

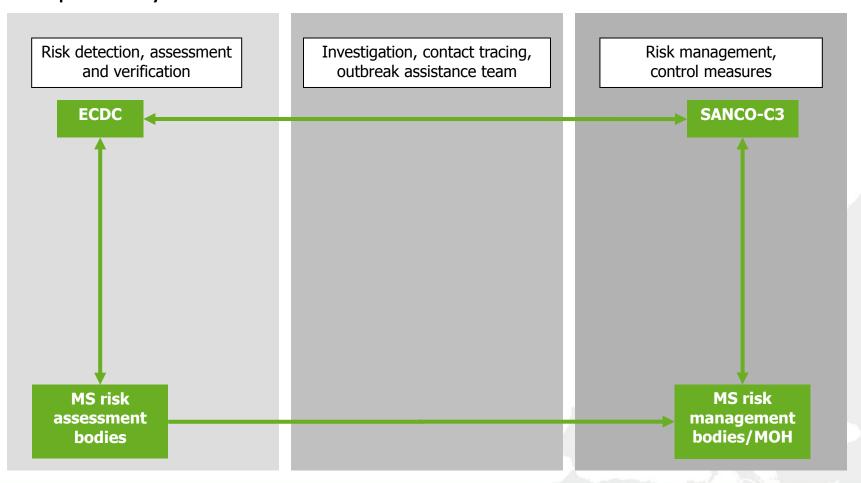


# Information processing for public health threats from an EU perspective

Assimoula Economopoulou
Epidemic Intelligence Team
Surveillance and Response Support Unit
European Centre for Disease Prevention and Control ECDC

## **Mandate**

According to the Article 3 of the Founding Regulation, ECDC's mission is to identify, assess and communicate current and emerging threats to human health posed by infectious diseases.







- · National health authorities
- International public health agencies
- Peer reviewed journals



### **Restricted web-sources:**



- EU Early Warning Response System (EWRS)
- International Health Regulations (IHR) Event Information Site



## Web-official information

## Web-unofficial information



### A virtually unlimited amount of web-based information

- media aggregators
- · early warning systems
- selected blogs
- informal communications
- social networks
- more

In most cases this information needs to be validated

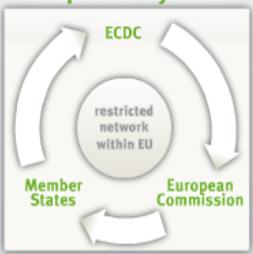
## The Early Warning and Response System



## OFFICIAL INFORMATION



## Early Warning and Response system



- European Network for epidemiological surveillance and control
- Established in1998
- Aims to ensure rapid alerting and response to communicable disease incidents
- Coverage: EU plus European Economic Area Countries
- Accessible to WHO
- Hosted and mantained by ECDC
- Restricted access



## **EWRS** establishment



Establishment: **EC decision 2119/98** by European Parliament and Council According to which authorities should communicate:

- i) information about appearance/resurgence of cases of communicable diseases (CD) including control measures;
- ii) any relevant information concerning progression of epidemic situations;
- iii) info on unusual epidemic phenomena or new communicable diseases of unknown origin, including in non-member countries;
- iv) info concerning existing and proposed mechanisms and procedures for the prevention and control, in particular in emergency situations;
- v) any info which could help MS to coordinate their efforts for CD prevention and control of CD, including any counter measures implemented.

## **EWRS**



The <u>EC decision 2000/57/EC</u> and its <u>amendment decision 2008/351/EC</u> describes the operation of the Early Warning and Response system:

 an early warning and response system to report specified threats to the public transmitted by the competent public health authorities of each Member State responsible for determining measures which may be required to protect public health;

 exchange of information between accredited structures and authorities of the Member States relevant to public health;

## **Early Warning and Response System (EWRS)**



## **Events to be reported:**

- Outbreaks of communicable diseases extending to more than one EU MS
- Spatial or temporal clustering of cases of diseases of a similar type, if pathogenic agents are a possible cause and there is a risk of propagation between EU MS
- Spatial or temporal clustering of cases of disease of a similar type outside the EU, if pathogenic agents are possible cause and there is a risk of propagation to the EU
- The appearance or resurgence of a communicable disease or an infectious agent which may require timely *coordinated EU action* to contain it;
- IHR event in the EU: disease/occurrence that creates a potential PHEIC as defined by IHR (2005) and related measures to be notified to WHO)



