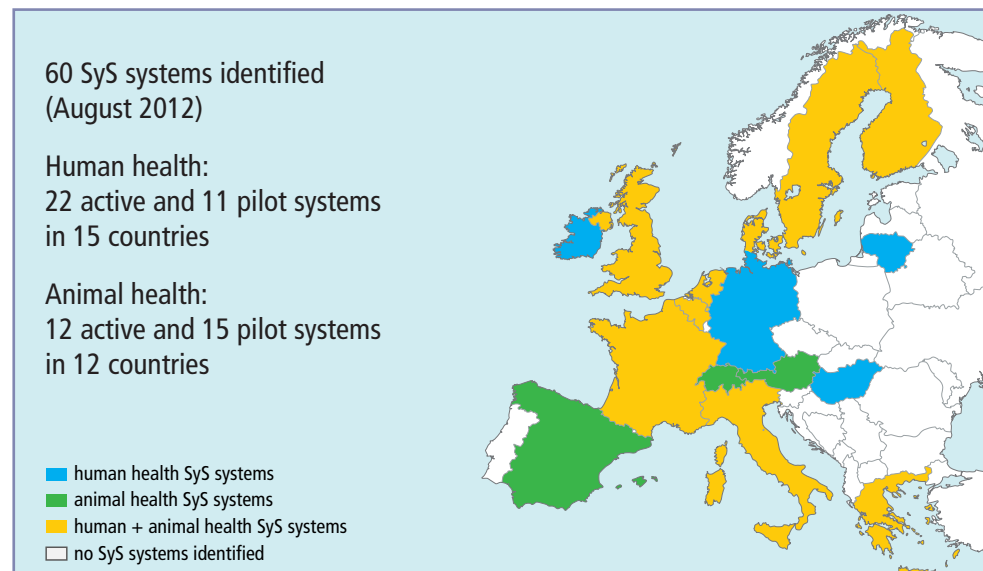# TRIPLE·S
Syndromic Surveillance Systems in Europe

Inventory of syndromic surveillance systems and initiatives in Europe

As part of the Triple-S project, an inventory was conducted. The aim was to dentify existing human and animal syndromic surveillance (SyS) systems and initiatives, establish if there were any gaps in coverage, find out what the expectations were of SyS and create a network of people involved in SyS in Europe.

A similar methodology was used for both human and animal health inventories: (1) identification of those involved in SyS through literature review and official contacts in animal and human health; (2) sending a brief questionnaire with information on the Triple-S project and its SyS definition; (3) selection of contacts in systems that fitted best with the Triple-S SyS definition; and (4) sending a more detailed follow-up questionnaire to obtain a fuller description of each system.

Countries where SyS systems were identified

60 SyS systems identified
(August 2012)

Human health:
22 active and 11 pilot systems
in 15 countries

Animal health:
12 active and 15 pilot systems
in 12 countries

- human health SyS systems
- animal health SyS systems
- human + animal health SyS systems
- no SyS systems identified

Comparing human and animal health SyS systems

While general health surveillance is the main objective for both human and animal health SyS systems (100% and 70% respectively), all human health systems have an objective of outbreak detection, compared with only 44% in animal health systems.

Human health SyS systems may differ but have common characteristics:

- 67% use only one data source.
- The most frequent syndromes monitored are respiratory illnesses (including influenza-like illness) and gastrointestinal illnesses. Some are focused on mass gathering events such as the G8 summit or major sporting events.

Animal health SyS systems tend to be more complex and diverse:

- 33% target more than one population
- 56% have more than one objective
- 78% use more than one data source
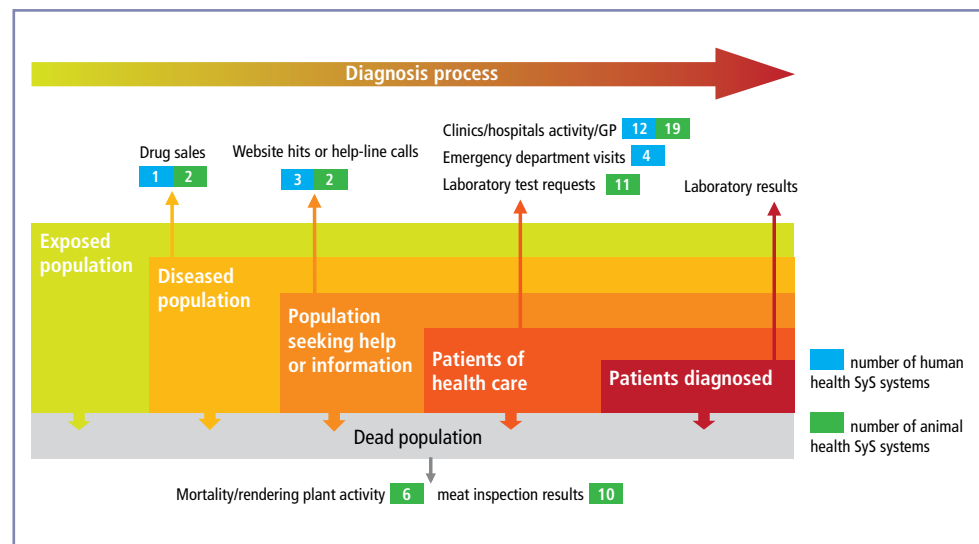- 80% use more than one indicator

The data are transmitted at least daily for 54% of the human health systems and 70% in animal health.

A lack of knowledge in data analysis was identified in animal health: 12 systems do not use statistical methods versus only 2 in human health.

Despite the existence of standardised coding for clinical signs in human health (in animal health this is more difficult to achieve and is not currently the case), both human and animal health SyS face a common issue in that 52% of the systems do not use a standard coding system.

During the diagnosis process, several kinds of data are used and some are similar for human and animal health (see figure below).

European human and animal SyS systems by data source

Conclusion

The inventory highlights the importance of SyS in both human and animal health and identified a large number of systems used for this purpose. The systems in different countries varied in their stages of implementation.

Human and animal health epidemiologists face common challenges regarding SyS, although many animal health systems are still at an earlier stage of development.

The inventory allowed the creation of a European network of people involved in human and animal health SyS, a valuable first step for the promotion of synergies between both sectors.

Web: www.syndromicsurveillance.eu I Email: info@syndromicsurveillance.eu