

IMPLEMENTATION OF A SYNDROMIC SURVEILLANCE SYSTEM USING A GENERAL PRACTITIONER'S HOUSE CALLS NETWORK

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OBJECTIVE

To describe the surveillance system based on SOS Medecins data, the first GP emergency and healthcare network in France and to show the utility and validity of this data source as a real-time syndromic surveillance system.

BACKGROUND

Recent health events in France, such as the dramatic excess of mortality occurred during the 2003 heat wave [1] showed the need for a better provision of information to health authorities. A new syndromic surveillance system based on the recording of general practitioner's visits by SOS Médecins [2] has been developed by the Aquitaine Regional Epidemiology unit (Cire).

METHODS

A computer assisted extraction of daily data was performed using a specific program, including sociodemographic data, patients' complaints, and medical diagnoses according to the International Classification of Primary Care [3].

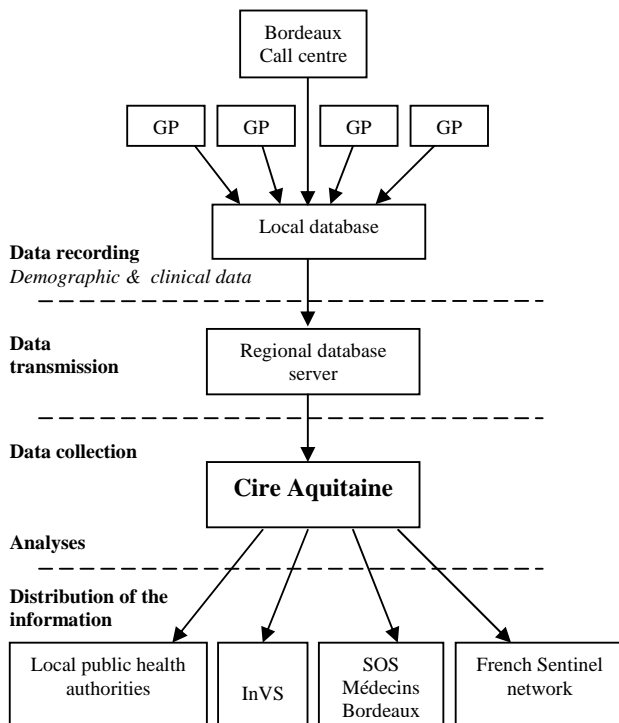


Figure 1 – SOS Medecins Bordeaux- Cire Aquitaine Syndromic surveillance flow chart.

Each morning, the data including all the visits logged during the previous 24-hour period are downloaded. In collaboration with the GPs, ICP-2 codes were grouped into 16 syndrome groups including influenza syndrome, bronchiolitis, gastrointestinal, heat linked syndromes, respiratory syndromes and others. An analysis system using the Shewhart Control Chart for individual measurements was implemented in order to detect immediately unusual variations in each of the 16 syndrome groups.

RESULTS

All visits made at home were daily collected and recorded in the database. The medical diagnosis was missing from 15% of the records. From the beginning of 2005 to the end of 2006, 303 936 visits were recorded, with an average of 417 visits per day.

Global activity was influenced by important day-of-the-week and seasonal variations.

We identified seasonal epidemics such as gastrointestinal, influenza or bronchiolitis monitoring the syndrome groups. The surveillance system also allowed the early detection of unusual events such as an acute increase in the number of heat syndromes during the heat wave that occurred in France in July 2006.

CONCLUSION

While a number of syndromic surveillance systems based on a real-time transmission of chief complaints are being developed to improve early detection of outbreaks, this system uses the final diagnosis allowing the monitoring of a wide range of health related events in a timely manner. Attributes and advantages of the system such as simplicity, acceptability, flexibility, data quality timeliness and representativeness demonstrated its validity and its utility in term of surveillance purposes and its extension at the national level is in process.

REFERENCES

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