

Teaching the concepts of One Health

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The concept of One Health has been a foundation of veterinary science since the origins of the profession. Environmental, animal and human health are inextricably linked in ways that are increasingly evident. As the human population expands, industries intensify and habitats and biodiversity diminish, the need to understand these linkages becomes increasingly compelling. The veterinary profession is uniquely positioned to contribute across each of these realms and their many interfaces by taking a One Health approach. To respond to these challenges we must develop innovative ways of fostering truly integrative thinking and multidisciplinary approaches that permeate all aspects of veterinary education, practice and research.

Veterinary teaching in New Zealand has a core program of integrative and problem-based learning that runs through all years of the curriculum. Input into this program is provided by veterinary and human health, animal science, agricultural and environmental science, biosecurity, animal welfare and bioethics, behaviour, psychology, and communications amongst practitioners and researchers. The focus is increasingly on animal welfare, nutrition, husbandry, disease prevention and biosecurity, underpinned by a strong culture of multidisciplinary inquiry and research. An active One Health research network, 'One Health Aotearoa', has developed involving academics and researchers from the Massey University institutes of Veterinary, Animal and Biomedical Science, Fundamental Sciences, Advanced Studies, and the Centre for Public Health Research, the University of Otago Medical School, and the New Zealand Government Institute of Environmental Science and Research.

Massey University has developed postgraduate programs educating medical doctors and veterinarians together across South Asia to use a systematic One Health approach to disease control policy and economic evaluation for priority zoonotic diseases, funded by the European Union. The core principle of our approach is "education into action", combining formal education with the strengthening of multi-sectoral collaborative frameworks and the practical application of acquired knowledge and skills to epidemiological investigation, research and disease control policy evaluation. This integrated approach builds both individual and institutional capacity, fosters collaboration between institutions and sectors, develops epidemiological understanding, and drives research to generate information about priority diseases nationally and regionally that is used to inform policy and government decision making.

Keywords: One Health – veterinary education – multidisciplinary education – zoonotic disease – multi-sectoral collaboration.