

Estimating the burden of foodborne gastroenteritis in Australia

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Background

Estimation of the burden of foodborne disease is desirable for policy purposes, but generally has to rely on multiple data sources, and has to contend with uncertainty inherent in much of the available data. Comparison between different countries and over time is only valid if similar methods of calculation are used and uncertainty is accommodated. While acknowledging the importance of uncertainty, previous overseas estimates have not always addressed this issue. OzFoodNet has made a new estimate of the incidence of foodborne gastroenteritis in Australia based on a methodology previously used internationally, but incorporating new a methodological enhancement to allow for uncertainty in the data.

Methods

To estimate the burden of total gastrointestinal illness we used data from a nationally representative survey of Australians conducted during 2001–2002. We estimated the ‘plausible proportion’ of gastroenteritis that is foodborne using pathogen specific surveillance, outbreak, survey and laboratory data, with a simulated ‘plausible’ distribution for each data element used in the calculation. We then applied this proportion to the total amount of gastroenteritis to estimate the amount of foodborne gastroenteritis.

Results

We estimated the ‘plausible range’ of the incidence of foodborne gastroenteritis in Australia each year as .23 to .35 episodes per person per year.

Conclusion

Foodborne disease is clearly an issue of importance for Australia. The methodology used in this estimation can be readily used in other countries and includes accommodation of uncertainty by presenting results as a ‘plausible range’.

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