

Session 31

Theatre 2

An epidemiological and economic framework for evaluating the tangible and intangible impacts of emergency animal disease outbreaks

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The economics of emergency animal disease outbreak response is impacted by a range of factors, such as the likelihood of an event occurring, species affected, frequency and distribution of disease incursions, transmission cycles, host interactions and climatic anomalies. Whilst empirically focussed economic evaluation tools for analysis and evaluation of control and prevention options are in frequent use, insights can be gained from an expanded framework that incorporates value-drivers used to justify decisions. The framework is build around an extrapolated cost-benefit analysis (CBA) that incorporates tangible and intangible elements. Primary steps involve risk analysis to ascertain the magnitude, priority and impact of the potential emergency situation. The framework also allows the operator to value-add to the CBA by incorporating non-commercial intangibles (such as environment, human health and animal welfare) using a series of value multipliers. These are essentially an averaged preference for a nominated approach or intervention along a scale of potential value placements using an axiological methodology. The outcome of the framework represents a holistically adjusted parametric. Potential uses of these outcomes could include (but are not limited to): (1) development of new policy for emergency animal diseases in peace time (Preparedness phase); (2) during consultative processes where multiple perspectives and values must be identified and considered: (1) for economic (tangible and intangible) justification of adjustments to response policy during an exotic animal disease (control phase); (2) for comparing and contrasting the economic (tangible and intangible) consequences of a particular control or prevention policy A case study using Hendra Virus will be given.