Community engagement in disease detection at the wildlife-livestock-human interface

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This poster outlines a number of collaborative studies underway at the Faculty of Veterinary Medicine, University of Calgary, designed to engage community groups to ensure early detection of emerging diseases in human, domestic animal and wildlife populations. The work depends on strengthening links between the veterinary faculty, community animal control services, parks and wildlife officers, community health science staff, biologists and social scientists in order to ensure early detection of disease and the recognition of risk factors that have an impact on human, wildlife and domestic animal health. The focus of these studies is on the interface between humans, wildlife and domestic animals in urban Alberta and in hunting communities in Northern Canada. Specific examples include the use of interviews to gather indigenous knowledge about changes in the health of caribou and other wildlife in northern Canada, developing networks to engage hunters in sharing observations and gathering samples and data for wildlife disease surveillance and collaborative approaches to understanding the ecology of human-coyote interactions, including disease risks, in a large urban centre (Calgary). Engagement of the local stakeholders is a common component of each of these projects and facilitates early detection of abnormal events or syndromes.

These and similar multidisciplinary studies designed to examine wildlife-domestic animal-human disease transmission at the community level have demonstrated that an understanding of disease ecology, and associated risk factors, requires recognition and early detection of factors that impact on ecosystem health as well as those directly relevant to the host-pathogen interaction. These factors include changes in the distribution and health of people and wildlife, disruption to normal behaviour and social structures in people and animals, unusual activity in disease vectors and climatic or geopolitical impacts on food and water supplies. Data from long term studies such as those designed to assess the health of isolated communities, and their environment, has been used effectively to improve health interventions for wildlife species and has the potential to be used equally effectively to identify and mitigate emerging risks for livestock and public health.