Research

EDITORIAL

Does animal health surveillance give value for money?

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RATIONALES for government involvement in animal health surveillance (and other aspects of disease prevention and control) can be summarised as being to protect human health against zoonotic disease threat, to protect and promote the health and welfare of animals, to protect the interests of producers, the wider economy, environment and society, and to comply with international trade rules and agreements (Ahuja 2004, Rushton 2009). Several studies have reported the benefits and costs of surveillance schemes (Thurmond 2003, Hadorn and Stärk 2008, Drewe and others 2012, Häsler and others 2013). Their value is to help ensure that the resources needed for disease prevention and control, including both surveillance and intervention, are allocated efficiently in order to maximise the net benefit associated with avoided disease losses for all concerned (Howe and others 2013). This requires information about the activities that consume resources and their outcomes. The expenditure of governments on animal health and veterinary public health can then be evidence based, economically justified and accepted by the general public, experts, politicians and international regulatory bodies. However, surveillance schemes comprise a complex combination of generic and specific activities within the public and private sectors. This requires detailed and unbiased information on surveillance expenditures and on the benefits of surveillance to fuel the analyses needed to answer questions about value for money.

In a paper summarised on p 16 of this week's *Veterinary Record*, Drewe and others (2013) establish the size of the information resources currently available to address these questions. Their objective was to assess the current distribution of financial resources between surveillance programmes by species and by disease. In the process they identified gaps in resource use and opportunities for greater efficiency. Their results suggest that surveillance funding in Great Britain is very unevenly distributed across species. They found that surveillance

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funding is heavily focused on cattle and cattle disease (94 per cent), with bovine TB accounting for 98 per cent of this expenditure. The remainder was spent on surveillance schemes in pigs, sheep/goats, poultry and on antimicrobial resistance surveillance across all species (2 per cent, 2 per cent, 1 per cent and 1 per cent, respectively). As a result, surveillance in Great Britain is heavily skewed toward regions of the country with high cattle densities, namely the southwest.

Most surveillance funding in Great Britain is spent on cattle, predominantly for bovine TB control

An important finding of Drewe and others' study is that it shows that the current public expenditure on animal disease surveillance in Great Britain is, to a large extent, focused on cattle diseases and particularly bovine TB as a zoonotic disease. This surveillance is part of the UK national control programme required by legislation and is driven by protecting public health, protecting animal health, avoiding losses to producers and also protecting international trade. There has been much debate and research about the technical and economic justification of the bovine TB control strategy (Smith and others 2007, Torgerson 2010, Torgerson and Torgerson 2010, Van Dijk 2010, Bessell and others 2013, Godfray and others 2013, Pfeiffer 2013). However, Drewe and others' paper indicates that economic knowledge and information gaps exist particularly on the benefits of the current surveillance schemes. Therefore, technical and economic data on both costs and benefits of surveillance schemes are needed to increase the validity of such economic assessments. As well as identified gaps in economic knowledge and information, the authors recognise several areas of opportunity for greater efficiency of surveillance schemes. These include sharing samples for surveillance of different diseases, risk-based sampling, collection of samples for several diseases at once and sharing health information collected by private herd health schemes to avoid waste of resources by collecting similar data.

Ideally, the degree of public sector funding should depend upon whether the disease is zoonotic, the degree of contagiousness, whether it is endemic or epidemic, and economic losses associated with the disease. Drewe and others (2013), question the basis of public surveillance expenditure distribution. For example, their study revealed that very little was spent on Aujeszky's disease (£70k) or swine influenza (£29k), and no data are available on public spending on salmonella surveillance in pigs, while both influenza and salmonella are zoonotic diseases and considered to be public health threats.

Drewe and others emphasise the public policy difficulties associated with surveillance schemes in a mixed public/private funding situation. They found that currently the British government bears a substantial proportion of the surveillance costs for a number of endemic and exotic diseases and only a small proportion of the surveillance funding comes from the private sector (public:private funding ratio = 9:1). The paper also draws attention to the difficulty for researchers of getting the necessary information, particularly on the costs and benefits of alternative investments in surveillance, as well as a lack of descriptions of the type of benefits, beneficiaries and responsibilities in the current British surveillance schemes. A common assumption is that the beneficiary of investment in animal health is the farming sector and that they should pay prevention and control costs. However, farmers are not always best placed to make the necessary investments and/or are not the only beneficiaries. The alternative extreme, an entirely public-funded approach, is also unlikely to be equitable or effective in controlling various animal diseases. These issues lead to a need for a public-private partnership and reconsideration of the sharing of responsibility and costs for animal health, welfare and disease control.

In light of Drewe and colleagues' findings, the critical factors in improving decisions and policies with respect to investing in health surveillance schemes and answering value for money questions can be summarised as: facilitating access to both economic and technical data relating to surveillance expenditures and activities; providing a clear description of the methods used for prioritising diseases; exploiting opportunities such as risk-based sampling; sharing samples for the surveillance of different diseases; collection of samples for several diseases at once and sharing health and economic information by private herd health scheme providers; improving descriptions of benefits, beneficiaries and responsibilities; and encouraging data sharing on the benefits of surveillance schemes by facilitating/investing in integrated frameworks such as the RISKSUR project (RISKSUR 2012).

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doi: 10.1136/vr.f7622

Veterinary Record

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Veterinary Record 2014 174: 14-15
doi: 10.1136/vr.f7622