Cystic echinococcosis (CE) is a zoonotic disease caused by the larval stages of the dog tapeworm *Echinococcus granulosus*. In humans, the disease presents as cystic lesions most commonly in the liver or lungs. CE has a global distribution, but is regarded as a neglected disease despite very high incidence levels being recorded in certain locations.

Consequently, a global burden of disease estimate to calculate the societal impact of CE was undertaken. Initially the financial burden of the disease was felt to be important as this parasite results in considerable animal health losses to livestock industries. However, in parallel to this, estimating the human burden of disease through the DALY approach was considered essential. A variety of sources of data to estimate human incidence and animal prevalence were used. These included OIE data, official government reports, detailed multi-lingual literature searches and published reports of detailed case studies for some locations. In addition, modelling techniques were utilized to estimate missing data based on parameters that included the GNI of individual countries and the prevalence of *E. granulosus* in livestock and/or dogs. These methods assumed that transmission to humans occurred at a similar magnitude to comparable countries where the data was better recorded.

Echinococcosis is primarily a space occupying disease of the liver and often has similar symptomatology to liver cancer. Consequently, disability weights for liver cancer were used based on Global Burden of Disease and Dutch disability weights for disease free liver cancer, preterminal liver cancer, terminal liver cancer and death. These values were 0.2, 0.239, 0.809 and 1 respectively. Quality of life studies have indicated that there is considerable morbidity even in patients that are detected at routine screening rather than presented for medical treatment with clinical problems. This further justified the weighting of 0.2 for such cases.

The proportion of cases of CE assigned to each category was based on a literature survey of several series of cases and their clinical outcome following surgical intervention. Likewise age weighting was calculated from a series of reports where the average age of patients was presented and then extrapolated to similar countries where this data was unknown. Because some of the data was uncertain, stochastic techniques were used to model this uncertainty and hence overall DALY estimates were calculated based on a median and 95% credible intervals.

For financial calculations, similar modelling techniques were used throughout. In addition, there is strong evidence that CE is severely underreported, largely because it is not notifiable in most countries and most cases are from poor countries where patients are often treated surgically at local hospitals. Furthermore, in many places, affected individuals may live in remote areas where treatment is unavailable or unaffordable. Indeed the small number of case finding reports confirmed that underreporting is in the region of 75%.

The global burden of CE was estimated to be approximately 1 million DALYs (95%CI 860,000-1,175,000) assuming underreporting of cases. It was estimated that approximately 200,000 new cases of CE are diagnosed each year. The financial burden of disease in purchasing power parity estimates is approximately $4.1 billion per annum of which 46% is associated with human treatment and morbidity and 54% is animal health costs. The burden of human disease of 1 million DALYs is greater than that of several other conditions in the tropical cluster such as dengue, chagas and onchocerciasis (667,000, 616,000 and 484,000 respectively), but less than that of trypanosomiasis and schistosomiasis (1.5 million and 1.7 million DALYs respectively). An unknown proportion of CE is foodborne due to contamination of human food with canine faecal material. Risk factor analyses suggest that this proportion could be considerable.