## **EWRS** software platform

- Designed and managed by the EC
- ECDC hosts the EWRS since Nov 2007
- Communication platform for risk management
- MS health authorities report control measures taken for public health events with EU relevance
- Open to EC, ECDC and national authorities responsible for Public Health risk management
- EU MS report control measures taken for events defined by specific criteria <u>MANDATORY NOTIFICATION</u>
- SMS and web/mobile access

## **EWRS:** three levels of notification

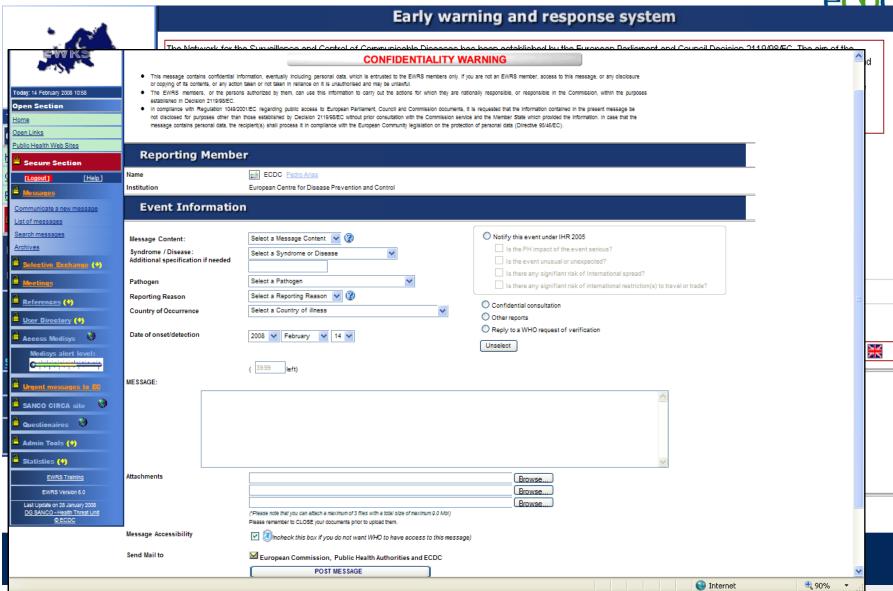


# 3 levels which determine subsequent response:

- -Level 1: <u>Information</u> exchange
- -Level 2: Potential threat
- -Level 3: Definite threat

