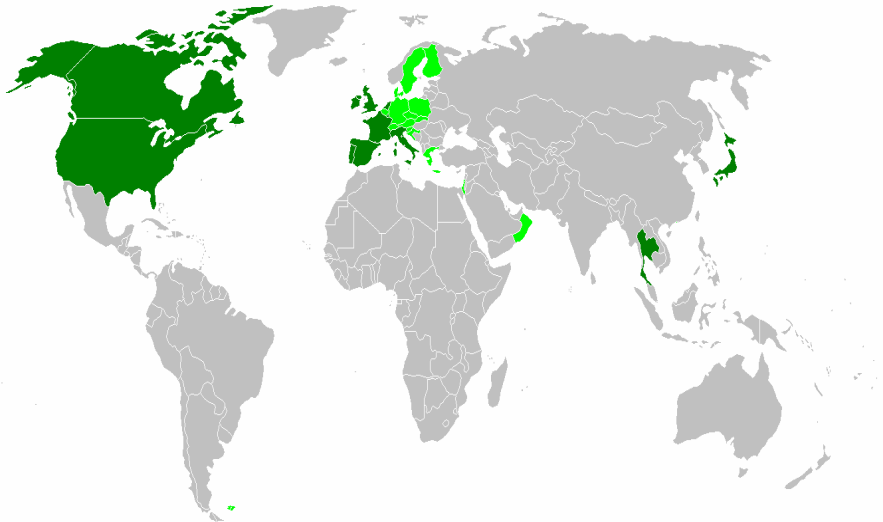
- Scientists proposed that the epidemic could swiftly be brought to a close with the immediate cull of infected herds. The idea was dismissed on the grounds that compensation for the owners of the herds was financially unaffordable.
- The British Ministry of Agriculture, Fisheries and Food (MAFF) exposed mainland Europeans to an unknown quantity of BSE-contaminated veal among the 2 million calves transported to Europe between 1990 and 1995.
- MAFF ignored a 1990 Brussels ruling designed to prevent the spread of BSE outside UK – continued exporting BSE-infected animals
- For eight years, debt-burdened non EU countries were lured to buy attractively low-priced BSE-suspect meat and the same animal protein-enriched pellets believed responsible for UK's BSE problems.

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Bovine Spongiform Encephalopathy (BSE)

- Fatal, neurodegenerative disease in cattle
- Long incubation period, about 4 years
- In the UK, more than 179,000 cattle have been infected and 4.4 million slaughtered during the eradication programme
- The disease may be transmitted to human beings who eat the brain or spinal cord of infected carcasses.
- In humans, it is known as new variant Creutzfeldt-Jakob disease (vCJD), and by April 2008, it had killed 163 people in UK, and 37 elsewhere
- The number expected to rise because of the disease's long incubation period.
- Between 460,000 and 482,000 BSE-infected animals had entered the human food chain before controls on high-risk were introduced in 1989

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Dark green areas are countries with confirmed human cases of vCJD. Light green shows countries which have reported cases of only BSE.

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Elements for a crisis

- Little known about the disease
- Disease has no cure
- Contaminated beef products implicated
- Affects the brain
- Difficult to diagnose
- Lack of trustworthy information
- Dishonest management of the crisis by politicians

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Crisis management

AVIAN INFLUENZA



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The next influenza pandemic?

- People are exposed to different strains of the influenza virus many times during their lives.
- Even though the virus changes, their previous influenza infections may offer some protection against infection caused by a similar strain of the virus.
- 3 or 4 times each century, for unknown reasons, a **radical change takes place in the influenza A virus** causing a new strain to emerge.
- Since people have **no protection** against the new strain, it can **spread rapidly around the world**, causing what is known as a pandemic.
- The last three pandemics occurred in 1918-19, 1957-58 and 1968-69.

