Of goats and humans; the societal costs of the Dutch Q fever saga

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Background: In the Netherlands, more than 4,000 human Q-fever cases and 19 deaths were notified between 2007 and 2010 during an unprecedented outbreak, implicating dairy goats as the main source. Veterinary control measures were taken reluctantly as economic damage was feared. Measures were introduced late, gradually increased and culminated in the culling of approximately 60,000 goats, 3 years after the outbreak began. Following acute Q-fever 40% of working Dutch patients reported long-term (>1 month) sick-leave. One to two years after initial infection 40% of patients reported persisting physical symptoms and 60% a severely affected health status. Furthermore their general Quality of life (QoL) was affected in 44.9% of cases and 43.5% suffered from persisting fatigue.

Results: Of goats and humans, the societal costs of the Dutch Q fever saga are estimated. The largest costs are due to loss of QoL followed by productivity and animal costs. Veterinary costs account for 85%, are spread out over a decade and delayed. The costs are due to loss of QoL followed by productivity loss. Veterinary costs vary between 6% and 15% (depending on costs included) are much smaller but immediate.

Conclusion: Q-fever poses a serious persisting long-term burden on patients and society. The real impact of a zoonosis outbreak only becomes apparent when combining human health, societal and animal costs. Veterinary costs are immediate and therefore more apparent although proportionally small. Because of a slow trickle down effect human cost and societal implications tend to be underestimated. Finding the balance between economic veterinary interests and human health remains a challenge when dealing with future outbreaks of zoonotic diseases.

http://dx.doi.org/10.1016/j.ijid.2012.05.914