

Institution: King's College London
Unit of Assessment: 30
Title of case study: Preventing infectious livestock disease in Britain: The implications of history for policy and practice
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>Infectious livestock disease poses a major threat to food production, animal welfare, trade, rural ways of life, and sometimes human health. Traditionally, the British government and the veterinary profession have approached its control in top-down fashion, relying on evidence from science and economics. However, controversy over the handling of the 2001 foot and mouth disease epidemic precipitated the recognition of social and cultural influences on understandings of disease and attitudes to their control. Woods' research has brought to light the 'human factor' which has operated in the past to influence government, veterinary and farming perceptions of and reactions to livestock disease. Her findings have informed contemporary disease control initiatives, contributed to a culture change in the ways that vets and policy makers think about livestock disease, and convinced them that history offers an important evidence base. Woods' foot and mouth disease research has also had impact in South Korea in the wake of an epidemic there.</p>
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>Woods' early research addressed the history of foot and mouth disease (FMD) in Britain (3.1). Coinciding with the 2001 epidemic, she revealed that the government's framing of FMD as a terrible plague was a product of history, not biology, and that its contentious policy of slaughtering all infected and at-risk animals had aroused opposition for over a century. These findings cast doubt on the validity of mass slaughter, and established Woods' reputation in the production of high quality, policy-relevant historical research. She produced another article on this subject in 2009 (3.2). Additionally, in 2007, inspired by the escape of FMD virus from the Pirbright laboratory, she conducted further investigations into historical perceptions of risk in relation to FMD research (3.3). The impact of this work was felt in Britain and South Korea during the period 2007-12.</p> <p>Woods also conducted research on the history of livestock disease prevention under the £24m Rural Environment and Land Use programme (Relu 2004-13). This programme was supported by several research councils, the Scottish government, and Defra. Established in the aftermath of the FMD controversy (which Woods' research had fuelled), it aimed to produce inter-disciplinary evidence that could help redirect policy and practice towards more socially acceptable methods of disease control. Woods was the only historian to receive funding. Specifically, her work informed, and was informed by, two post-FMD changes in livestock disease governance: (1) a move from top-down policy making to partnership approaches, which awarded livestock owners more influence over disease control policy in return for bearing more of the responsibility and cost; and (2) efforts to develop new veterinary markets and relationships with farmers, particularly through preventive medicine services to farms (known as Farm Health Planning). Woods identified numerous precedents for these supposedly new ways of working, and used them to show how the human factor operated to influence policies and practices.</p> <p>Drawing on her earlier analysis of war-time efforts to promote veterinary preventive medicine on farms (3.4), she examined government, veterinary and farming attempts to advance this agenda in the 1960s and 70s, and the present day (3.5, 3.6, 3.7). Findings revealed the many difficulties associated with implementing a preventive approach, and that the oft-cited claim, 'prevention is better than cure', holds true only in very specific circumstances. Another piece of research (3.8) derived from the 2009 concern that farmers were failing to utilise a new vaccine against the pressing threat of blue tongue virus. A historical precedent was identified in Newcastle disease control, 1962-72. Its analysis revealed how vaccination decisions were informed by producers' world views, their perceptions of disease risk and vaccine benefits, and their trust in government. A further, synthetic account of 20th century livestock health policy in Britain (3.9) revealed the range</p>

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of factors that informed past policy making. It also showed how, by precipitating changes to farming and trading practices, public policy could sometimes have unanticipated, detrimental effects on farm animal health. Animal disease should therefore be viewed both as a stimulus to, and a consequence of, public policy.

Abigail Woods joined King's as reader in the history of human and animal health in August 2013. Since 2005 she had been a member of the Centre for the History of Science, Technology and Medicine at Imperial College, which merged with King's College London in August 2013. The merger has been recognised and the use of the underpinning research approved by the HEFCE REF team for purposes of this impact assessment.

3. References to the research (indicative maximum of six references)

3.1 Woods, *A Manufactured Plague: The History of Foot and Mouth Disease in Britain, 1839-2001* (Earthscan, London, 2004; translated into Korean 2011). A peer reviewed book derived from a Wellcome Trust-funded PhD ('Foot and mouth disease in 20th century Britain: Science, practice and policy.' c£50,000, 1999-2002).

3.2 A. Woods, 'The historical roots of foot and mouth disease control in Britain, 1839-2001' in M Doring and B Nehrlich (eds), *The Social and Cultural Impact of Foot and Mouth Disease in the UK in 2001: Experiences and Analyses* (Manchester University Press, 2009), 19-34.