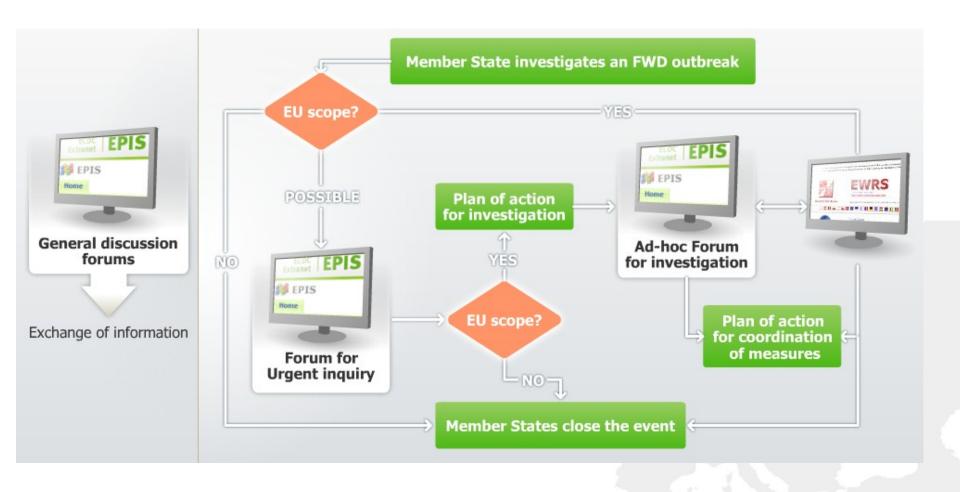
**EWRS** 





## **EPIS and EWRS**



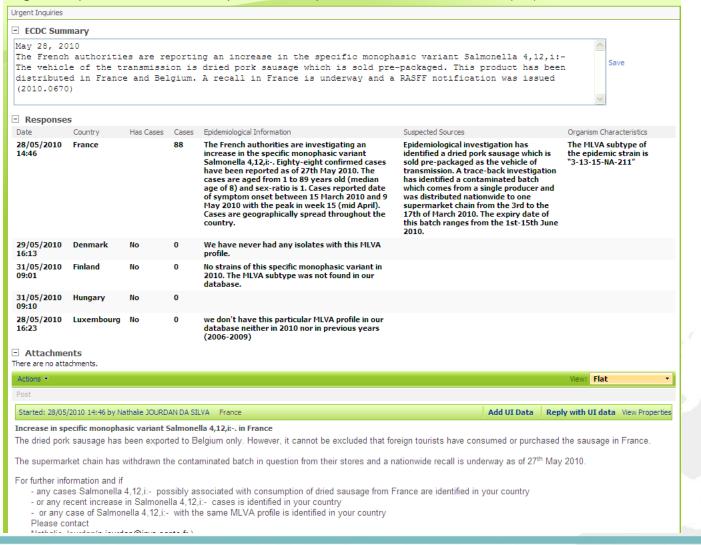


### **EPIS: FWD**



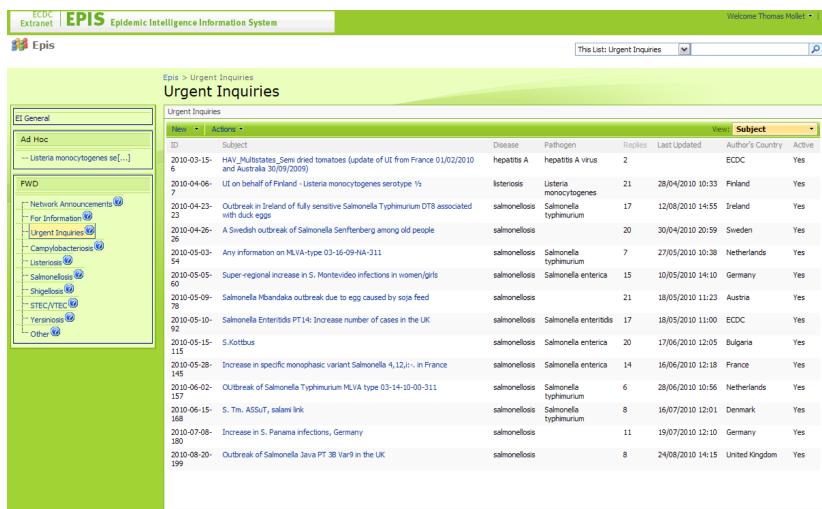
Epis > Urgent Inquiries > Increase in specific monophasic variant Salmonella 4,12,i-. in France