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Crisis: cross-sectoral consequences

- Given the high level of global traffic, the pandemic virus may **spread rapidly**, leaving little or no time to prepare.
- **Vaccines, antiviral agents and antibiotics** to treat secondary infections will be in **short supply** and will be unequally distributed. It will take several months before any vaccine becomes available.
- **Medical facilities will be overwhelmed.**
- Widespread illness may result in sudden and potentially **significant shortages of personnel** to provide essential community services.
- The **effect** of influenza on individual communities will be **relatively prolonged** when compared to other natural disasters, as it is expected that several waves of outbreaks.
- Preparedness as a best defence!

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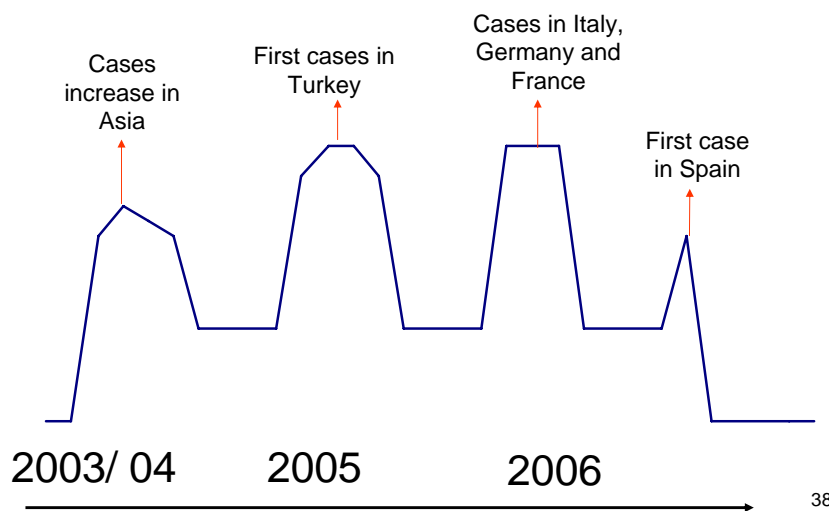
Any Avian flu cases in Spain?



Great Crested Grebe
Álava (July 2006)

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Avian Influenza: News intensity on Spanish media



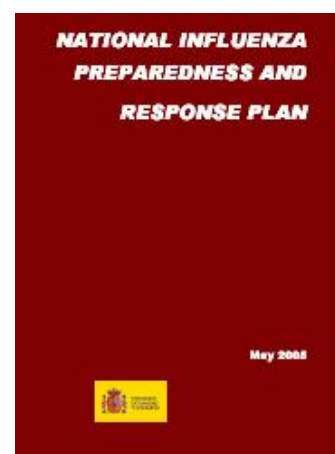
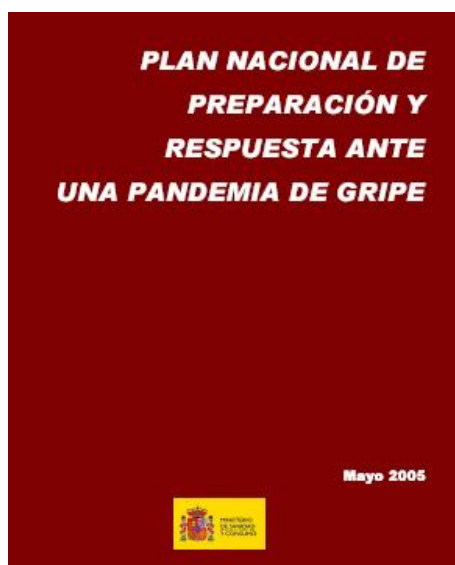
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Why such a low interest?

