Syndromic surveillance in Europe: Current situation in human and animal health and possible synergies

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Context: The TRIPLE S project

- Syndromic Surveillance (SyS) Systems in Europe
- Co-financed by European Commission
- Sept 2010 - Sept 2013
- Both Human (InVS) and Animal Health (Anses) SyS
- Inventory of SyS systems
- Guidelines for implementation of SyS system
Objectives

• Identify and describe syndromic surveillance (SyS) systems or initiatives in Europe

• Identify possible gaps and expectations
  → Guidelines

• Create a network of people involved in SyS in Europe and a bridge between human and animal health
"Syndromic Surveillance is the real-time (or near real-time) collection, analysis, interpretation and dissemination of health-related data to enable the early identification of the impact (or absence of impact) of potential human or veterinary public-health threats which require effective public health action" (Triple-S project, 2011, Lancet)
Method

1) Identification of persons involved in SyS
   - Literature review: European authors of scientific papers
   - Official contact in animal and human health (EFSA focal points, CVO, Ministry of Health, Institute of Public Health...)

   → 248/28 contacts identified

2) Brief questionnaire together with short presentation of Triple-S project and Triple-S SyS definition

   → 22/24 answers
Method

4) Long questionnaire sent to 26/39 people:

- General characteristics of the system
- Data providers
- Data collected
- Data analysis
- Data dissemination
- Uses and evaluation of the system
Descriptive analysis

- **27/33** systems identified from **12/15** countries

Brief description of each system available on the Triple-S website

http://www.syndromicsurveillance.eu/
Differences between human and animal health SyS systems

• Most systems in active phase in human health 22/33 versus 12/27 in animal health
  → SyS at an early stage in animal health

• Outbreak detection is an objective for 44%/100% of SyS systems

• Data transmitted at least daily for 70%/54% of SyS systems
Differences between human and animal health SyS systems

• Lack of knowledge in data analysis particularly in animal health: 12/2 systems do not yet use statistical methods

• No standardized coding systems for clinical signs or lesions in animal health
Differences between human and animal health SyS systems

• Complexity and diversity of animal health SyS systems (n=27)
  – 33% > one population (several species)
  – 56% > one objective
  – 78% > one data source
  – 80% > one indicator

• Human health SyS systems (n=33)
  – 67% use only one type of data source
  – 80% monitor influenza-like illness
Similarities between human and animal health SyS systems

• General health surveillance is the main objective of SyS systems for 100% and 70% of systems

• Lack of coding systems: 52% of human and animal health SyS do not use any

• Common epidemiological and statistical issues

• Similar data sources
Drug sales (2/1)

Website hits or Help line calls (2/3)

Clinics / hospitals activity/GP (19/12)
  ED visits (4)
  Laboratory test requests (11)

Exposed population

Diseased population

Population seeking for help or information

Patients of health care

Patients diagnosed

Dead population

Mortality/ rendering plant activity (6), meat inspection results (10)

Animal health SyS systems / Human health SyS systems
Synergies

• Why?
  – Similarities between SyS systems in human and animal health
  – Common diseases (zoonoses)
  – Early detection (sentinel animals)
  – Help for statistical alarm interpretation
  – Complementarity for health event impact assessment

• How?
  – Increasing awareness of animal health among public health stakeholders
  – Create networks of people involved in SyS in both sides
  – Exchange of knowledge (common meetings, Triple-S guidelines)
  – Sharing outputs of SyS systems

→ Triple-S was a first step that needs to be emphasized
Thank you for your attention

http://www.syndromicsurveillance.eu/