#### Urgent Inquiries: Increase in specific monophasic variant Salmonella 4,12,i-. in France



### **EPIS:FWD**

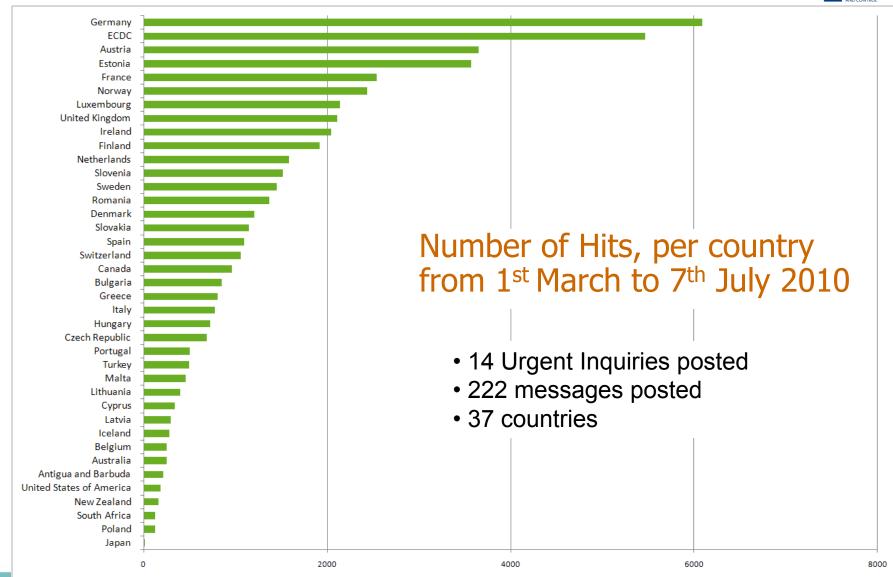




© European Centre for Disease Prevention and Control (ECDC) 2005 - 2010

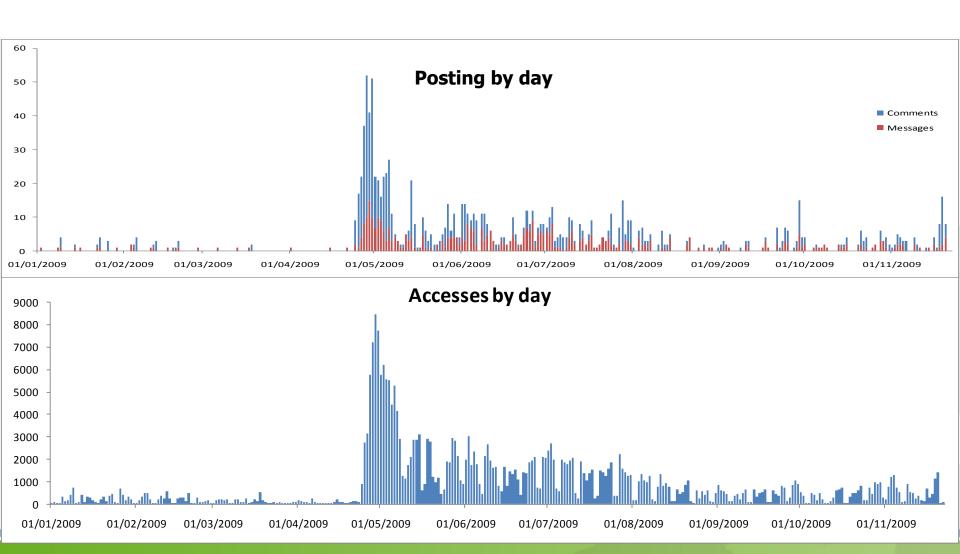
### **EPIS: FWD**





# Postings and accesses by day January – November 2009



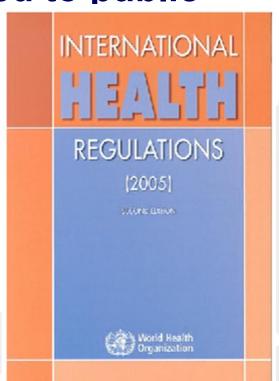


# The purpose of the International Health Regulations (2005)



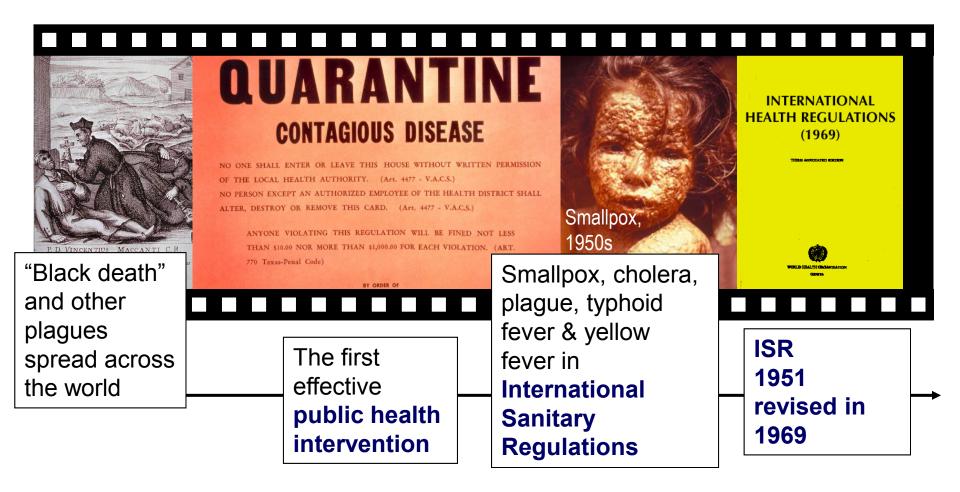
"to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public

health risks, and which avoid unnecessary interference with international traffic and trade" (*Article 2*)



## **International Health Regulations ...**

Milestones



## **International Health Regulations (2005)**



- Revised to improve global public health security
- Intends to do so through strengthening local capacity to detect, assess, respond, report and control a potential outbreak -/-> pandemic

