



EDITORIALS

Healthy people, healthy animals, and a healthy environment: One Health

Global challenges require collaborative interdisciplinary approaches

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When *Vet Record* and *The BMJ* produced a joint themed issue in 2005 (<https://www.bmj.com/content/331/7527>), the guiding concept was One Medicine, with an emphasis on what vets and doctors could learn from each other to benefit both sets of patients.¹ Since then, a new model has emerged: One Health, a triad of healthy people, healthy animals, and a healthy environment, all inextricably linked.²

Both journals have proud histories of highlighting the links between animal, human, and environmental health; and events over the past decade—bird and swine flu pandemics, the Ebola outbreaks, the growth of antimicrobial resistance, and concern about the effect of environmental degradation and climate change—have brought a renewed sense of urgency. When deciding on a theme to mark *Vet Record*'s 130th year, One Health was the obvious choice.

Why One Health matters

Why should vets and doctors care about One Health? Firstly, zoonotic diseases make a large contribution to the burden of infectious disease in humans. About 60% of all human pathogens and 75% of new or emerging infectious diseases are spread from animals.³ Transmission is accelerating globally, fuelled by population pressures, inadequate sanitation, lack of public health infrastructure, and rapid growth in international travel and trade.

Secondly, doctors and vets have a shared responsibility for the stewardship of antibiotics. As explored in our roundtable discussion, inappropriate prescribing in human medicine, and overuse in farming and fisheries has led to the rapid emergence of resistant strains.⁴ Their global spread is now seen as one of the greatest threats to human health.⁵

Thirdly, animal farming practices around the world influence the quality and safety of the food we eat, with obvious implications for human health.⁶

And, finally, human activity is devastating the natural environment on which we all depend. Population growth and increasing consumption bring with them changing patterns of land and water use, loss of habitats, intensive farming, the use of pesticides, and the release of greenhouse gases. Reports also suggest that species are disappearing at rates faster than in the world's previous five mass extinction events.⁷ This is not only a tragedy for planetary diversity but denies us the future potential

of new medicines that could have been derived from those lost species.⁸

Global challenges

These are complex and inter-related global challenges for which, as Paul Gibbs explains, organisations around the world are looking to One Health for solutions.⁹ The One Health approach has now been adopted and championed by the US Centers For Disease Control and Prevention, the UN Food and Agriculture Organization, the World Health Organization, the UK Department for International Development, the Gates Foundation, the European Union, the World Bank, and the United Nations. In the past seven years, major international One Health congresses have been held in Africa, Australia, and Asia.⁹

Vets and doctors largely train, practise, convene, and publish within their separate spheres. But this is changing. In 2007 the American Medical Association, the American Veterinary Medicine Association, and the American Public Health Association signed up to a joint One Health initiative. And UK bodies in both animal and human health have responded quickly to the 2016 O'Neill report, which called for a One Health approach to antimicrobial resistance.¹⁰

Both the NHS and the Department for Environment, Food and Rural Affairs have established frameworks that focus on surveillance and control of resistant strains; preventing infection; reducing the use of antibiotics; and educating professionals, patients, and the public. A study published this week in *Vet Record* confirms previous findings that limiting antibiotic use in animal husbandry does not adversely affect health or welfare.¹¹

Gibbs makes clear that One Health is not a discipline but an ethos.⁹ It is the promotion of health through interdisciplinary collaboration. One Health is now part of the veterinary curriculum. Medical education and training should follow suit. As well as doctors and vets, One Health involves wildlife specialists, anthropologists, economists, environmentalists, epidemiologists, behavioural scientists, and sociologists. It is, says Gibbs, about seeking advice beyond your own profession.

For this to happen quickly and effectively we need new multidisciplinary platforms for research, education, and debate.

To help to meet this need, we have added a One Health stream to our open access sister journal *BMJ Global Health* (gh.bmj.com) and are seeking partnerships for meetings and events to advance the debate on One Health. As a world we cannot afford to ignore these cumulative threats to the health of people, animals, and the environment or to miss the opportunity to collaborate for a better future.

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