



## Examples of syndromic surveillance uses in Europe

### **Early warning of onset and real-time monitoring of infectious diseases: the A(H1N1) influenza pandemic**

Syndromic surveillance (SyS) systems based on various data sources contributed to timely surveillance of the spread of the A(H1N1) influenza pandemic:

- Emergency care patient records in Austria, Belgium and Spain
- Primary care patient records in the United Kingdom and Denmark
- School absenteeism in the United Kingdom
- Telephone helpline calls in the United Kingdom
- Web queries on a medical website in Sweden
- Google Flu Trends for 13 countries in Europe

### **Early detection of communicable and non-communicable disease outbreaks during mass gatherings: the 2012 Olympic Games in London**

During the London Olympic Games 2012, syndromic surveillance based on four data sources provided early warning of smaller communicable disease outbreaks, a rise in asthma and heat-related illness cases as well as real-time reassurance that no other public health threat was occurring. SyS was also used for the health surveillance of the Athens Olympic Games in 2004.

### **Situational awareness during rare environmental events: the volcanic ash cloud**

Syndromic surveillance provided (near) real-time reassurance that the volcanic ash cloud covering Europe in April 2010 was not affecting the health of populations in the United Kingdom and regions in Austria, Germany and Spain.

### **Detection of a new virus: the Schmallenberg virus**

Syndromic surveillance identified a cluster of atypical symptoms in cattle in the Netherlands, complementing traditional case-based animal surveillance in Germany that had also identified occurrences.

### **Timely reassurance of absence of threat to public health: refugee influx in Italy**

Timely, *ad hoc* surveillance of migrants coming from North Africa to Italy in 2011 confirmed that an influx of refugees posed no increased risk to the health of the Italian population.



# The SurSaUD® syndromic surveillance system:

## An example from France

In France, the SurSaUD® syndromic surveillance system was set up in 2004, following the heat wave the previous year, which had a huge impact on public health with over 15,000 excess deaths. Since then, SurSaUD® has demonstrated its value on numerous and varied occasions, including surveillance of seasonal and pandemic flu, the chikungunya virus, measles, asthma, mushroom poisoning, melamine-contaminated milk, industrial accidents, and storms and floods.

SurSaUD® was implemented by the French National Institute for Public Health Surveillance (InVS, [www.invs.sante.fr/Dossiers-thematiques/Veille-et-alerte/Surveillance-syndromique-SurSaUD-R](http://www.invs.sante.fr/Dossiers-thematiques/Veille-et-alerte/Surveillance-syndromique-SurSaUD-R)). The initial aim was to build a non-specific and reactive surveillance system in close cooperation with emergency health services. The system also included mortality surveillance in order to be able to detect new public health threats that had identified or potential health impact.

The objectives were soon extended to:

- Detection and monitoring of expected or unexpected outbreaks and seasonal or emerging events
- Health impact assessment of expected or unexpected events, in the fields of infectious diseases, environmental health, mass gatherings, exceptional events, and intentional threats
- Enabling public health authorities to give reassurance through the timely communication of objective, evidence-based information

SurSaUD® draws on four data sources:

- Emergency departments
- General Practitioners' emergency services
- All causes mortality
- Mortality by cause

The strengths of the SurSaUD® system are: *timeliness* with data collected and analysed daily; *flexibility* as syndromic indicators, age groups and geographical level of analysis can be adapted to the event; *access* at both national and regional levels, numerous *historical data*, and close *collaboration* with data providers and specific surveillance systems.

For more information and references on syndromic surveillance systems in Europe, please visit our website. Here you can also find a list of human and animal health systems in Europe, and the Triple-S guidelines on syndromic surveillance implementation and data analyses.

**Web:** [www.syndromicsurveillance.eu](http://www.syndromicsurveillance.eu) | **Email:** [info@syndromicsurveillance.eu](mailto:info@syndromicsurveillance.eu)

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This fact sheet arises from the project Triple S-AGE which received funding from the European Union, in the framework of the Health Programme. The sole responsibility lies with the partners of the project and the Executive Agency is not responsible for any use that may be made of information contained herein.