

## Economic evaluation of animal health surveillance - moving from infancy to adolescence?

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### Purpose

Population growth, changes in food systems, urbanisation, and climate change linked in a web of global trade throw up new challenges for disease control. Animal health surveillance is widely recognized as an effective tool for disease management, but investment is often low and poorly targeted. For European decision-makers, economic criteria are important in decision-making for surveillance. Yet, economic evaluations of surveillance (EES) are sparse and available guidelines for the evaluation of surveillance fail to provide guidance on systematic economic appraisal.

### Methods

The RISKSUR consortium ([www.fp7-risksur.eu](http://www.fp7-risksur.eu)) that investigates novel approaches for cost-effective surveillance has developed a web-based surveillance design and evaluation tool directed at users with advanced surveillance knowledge and skills. A key innovative feature is the provision of user-friendly and practical guidance for the design and implementation of EES. Economic theory underpinning EES is explained and challenges that accrue from application of differing paradigms highlighted. In particular, the three-variable relationship between surveillance, intervention and loss avoidance; value of information, and non-monetary benefits are elaborated and linked to economic analysis methods commonly used in animal health.

### Results

The application of the tool for EES for classical and African swine fever, bovine viral diarrhoea, avian influenza, and Salmonella Dublin infection in five European countries showed that cost-benefit, cost-effectiveness, and least-cost analyses were the methods of choice. Difficulties encountered include estimation of fixed and variable costs, non-monetary benefits, co-benefits resulting from using synergies, and the selection of meaningful effectiveness measures. Selected results will be presented.

### Conclusions and relevance

The tool promotes understanding of critical concepts, suitable methods, data and time requirements and is expected to nurture the use of EES, which is still in its infancy. In the long term, this will increase professional capacity and help to address the problem of resource allocation for surveillance to the benefit of all.