2005: Strategic Deployment in Five Parts

The context in which InVS intervenes has changed significantly in the past three years, especially through the reinforcement of its alert functions and the search for better anticipation of health events and their consequences. These changes are also manifested by the concern for a more comprehensive approach to understanding these events.

In this framework, and in close liaison with the Ministry of Health, InVS has begun a strategy of deployment based on five pillars:

- reinforcement of the responsiveness of health information collection, as close to the source as possible
- development of regionalization, which satisfies the same concern for responsiveness and proximity
- development of a capacity for expert knowledge complementary to InVS’s in-house expertise
- rapprochement between surveillance and research
- reinforcement of European cooperation.

Developments in Information Collection

Information is the basis of surveillance and alert. For the past two years, information collection at InVS has grown in two directions: on the one hand, the fields from which information must be collected have expanded continuously; on the other hand, the methods of collection have been transformed, moving ever closer to the event. The traditional system of information collection—based on retrospective reports—is coupled with a system of information collection in real time at the source.

Surveillance of antibiotic resistance in diseases generally treated by private practitioners (otitis, sinusitis, urinary infections) provides a good example. Progressive hook-up and networking now allows the automated collection of information directly from some private laboratories.

Another example is the OSCOUR network (coordinated organization of emergency department surveillance), which began in July 2004. It ensures direct real-time reporting of information from a sample of hospital emergency departments. Some 50 facilities participate in this network today; its objective is to analyze use of emergency services, both quantitatively (number of patients) and qualitatively (age, sex, reason, severity score, diagnosis, short-term outcome, etc.). This real-time measure of health impact may make it possible to trigger an alert early—in case, for example, of a rerun of the August 2003 heat wave.

These data come directly from each hospital’s computer system and are transmitted daily to InVS, without intervention by hospital staff and therefore without increasing their workload. Today, this system covers approximately 4000 visits a day, which are immediately recorded and analyzed.

These changes led InVS to adopt a new master plan for information systems (SDSI) during the winter of 2005-2006. It will redeploy tools and reorganize its systems according to three principal themes:

- modernization of data entry and dematerialization insofar as possible before arrival at InVS
- setting up a “data store”, that is, optimizing storage of the information collected
- creating a system to mine and analyze the database, to enhance its responsiveness and utility.
Beyond these technological considerations, InVS has insisted that the deployment of this new master plan be accompanied by a collaborative strategy aimed at our information suppliers. The design is thus planned to provide systematic feedback and facilitate collaboration. Its cost should be on the order of one million euros over three years.

**Widening the field of workplace health**

Occupational health remains one of the important components of the Institute’s work. It is also an increasing concern of public authorities and public opinion.

A major priority in this area involves the development of new surveillance tools. This work, conducted for several years now, began to bear fruit in 2005, in particular the development of job-exposure matrices. These matrices, combined with occupational cohorts and exposure databases, are an important tool in occupational risk surveillance. They make it possible to cross exposure to particular risk factors, based on individual careers, with diseases developed later. The final objective is to determine the “attributable fraction” of the occupational factors of a disease (for example, asthma, allergies or cancer), in other words, the role that occupational exposure may have played in the onset or development of the disease in question.

**REGIONALIZATION AND IMPROVEMENT OF “SENSITIVE” SURVEILLANCE**

Regardless of the technological improvements in information collection, strengthening health surveillance and alerts presumes closer proximity to the event’s source. This would speed up the implementation of field investigations. In view of the increased regionalization of health surveillance systems, the regional epidemiology teams (CIRE) are obviously essential participants. The conclusions of the report *Alerts in France*—drafted for the regional public health program—confirm this development, especially for the regional plans for alerts and management of emergency health situations.

One question today is thus whether some of the tasks performed by InVS, especially those involving investigation, should be delegated to the regional epidemiology teams. A system of automated information transmission, working as OSCOUR does (see above), could then rely on the regional epidemiology networks to help interpret events and alerts.

CIRE teams today have acquired important experience and skills, as shown, for example, by their recent work on legionellosis in Pas-de-Calais, environmental studies in Provence-Alpes-Côte d’Azur, and the work on pesticides in the West Indies-French Guyana. In view of the extension of the field and tasks of health surveillance, they must nonetheless reinforce their resources and their skills to acquire diversified high-level expertise. This point is included in the Memorandum of Understanding between InVS and the Ministry of Health.

