

New research shows societal burden of foodborne illness in the UK

The FSA Board has welcomed a report which presents new comprehensive estimates of the societal burden caused by foodborne illnesses in the UK.

The outcome of an extensive programme of work conducted over a five-year period was scrutinised by Members at the [FSA Board Meeting](#), and provides a more in depth understanding of the wider impacts of foodborne diseases such as norovirus, campylobacter and listeria.

For the first time, the study also incorporates estimates based on the impacts of foodborne illness cases where a specific pathogen is not identified, often as a result of people not seeking medical attention.

The new model which produced the estimates follows an established process used in the UK and internationally to assess the financial impacts and the 'human costs' such as pain grief and suffering and changes to quality and length of life.

Estimates for these 'human costs' were developed in part by surveying more than 4,000 people to produce monetised values to measure the impact of different foodborne pathogens.

This will allow for these intangible human impacts to be considered alongside financial impacts when decisions relating to foodborne illnesses are made.

The model shows that for 2018:

- the burden arising from the 13 main foodborne pathogens is around £3bn. Norovirus imposes the greatest burden at an estimated annual cost of £1.68bn followed by Campylobacter spp. (£0.71bn) and Salmonella spp. (non-typhoidal) (£0.21bn).
- foodborne illness cases where a pathogen was not identified causes an estimated societal burden of around £6bn.
- Taken together, the two estimates lead to a headline figure of approximately £9bn, as the annual cost burden of foodborne illness in the UK in 2018.
- cases of Campylobacter, which are more common but generally less severe, impose a burden of £2,380 each while Listeria, the least common of the 13 measured, has a burden equivalent to £230,748 due to a higher proportion of fatalities, resulting in a higher 'human cost'.

The Board welcomed the work and the report's findings which provides the FSA with a more robust and comprehensive awareness of the impact of all foodborne illnesses and an additional tool to direct future decisions on prevention.

Heather Hancock, Chair of The Food Standards Agency said:

"I welcome this vital new research. Being able to put a cost on the personal, social

and economic burden when someone becomes ill as a result of food, represents a milestone for the FSA.

“We will use this new analysis of the cost of illness, and how it varies between different germs, to help set our priorities for tackling foodborne illness and to focus the FSA’s expertise, money and influence.”

Professor Rick Mumford, Head of Science Evidence and Research at the Food Standards Agency said:

“For the first time this model gives the FSA and other partners a much more detailed picture of how foodborne illnesses can impact society.

“We have designed it from the ground up to measure the impacts of specific pathogens as well as for the first time providing an estimate of the majority of cases where no pathogen is attributed.

“As a result, we are now equipped with robust, quantitative evidence on the impact of foodborne disease which significantly strengthens our decision-making ability.”

Richard Smith, Deputy Pro Vice Chancellor and Professor of Health Economics at the University of Exeter said:

“Providing an understanding of the impact of foodborne disease on individuals and wider society is a critical building block to understanding where and how to best deal with it.

“The FSA has a rich history of developing such analyses, and this latest work builds on that with significant revisions and updates to provide the most robust values yet of the societal impact of foodborne disease.

“This provides a robust, powerful and flexible tool to assist FSA in determining its priorities for tackling foodborne disease, which remains a serious challenge for our society.”

FSA economists worked with academics from leading UK universities to develop the Cost of Illness (COI) model to identify and measure all the costs of a particular disease.

The model is loosely based on the Health and Safety Executive (HSE)’s [Cost to Britain model](#) which estimates the annual cost of workplace fatalities, self-reported injuries and ill health at £15bn.

This new model was quality assured internally and externally by independent experts and represents a significant improvement from the previous, much simpler model used to estimate the burden of foodborne illness. Further work is currently ongoing to apply these methodologies to other areas, including food allergy and hypersensitivity.

Notes to Editors

Publications

Other notes

Comparisons to previous estimates is not possible as this is the first time that the FSA have estimated the total burden of foodborne illness.

This estimate is therefore inevitably greater than the estimates for identifiable cases alone for the following reasons:

- this is the first time we are measuring cases where no specific pathogen is attributed, which account for 60% of cases
- the estimated number of illnesses cases attributed to foodborne illnesses has increased from 1 million to 2.4 million [as announced last month](#)
- The new model uses a different methodology to calculate the non-financial 'human costs', which account for almost 80% of the overall burden