3.3 A. Woods, 'Pursuit of the risk vaccine', *Guardian*, 7 August 2007, p27. A short commentary, derived from original research.

3.4 A. Woods, 'The farm as clinic: Veterinary expertise and the transformation of dairy farming, 1930-50', *Studies in History and Philosophy of Biological and Biomedical Sciences* 38 (2007), 462-87. doi.org/10.1016/j.shpsc.2007.03.009 This peer reviewed article derived from a post-doctoral fellowship awarded by the Wellcome Trust ('The veterinary medicalization of bovine reproduction', c£80,000, 2003-05).

3.5 A. Woods, 'Is prevention better than cure? The rise and fall of veterinary preventive medicine, c1950-80', *Social History of Medicine* 26 (2013), 113-131. doi.org/10.1093/shm/hks031 (peer reviewed).

3.6 A. Woods, 'Is prevention better than cure? Lessons from history', *Veterinary Times*, 5 March 2012, 26-28 and 19 March 2012, 16-17. A popular summary of 3.2 and 3.3.

3.7 A. Woods, 'The Lowe report and its echoes from history', *Veterinary Record* 169 (2011), 434-6. [doi: 10.1136/vr.d5388](https://doi.org/10.1136/vr.d5388). A 'feature' piece, derived from original research.

3.8 A. Woods, 'Understanding blue tongue virus vaccination behaviours: Newcastle disease control in England and Wales, 1962-72', *Government Veterinary Journal* 21 (2011), 30-44. Reviewed by journal editors and the government's deputy chief vet. Copy supplied on request.

3.9 A Woods, 'A historical synopsis of farm animal disease and public policy in 20th century Britain.' *Philosophical Transactions of the Royal Society B: Biological Sciences* 366 (2011), 1943-54. [doi:10.1098/rstb.2010.0388](https://doi.org/10.1098/rstb.2010.0388) (peer reviewed).

References 5-9 derived from an interdisciplinary early career post-doctoral award from the RELU Programme ('Reinventing the wheel? Farm Health Planning, 1942-2006', c£200,000, 2007-11).

4. Details of the impact (indicative maximum 750 words)

Woods' research has impacted on vets and policy makers in three distinct ways. Firstly, by revealing livestock disease to be a social as well as a technical problem it has encouraged, and, through the provision of evidence, helped to make possible the general reorientation of policy and

practice, from the highly technocratic approaches that prevailed in 2001, to today's emphasis on partnership and understanding the human factor. Secondly and more specifically, the conduct of particular historical case studies has informed understandings of how social, political and cultural factors are currently influencing attitudes to FMD control, blue tongue vaccination and Farm Health Planning. Finally, research has inspired vets and policy makers to think historically, and to recognise history as a source of critical evidence for livestock disease policy and practice. These impacts were enhanced by active networking, discussion of findings, and the building of relationships with veterinary professionals, government policy makers and scientific researchers.

The impact of Woods' FMD research (3.1, 3.2, 3.3) was felt nationally and internationally. The 2009 publication of a 4-page Parliamentary Post Note, 'Lessons from History' devoted half of page 1 to a case study of her findings (5.1). Post Notes are designed to inform and assist parliamentarians in decision making. Woods' findings also impacted on how policy makers, veterinary surgeons, farmers' representatives and the general public in South Korea evaluated their government's response to a devastating 2010-11 FMD epidemic. This was achieved by a Korean translation of 3.1 (2011) and through invited presentations – which these stakeholders attended – to FMD engagement events in Seoul and Pohang. The Pohang presentation featured in the local and national press, and a local TV news report (5.2).

The impact of Woods' research on the history of veterinary preventive medicine was enhanced by her participation in the Relu programme, which constituted 'a benchmark, a new "standard" in impact-generation' (5.3, p. 6). It held various workshops with the explicit goal of encouraging networking between researchers and stakeholders. It extended the reach of Woods' publications by integrating them within a series of articles that appeared in high profile (3.9) and widely read journals (3.7 and a press release of 3.6 appeared in the Veterinary Record, received by 13,500 vets). It also enabled her to work shadow Defra's Deputy Chief Veterinary Officer (DCVO), who requested the production of 3.8. His evaluation of the work shadow experience valued her 'challenge to the accepted ways of working' and her 'objective analysis of current policies using historical inquiry as a discipline' (5.4). He was also extremely impressed by 3.8, describing it as 'a fascinating and well-researched document. I learnt a lot – particularly about the environment in MAFF [Ministry of Agriculture, Fisheries and Food, the predecessor department to Defra] in the two decades prior to me joining. But what is most telling and slightly disturbing is the uncanny resemblance of the 1960/70s Newcastle Disease vaccination effort to the position we find ourselves in with Blue Tongue Virus...I'd like to give this wider publicity.' At his instigation, the report was published in the Government Veterinary Journal. This extended the reach of the research by disseminating it to vets across government. He also made follow-up requests for additional historical information (5.5).