- 2005:
 - Media reporting on avian influenza cases
 - Link between avian cases increase and risk for human cases?
 - Food as a source for avian flu?
 - Is there any treatment: Antivirals, Vaccines?
- • National Plan
- • Communication Plan

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National Preparedness Plans



General Objectives

- To reduce the impact of the pandemic in the population and diminish social disruption
- To take appropriate measures in order to reduce viral transmission and protect the population
- To ensure that response and control measures are in accordance with EU and WHO recommendations

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Key Strategies

- Clarify roles and responsibilities
- Enhance rapid detection and surveillance
- Reduce dissemination and impact
- Maintain public awareness and facilitate acceptance of response strategy from the public
- Carry out appropriate investigation to support response

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Key elements of the National Preparedness Plan

- Planning and Coordinating Structure
- Epidemiologic and Virological Surveillance
- Prevention and Control Measures
- NHS Response
- Communications Strategy



US soldiers wear masks to protect against Influenza in 1918

Planning and Coordinating Structure

- **National Executive Committee:** helps the implementation of measures aiming to reduce the impact of the pandemic
- **Public Health Board:** coordinates Plans developed by the Autonomous Communities
- **Subcommittees and Working Groups**
 - Epidemiologic and Virological Surveillance
 - Vaccines and Antivirals
 - Emergency Response
 - Communications
- **Scientific Committee**

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Lessons learnt

- Health crises are characterized by uncertainty
- Uncertainty is reduced by:
 - Preparedness
 - Communication
- Coherence and acting accordingly are essential to ensure public acceptance of a crisis management

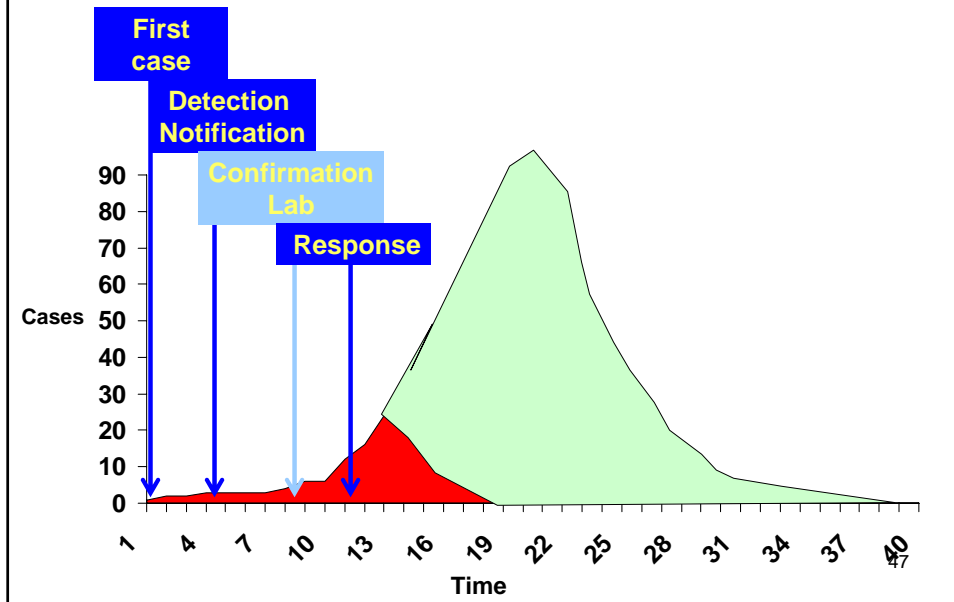
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Contingency emergency plans

- Contingency emergency plans outline “what to do in situation X”.
- They describe the roles and responsibilities of the various actors in the event of a particular incident.
- They should ideally be developed based on scenario planning, risk assessment, mathematical modelling and economic input.
- Contingency emergency plans should be tested with live and/or tabletop exercises to ensure that the plans will actually work in practice and to further improve preparedness and strengthen intersectoral work.

