

Editorial

Public health surveillance can be defined as the ongoing, systematic collection, analysis, interpretation, and dissemination of data that relates to a health-related event in order to reduce morbidity and mortality as well as to improve health. Surveillance is undertaken to inform disease prevention and control measures, as data disseminated by a public health surveillance system can be used for immediate public health action, programme planning and evaluation, and formulating research hypotheses. According to the definition of the WHO, an effective surveillance system has the following functions:

- detection and notification of health events
- collection and consolidation of pertinent data
- investigation and confirmation (epidemiological, clinical and/or laboratory) of cases or outbreaks
- routine analysis and creation of reports
- feedback of information to those providing the data
- feed-forward (i.e. the forwarding of data to more central levels).
- reporting data to the next administrative level.

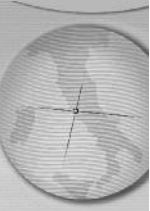
Public health information systems by definition include a variety of data sources essential to public health action and are often used for surveillance. These systems vary from a simple system collecting data from a single source, to electronic systems that receive data from many sources in multiple formats, to complex surveys.

The thematic part of the present issue of the Italian Journal of Public Health addresses different topics within the framework of public health surveillance systems in Italy.

The article from *Laurenti et al.* describes the activity of a tuberculosis (TB) surveillance system of among homeless in Rome. The surveillance system was organized with the aim to develop an integrated model for the risk evaluation and management of both Latent Tuberculosis infections (LTBI) and active TB among homeless people. A total of 409 cases of TB in Rome were notified in 2004, however the real occurrence among this special category remains unknown. A Tuberculin Mantoux test, followed by an analysis of the individual's expectorate and a chest X-ray, in case of acute positivity, were undertaken by 108 homeless' refugees. Multiple logistic regression models were adopted to identify the determinants of infection. Results show that the prevalence of LTBI is 43.5%, while no active TB cases were found. Male gender, birth place (Europe and East Mediterranean native Region) and obesity were significantly associated with the risk of LTBI. It was demonstrated that the surveillance system was useful in rapidly directing LTBI cases to specialized centres for clinical evaluation and the appropriate therapy thus preventing the disease's evolution.

Scaramozzino et al. proposes a risk based surveillance model for environmental pollutants that aims to monitor the presence and the amount of toxic contaminants in cattle and sheep products. After identifying the official list of polluted sites in the province of Latina in Italy, all of the geographical, hydrographic, and geological data were integrated in a GIS, using ARCGIS 9.2 system. Farm information from the National Animal Record Data Base was also entered in the system, and a score for each of the attributes considered in the risk evaluation was given to each of the polluted sites. As such, the authors identified 14 polluted sites including 25 farms, from a total of 103 samples. The prevalence of contamination sites revealed to be 10% with a level of confidence of 95%.

Exposure to bioaerosols poses a serious health risk to workers who process Urban Solid Waste (USW).



Del Cimmuto et al. presents the results of a surveillance system which aims to evaluate the microbiological air quality within the largest USW selection facility in Europe, located in the neighbourhoods of Rome, Italy. Sampling was performed on a yearly basis (2005 – 2009) upon request by the management of the selection plant. Total Mesophilic Counts (TMC), as well as fungal and Gram-negative concentrations were determined. Results show that the highest viable fungal particles concentrations (medians) was in the waste delivery areas, while the lowest was in the control rooms. TMC was highest (6116 CFU/m³) at the delivery pit, followed by the machine shop (3147 CFU/m³), where no waste processing takes place. Medians of Gram-negative bacteria are below the recommended Occupational Exposure Limit of 1000 CFU/m³, although this limit was exceeded at several single time-points in the waste delivery areas, as well as in a personnel rest room. The authors conclude by stating that carefully-thought positioning of areas that are not directly involved in waste processing are necessary and effective in obtaining satisfactory microbiological air quality, provided that personal protection practices are strictly enforced.

Camoni et al. working at the National Institute of Health developed a detailed form for data collection relating to HIV infection epidemiology, within the national surveillance system network. The current system does not allow for a thorough description of the dynamics of the epidemic, making comparison with data from other European countries difficult. The authors propose the addition of the following information to the Italian form: i) the year of entry in Italy for non-nationals; ii) testing pattern (i.e., the number of tests in the previous two years and during lifetime); iii) whether or not infection was recent, based on the antibody avidity index, and which test and cut-off were used; iv) whether or not testing was performed in the acute phase of infection, based on symptoms; and v) a checklist of reasons for undergoing testing. The next step will be the validation of this form, which will occur in due course.

Finally, in the paper from **Tanucci Nannini et al.** results of a 2-year surveillance study carried out in 34 nonindustrial production of pastries and ice cream in Naples are presented. The following aspects were evaluated: hygiene/sanitation conditions of the work area and equipment, implementation of the principles of good food hygiene, evaluation of Hazard Analysis Critical Control Point (HACCP) plans, licensing/authorization, quality control and sampling protocols, and systems for ensuring food traceability. In 28 businesses, samples (environment, foods, workers) were collected for microbiological analyses. Results show that Neapolitan food business operators in this specific sector did not fully understand the importance of the general preventive measures such as Good Hygienic Practices, Good Manufacturing Practice and HACCP codex requirements for providing consumers with safe, high-quality food products, as 80% of the surfaces sampled and 23.8% of the hand swabs collected proved to be contaminated.

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