All 194 member states signed on, but many still NOT compliant by 2012





HIV/AIDS, 1980s

## **IHR** continued

- International agreement giving rise to international obligations
- Focuses on serious public health threats with potential to spread beyond a country's borders, to other parts of the world
- Such events are defined as a Public Health Emergency of International Concern (PHEIC)
- Outlines assessment, management, and information sharing for PHEICs







## Comparison of Criteria for Notification for IHR and EWRS



### **IHR** (from Annex 2)

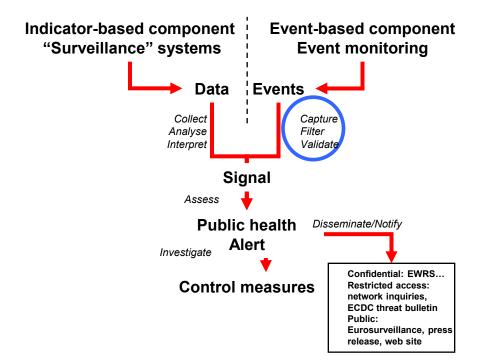
- Is the public health impact of the event serious?
- Is the event unusual or unexpected?
- Is there a significant risk of international spread?
- Is there a significant risk of international travel or trade restrictions?

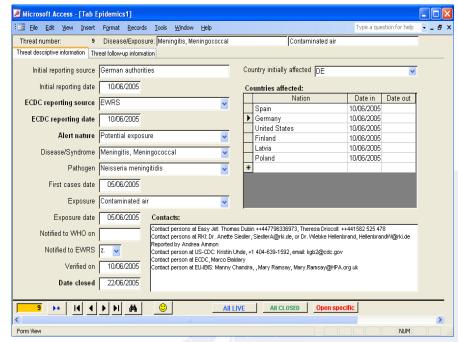
## EWRS (from Annex I of Decision 2000/57/EC)

- Is there any other reason for the event to have an intrinsic community-relevant impact?
- Is the disease unknown?
- Are there factors related to the host or environment that should alert us to the potential for international spread?
- Is the source known or suspected to be a food product or any other goods that have been imported from or exported to other countries?
- Is it caused by a disease/agent that has been eradicated?
- Is it suspected to be a deliberate release?

# **Event-based surveillance Tracking of signals in TTT**

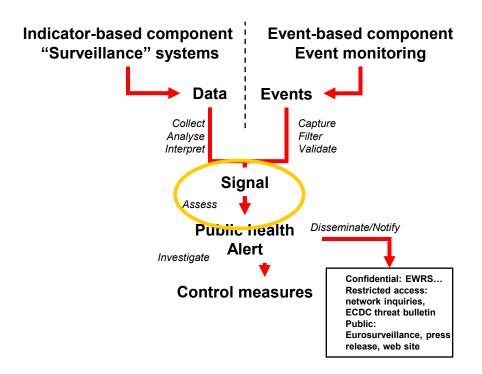






# **ECDC** daily roundtable **Signal assessment**

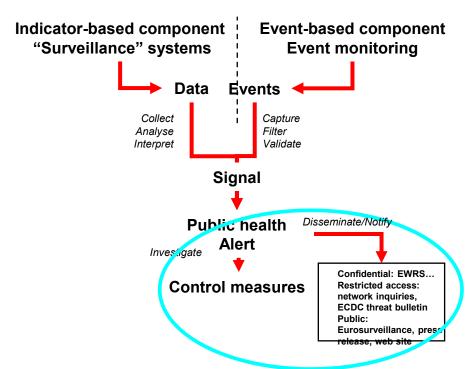




Roundtable date :	Participants:
09/11/2006	PRII: Baldari, M. Depoortere, E.  SCII: Gergonne, B.
Round Table timings: Mon to Thu : h. 11:30	SAII: ∐ FIIS: ☐ Pettifer, C. Steffens, I.
Fri : h. 14:00 Location: Crisis Room (at PRU)	Other ECDC comp.:  Guests:
Analysed issues and conclusions (s	ummary):
H5N1 in China (resistant to vac -Possible haemorrhagic fever in -EWRS message from Belgium a contact requesting article. Follo	Angola, Uige. There were cases of Marburg HF in th bout Streptoccocus M 81 causing skin infections in r

## EWRS: Alert notification & coordination of R measures







## EWRS: Alert notification & coordination of R measures



