

Comment

Combining the best elements

IN a week in which the western world seems finally to have woken up to the threat posed by Ebola virus, and in which, quite separately, Public Health England reported that, despite all the emphasis placed on antimicrobial stewardship in recent years, prescribing of antimicrobials by doctors in England has actually increased, a meeting held at the Royal Society of Medicine (RSM) in London could not have been more timely. Organised by the Comparative Medicine Network and the Epidemiology and Public Health Section of the RSM, along with the Bella Moss Foundation, the meeting, on October 13, brought together a broad cross-section of public and animal health experts to discuss how the One Health concept could be made to work more effectively against infectious disease. Focusing particularly on the threats posed by antimicrobial resistance and emerging zoonoses, it provided some useful insights into how application of the One Health approach (which is already a feature of the UK's antimicrobial resistance strategy) might help, while also pointing to some of the factors that might be preventing it from being applied more widely.

If there is one thing that diseases such as SARS, H1N1 influenza and, most recently, Ebola have demonstrated, it is the relative ease with which diseases can move around the world. It remains unfortunate that richer nations tend only to react to such diseases when they are seen to be presenting an immediate threat, when a far better way of dealing with them is to build public health capacity in low- and middle-income countries and prevent them at source. The importance of such capacity building is recognised in the five-year global health strategy published by Public Health England last month¹ and was also emphasised by a number of speakers at the meeting at the RSM this week. As one of the session chairs, Peter Borriello, chief executive of the Veterinary Medicines Directorate, put it, 'If you want to prevent importation of infectious diseases, you need to export public health.'

Improved and better coordination of surveillance – locally, nationally and internationally – was, it was argued, needed not just to detect and help prevent emerging and re-emerging infectious zoonotic diseases, but also to help combat antibiotic

resistance, with some speakers suggesting that resistance could usefully be regarded as a zoonosis in itself. Like zoonotic diseases, resistant bacteria could move between species, and resistance could be transferred and become established in different species, although the direction of travel (for example, human to animal/animal to human) was not always clear and needed to be investigated further. Also, like infectious diseases, resistant organisms could, as a result of modern travel and trade, move rapidly around the globe and quickly become established in new areas.

Regarding the contribution of the use of antibiotics in animals to the problem of resistance to products used in human medicine, the situation was, the meeting heard, 'complicated', with discussion being hampered by a lack of data. However, it was clear that inappropriate use of antibiotics drove resistance and that careful stewardship and prudent use of the available products was essential. In this context, Anthony Kessel, director of public health strategy at Public Health England, described the results of the first report of the 'English surveillance programme for antimicrobial utilisation and resistance', which was published last week,² as 'concerning'. Intended to provide benchmark data against which trends in antibiotic usage and resistance can be measured, this found, among other things, that antibiotic prescribing by doctors in England increased year on year between 2010 and 2013, with most of that prescribing taking place in general practice. Also worrying, given that the UK tends to think of itself as adopting good practice in terms of antimicrobial use, was the finding that, although there is much variation in levels of prescribing across the country, the median level of prescribing in England was higher than that in many other European countries. Professor Kessel highlighted the need for better diagnostic tools to be developed for use by primary care physicians, as well as calling for more education around antibiotic use.

The role that social sciences can play in helping to understand and influence human behaviour was explored during the meeting, in a session which illustrated how understanding a problem in purely scientific terms might not be enough to result in that problem being addressed. Meanwhile, in a

further presentation, Michael Day, of the University of Bristol, drew attention to the importance of companion animals in One Health, and the steps being taken by the World Small Animal Veterinary Association to see that they are considered in the equation. Although not referred to during the meeting, the uncertainties surrounding the Spanish authorities' decision last week to destroy a dog belonging to a nurse who contracted Ebola virus provides just one example of why companion animals need to be included.

No one at the meeting seemed in any doubt that a multidisciplinary One Health approach is needed to help tackle the disease and other challenges of the 21st century, but, as more than one speaker remarked, while the veterinary community 'gets' One Health, the human medical community still seems to have some way to go. Among the reasons suggested for this were that vets are trained to think across the species while a human medical training is very much focused on one species and treating the individual patient. There are no rights and wrongs about this, just different ways of thinking and differences in approach. The two professions must work harder to understand each other's viewpoints and, through education and practice, to combine the best elements in a truly collaborative approach.

1. www.gov.uk/government/publications/global-health-strategy. Accessed October 15, 2014

2. www.gov.uk/government/publications/english-surveillance-programme-antimicrobial-utilisation-and-resistance-espaur-report. Accessed October 15, 2014

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