Another official in the Defra Veterinary Research Unit organised a presentation of findings from 3.4 and 3.5 to around 20 members of Defra's Farm Health Planning team. Both before and afterwards he reported a good deal of interest in Woods' findings (5.6). They also impacted on a 2009 Defra-commissioned report on veterinary expertise in food production. Woods was interviewed by the author, who asked for 'a brief paragraph on the circumstances in the past in which farm health planning has emerged as an important initiative...I need to be able to quote you in on this.' Later he asked for her opinion on the draft report 'to check that I am not reinventing the wheel' (5.7). This report was later taken up by the British Veterinary Association's Veterinary Development Council (2010-12) with the aim of planning the long-term future of veterinary services.

Other pathways to impact on the veterinary profession included popular summaries of research findings (3.5) in the magazine Veterinary Times (a weekly news journal for the profession with a circulation of 20,000); and presentations to veterinary societies and schools (Royal Veterinary College, London, 2013; Veterinary Research Club, 2011; Cambridge University Veterinary School, 2009; British, World and South Korean Veterinary History Society meetings, 2009-12). The head of the Department of Production at the Royal Veterinary College, London (who is also a leading figure in the British Cattle Veterinary Association, BCVA) thanked Woods for 'a fascinating insight into the sometime cyclical nature of proactive health planning and preventive medicine in the UK livestock sector. As a profession we have very short memories and we have so much to learn from the past.

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The high turnout we had was an indication of the interest your talk generated' (5.8). The current BCVA president, who has headed its Farm Health Planning project since 2006, is also impressed with Woods' discovery that this concept has a long history. He cites her work frequently in his talks to farmers and vets; in articles published in Veterinary Record and Cattle Practice (the BCVA's journal for practitioners); in Defra stakeholder forums; and in discussion with the new Animal Health and Welfare Board for England, which advises Defra on policy (5.9). Such activities support the above claim of a culture shift, which has led vets and policy makers to acknowledge history as a source of evidence for livestock disease policy and practice.

Woods has also appeared on the BBC2 TV programme 'War time farm' (27 Sept 2012). Here, she enriched public understandings of how war impacted on the perception and management of livestock disease. She demonstrated how to use a 1940s milking machine so as to prevent mastitis, and drew on 3.1 to discuss how government, farmers and vets worked to enhance the war-time milk supply by improving livestock health. The episode was viewed by 2.77m people, and was the fifth most viewed programme on BBC2 that week (5.10).

5. Sources to corroborate the impact (indicative maximum of 10 references)

- 5.1 Parliamentary Post Note 323, 'Lessons from History' (2009).
<http://www.parliament.uk/briefing-papers/POST-PN-323>
- 5.2 Booklets related to events at Kunghee University and Pohang University, 2012; press release by Korean foundation for the advancement of science and creativity; articles in local and national press. Available on request.
- 5.3 Relu societal and economic impact evaluation, 2012.
http://www.esrc.ac.uk/images/Relu%20Impact%20Evaluation%20Final%20Report-%20307_tcm8-22271.pdf
- 5.4 RELU Work Shadowing and Visiting Fellowship Scheme: Evaluation Questionnaire.
- 5.5 Email exchanges, Deputy Chief Veterinary Officer, Defra, to Abigail Woods, 13 July (uploaded) and 29 Oct 2009, 19 March 2010.
- 5.6 Email to Abigail Woods, 3 Sept 2010, 17 Nov 2010.
- 5.7 Unlocking potential: A report on veterinary expertise in food animal production (2009), and author email correspondence with Woods, 5, 10, 11 Feb 2009.
- 5.8 Head of Department of Production and Health, Royal Veterinary College, letter to Abigail Woods, 19 March 2013 (uploaded).
- 5.9 References included in email to Abigail Woods, 15 August 2013 (President, BCVA, uploaded).
- 5.10 Wartime Farm episode 4, broadcast 27 Sept 2012. Viewing figures at <http://www.barb.co.uk/viewing/weekly-top-30?>
- 5.11 Director, RELU (statement uploaded).