At the same time, these developments also call for the modification of the very conception and approach to regionalization of health surveillance. Regionalization was initially designed to professionalize the decentralized government departments, that is, the DDASS (district health and social service bureaus) and the DRASS (regional health and social service bureaus). Today’s new issues and the additional requirements of responsiveness and reliability lead us to think that the regionalization of health surveillance must take place in a specific framework—the regional epidemiology teams—equipped with greater skills and expert capacity.

**COORDINATION BETWEEN INVS AND ITS PARTNERS**

The French system of health surveillance relies on the mobilization of a large number of different and important stakeholders. Moreover, complex health crises bring into play interactions between diverse factors: medical, scientific, economic, and sociological. Good coordination of these skills, expert capacity, and stakeholders is therefore important to the efficacy of the global health surveillance system and its response to emergency health situations. InVS has therefore undertaken to improve its coordination with its principal partners. Several concrete changes in this domain took place in 2005.

**Relations with other health agencies**

The health security system involves numerous working relations between agencies. InVS, with its relatively general bailiwick, is often involved in such collaborative work.

Sometimes the Institute participates in work coordinated by another agency: the department of environmental health (DSE) and the department of occupational health (DST) both contribute to AFSSET’S (French agency for environmental and occupational safety) science watch bulletin. Sometimes InVS is responsible for the coordination, as for toxicity monitoring: this requires meetings of a toxicity monitoring coordination committee, which includes several agencies (AFSSA—French food safety agency, AFSSAPS—French drug agency, AFSSSET) as well as the DGS, to define a coordinated work program and ensure a joint response to requests for assessments according to the specific expertise of each.

**Relations with research**

The links between InVS and research have nothing to do with any theoretical debate. Strengthening them results, on the contrary, in concrete improvements. For example, the discovery of a urine test has substantially improved surveillance of legionellosis. While much work remains, several positive advances can already be reported in this domain.

- **National reference centers (CNR):** the CNRs on which InVS relies for the monitoring of infectious diseases are usually part of research teams and accordingly not only expert in their fields but also able to develop innovative tools for the identification and biological characterization of this type of agent. They also participate in applied research on the control of these diseases. Since 2001, InVS has been involved in defining the needs for CNRs and monitoring their public health activities. In 2005, governmental appropriations for the CNRs were transferred to InVS to strengthen the link between scientific evaluation and the direction of their programs. The
call for bids to renew all of the CNRs strengthened this network, which now includes 77 laboratories for 45 infectious disease themes, three of them new—syphilis, cytomegalovirus, and toxoplasmosis.

- **National institute for health and medical research (INSERM):** like all the health agencies, InVS participates in INSERM’s initiative for the creation of a virtual “institute of public health research”. In this grouping, different participants share resources to fund public health research. Each year, members of this institute jointly decide on a common theme and launch a joint call for applications for funding of research related to it.

- **Interface contracts:** this procedure also links INSERM and InVS. The procedure allows the joint selection of researchers who will be seconded to InVS to conduct specific research projects there. This contract is used today, for example, to fund occupational health research at InVS.

- **Mixed units:** the aim is the same as for interface contracts but with an inverse approach. The first initiative of this type was the health and nutrition unit (USEN), implemented with the National conservatory of arts and sciences (CNAM) and now also with University of Paris XIII, where an INSERM surveillance unit has been inserted into a laboratory. This complementarity made it possible for USEN to launch a national nutritional health survey (ENNS) at the end of 2005. In view of the good results from this approach, InVS began another such experience in 2005 with University of Lyon III: the creation, in collaboration with the DST, of an industrial hygiene unit focused on workplace exposure to health risks.

**Reinforcement of international cooperation**

The European Center for Disease Prevention and Control (ECDC) began effective operations in 2005, after its director took office on March 1. The Member States are represented on the management board and it is the executive director of InVS who represents France. The creation of a strong European structure in the field of health surveillance—although it relies on earlier achievements and systems—significantly modifies the international environment of InVS activities. While ECDC today concentrates essentially on infectious diseases, its field of intervention is likely to expand in the years to come.

In this changed landscape, InVS collaborates very closely with ECDC. The head of DMI thus sits on ECDC’s advisory forum and two InVS employees has been seconded to or recruited by this new center.

InVS intends in particular to participate fully in the upcoming enlargement of ECDC’s field of competence, especially in the areas of environmental and workplace health. Inversely, three European programs coordinated until now by InVS—Euro HIV (AIDS), Euro TB (tuberculosis) and Eurosurveillance—should probably be taken over by ECDC, as is already the case for the European program for intervention epidemiology training. On the other hand, European programs that do not concern infectious diseases (those for example on injuries and environmental health) will continue to be coordinated by InVS for now.