



THE IMPACT OF RABIES AND THE BENEFITS OF ITS PREVENTION

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BIOGRAPHY

Dr Katie Hampson is a Wellcome Trust research fellow based at the University of Glasgow. Dr Hampson works on the dynamics of rabies and strategies for effective rabies surveillance, control and elimination. She collaborates with a network of practitioners and policy-makers in rabies endemic areas to collect and analyse data on rabies transmission and the impacts of control effort.

SUMMARY

Rabies is a notoriously under-reported and neglected disease. Here, the impacts of rabies in terms of public health and economic costs are described and an overview of published data and accompanying modelling to generate estimates of the costs of rabies is provided. We estimate that globally canine rabies causes approximately 59,000 (95% confidence intervals [CIs]: 25–159,000) human deaths, over 3.7 million (95% CIs: 1.6–10.4 million) disability-adjusted life years (DALYs) and 8.6 billion USD (95% CIs: 2.9–21.5 billion) in economic losses annually. The largest component of the economic burden is due to premature death (55%), followed by direct costs of post-exposure prophylaxis (PEP, 20%) and lost income whilst seeking PEP (15.5%), with only limited costs to the veterinary sector due to dog vaccination (1.5%), and additional costs to communities from livestock losses (6%). Overall, the burden of rabies impacts on public health sector budgets, local communities and livestock economies, with the highest risk of rabies in the poorest regions of the world. Moreover, the impacts of the disease on the poorest communities are not revealed by official statistics, which has contributed to the neglect of the disease. Most progress in the control and elimination of rabies around the world has been achieved through sustained investment in dog vaccination. However, in most rabies endemic areas, investment in dog vaccination has been inadequate and availability and affordability of PEP needs improving. Collaborative investments by the medical and veterinary sectors are therefore urgently needed to reduce the currently large and unnecessary burden of rabies on affected communities. Moreover, engagement of these communities will be essential to the effectiveness and sustained momentum of dog vaccination programmes that should ultimately lead to the elimination of disease.