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Anticipation: detection and control



FRAMEWORK OF A PREPAREDNESS PLAN

INTRODUCTION

- Goal and objectives of the preparedness plan
- Overview of the plan
- The planning process (committee structure composition)
- Roles and responsibilities (in planning, response and recovery phases)

BACKGROUND

- X
- Phases
- Estimated impact in (country name)
- Legal considerations
- Ethical considerations

FRAMEWORK OF A PREPAREDNESS PLAN

COMPONENTS OF PREPAREDNESS AND RESPONSE

(including current status, gaps, action plans)

- Command and control (*leadership, organization and coordination*)
- Surveillance (epidemiologic, laboratory)
- Public health measures (vaccine, antivirals, disease control measures)
- Health services (public health, rapid interventions, surge capacity)
- Emergency and essential services
- Communications
- Logistics
- Contact lists (see annexes)

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FRAMEWORK OF A PREPAREDNESS PLAN

ANNEXES

- Contact lists – external, internal (staff, suppliers...)
- Supplies (EOC)
- Organizational Charts
- Maps, demographic information
- Forms – situation status, messaging, infrastructure assessment, briefing, resource request, sign-in/out
- Other checklists
- Other information as appropriate

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Crisis management in the EU

- Coordinated policy decision making between Member States and at EU-level on public health issues
- Pro-active health crisis co-ordination, including inter- sectoral or security issues coordination (i.e. significant action extends beyond the health sector)
- Exchange information on health-related threats to ensure rapid communication in case of major health-related crises

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Conclusions

A crisis is a

- Sequence of events
- Undermining normal response capacity (in medical, administrative, political and psycho-social dimension)
- With limited time available for deciding
- With large degree of uncertainty
- Leading to distrust of authorities
- Leading to search for culprit

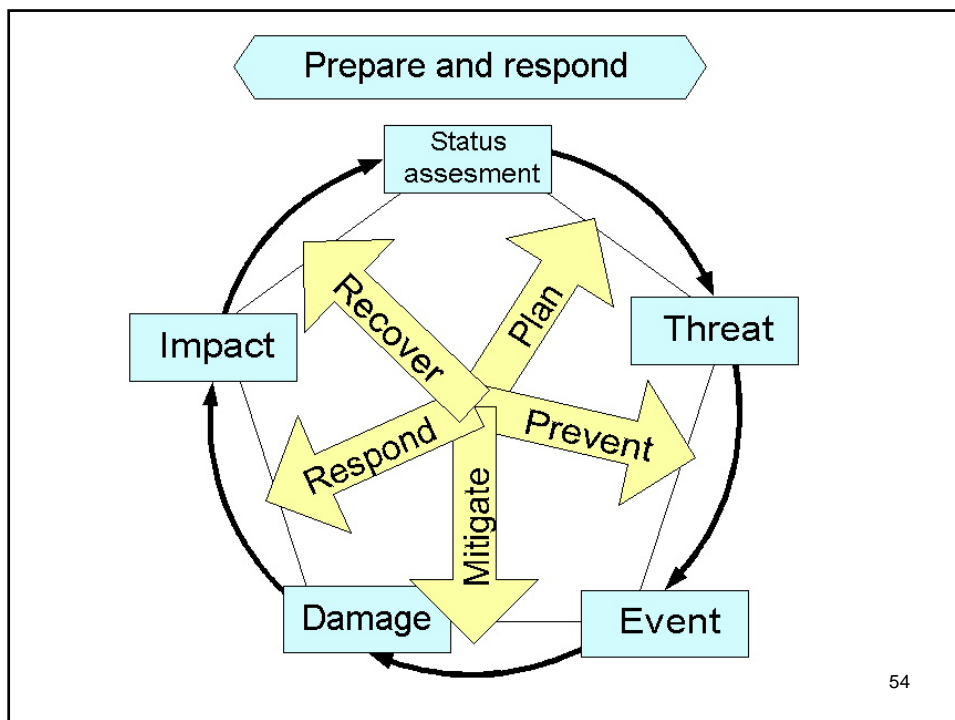
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Conclusions

Response should include

- Information distribution
- Co-ordination
- Cross-sectoral approach
- Preparedness (Plans)
- Handle massive amount of information
- Exercise and test
- Link with risk-assessment agencies
- Link authorities

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A crisis as source of opportunities

- The success of PH services is usually invisible: no news
- Health crisis evidence the importance of PH and test its basic principles
- They are an opportunity to:
 - show its usefulness and reinforce it
 - Modify health policies
 - disseminate the need for investment in PH

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Thank you for your attention

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