

Burden of foodborne disease in the Netherlands: from science to policy

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In the Netherlands, the Ministry of Health mandates the National Institute for Public Health and the Environment (RIVM) to provide annual updates of the number of illnesses, disease burden and cost-of-illness caused by an agreed-upon standard panel of 14 enteric pathogens. These pathogens are mainly transmitted by food, but also via direct contact with animals, environment-mediated and human-to-human transmission routes. The disease burden is expressed in DALYs (Disability Adjusted Life Years), a metric integrating morbidity and mortality into one unit. Furthermore, the cost-of-illness (COI) related to these 14 pathogens is estimated and expressed in euros. The COI estimates include healthcare costs, the costs for the patient and/or his family, such as travel expenses, as well as costs in other sectors, for example due to productivity losses. Moreover, using different approaches to source attribution, the estimated DALYs and associated COI estimates are attributed to five major transmission pathways (i.e. food, environment, direct animal contact, human-human transmission, and travel) and 11 food groups within the foodborne pathway itself. The most recent DALY and COI estimates referring to the year 2018 show that the 14 pathogens in question are cumulatively responsible for about 11,000 DALYs and €426 million costs for the Dutch population in 2018, with a share for foodborne transmission being estimated at 4,300 DALYs and €171 million costs, which is comparable to previous years. These estimates have been providing vital insights for policy making as to guide public health interventions and resource allocation for over two decades in the Netherlands. Herewith, the approach and outcomes of the burden of disease and COI estimates in the Netherlands will be presented, with a focus on how these estimates enable policy-makers and the scientific community to monitor trends, generate scientific hypotheses, and undertake public health actions.