Pursuing a career in veterinary public health

Milorad Radakovic is a teaching fellow in veterinary public health (VPH) at the University of Cambridge. Here, he explains why he believes the challenges in this field of veterinary medicine make for an exciting career path. In a second article to be published in Vet Record Careers next week, he will share some of his own experiences of working in this field.

Having spent much of my working life in veterinary public health (VPH), I try to introduce some enthusiasm for the topic among my students, in the hope that some of them will embark on a career in this area.

The World Health Organization (WHO) defines VPH as ‘the sum of all contributions, to the physical, mental and social wellbeing of humans through an understanding and application of veterinary science’. This definition encompasses all activities carried out by veterinarians with all animal species, as well as human interactions, in the context of the environment they live in and share. Therefore, each veterinarian, one way or another, contributes to VPH.

The desired outcome of any veterinary task is to enrich animal and human life: to make people and animals healthy and happy. The approach to keeping and treating animals depends on whether one lives in the developed or developing world. In a very broad sense, and not always with clear distinctions, animals are kept for consumption, such as meat and milk (cattle, sheep, pigs, poultry, etc), for company (pets, horses) and also as working animals (horses, donkeys and camels [although these may also be kept for food]). Cultural differences in the world must always be acknowledged and appreciated.

Like humans, animals will inevitably suffer from illness and disease. There are many definitions and interpretations as to what constitutes a disease. For example, some diseases show clinical signs in animals while others do not, and some animal diseases are transmissible directly or indirectly to people (zoonoses). Diseases may be caused by a number of agents; for example, bacteria, viruses, fungi, toxins, chemicals, and so on. The dynamics of how, or if, diseases spread among the animal and human population depend on many factors. Humans may suffer from a mild zoonotic disease with self-limiting clinical signs – skin rash, vomiting and/or diarrhoea, or, in extreme cases, septicaemia, which may be fatal, to the most extreme, such as rabies, which will certainly be fatal.

Opinions and decisions or actions by the veterinarian should always be ‘evidence-based’ or ‘evidence-led’. In real life this is not always possible; for example, evidence may not be available or only limited evidence may be available (with all its uncertainties). Veterinarians are often asked to interpret and apply terms and words such as: hazards/risks, abnormal/normal, fit/unfit, safe/unsafe, adequate/not adequate, feasible/not feasible, flexible/not flexible, and so on. Interpretation may differ because of perceptions or bias on the part of individual veterinarians, influenced by the society they work and live in. The role of the veterinarian, however, should be to interpret these terms meaningfully to achieve the best outcome for people, animals and the environment in any individual circumstance.

VPH opinions, decisions and actions have a wide range of impacts on animals and humans as well as the environment.

In order to understand and apply VPH skills effectively, specific knowledge of animal diseases and zoonoses is essential. During veterinary undergraduate training, students also acquire an adequate level of knowledge and understanding of other disciplines and areas, such as legislation, food security and food technology (including hygiene and food safety), policy development, negotiation, inspection and auditing, enforcement, economy, religion, tradition, sociology, culture and politics. Veterinary graduates are uniquely trained to digest, process and analyse information from a wide range of sources and to then use it to develop and deliver action strategies. During their training, veterinarians develop an ability to think and act outside the box and to communicate effectively.

There are many VPH fields with job opportunities; for example, working on diagnostics, surveillance, epidemiology, control and prevention and elimination of zoonoses (foodborne and non-foodborne), biomedical research, health education, production and control of food, biological products and veterinary/medical/food equipment.

VPH is important, interesting, diverse and integrated in many other disciplines – and that makes it challenging. It creates many opportunities for veterinarians and medics in the developing and developed world, contributing to the enrichment of animal and human lives and their shared environment. VPH = One Health = One World.

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