New Study Provides Insight into the Public’s Willingness to Pay for Improved Food Safety

*À sophisticated and innovative survey challenges the approach typically used to value the benefits of food safety regulations, detailing how much the public is willing to pay to reduce related risks.*

Washington D.C. – A new survey conducted by Harvard Center for Risk Analysis scholars explores the amounts that consumers are willing to pay for a safer food supply, challenging the approaches often used to value reductions in the risks of foodborne illness. The researchers find that consumers would collectively be willing to spend between $4,500 and $6,500 to avert each case of short-term illness. According to the Centers for Disease Control and Prevention, “roughly 1 in 6 Americans (or 48 million people)” become ill from foodborne illness each year.

The analysis, entitled “Diminishing Willingness to Pay per Quality-Adjusted Life Year: Valuing Acute Foodborne Illness,” was co-authored by Kevin Haninger and James Hammitt of Harvard University and supported by a U.S. Department of Agriculture grant. The research appears in the September issue of the journal *Risk Analysis*, published by the Society for Risk Analysis.

The researchers survey 2,858 randomly-selected adults and elicit their willingness to pay for a food safety program that would reduce the risks associated with eating chicken, ground beef, or packaged deli meats. The survey describes mild, moderate and severe illnesses that last from one to seven days and vary in the extent of gastrointestinal discomfort and restrictions in work and leisure activities, with severe cases requiring hospitalization. More severe cases also result in a small risk of death. Respondents are asked to indicate their willingness to pay for a specific reduction in the likelihood of experiencing such illness, of either 1 in 10,000 or 3 in 10,000 per meal. The characteristics of these scenarios are based on data on the incidence, symptoms and duration of foodborne illness in the United States.

The authors also explore the relationship of individual willingness to pay (WTP) to another metric often used in analysis of food safety and other health policies. This alternative approach – “quality adjusted life years” or QALYs – involves determining how an illness affects an individual’s health-related quality of life using a zero-to-one scale where zero is equivalent to dead and one is equivalent to perfect or optimal health. That value is multiplied by the duration of the illness to determine the associated QALYs. QALYs are widely used in medicine and
public health to determine the cost-effectiveness of various interventions and programs, and are sometimes assigned a monetary value to estimate the value of the benefits of food safety and other regulations.

The authors find that “WTP to reduce the risk of illness increases with, but is less than proportional to, illness severity and duration,” and that “WTP is more sensitive to severity than to duration.”

These findings suggest that the practice of valuing nonfatal risks by assigning a constant monetary value to a QALY is not valid. Such an approach assumes that the value of averting an illness is proportional to its severity and duration, a result that is not supported by this study. Thus using QALYs to measure the monetary benefit of government policies will lead to results that are inconsistent with individual preferences for spending on health risk reductions. As the authors note, “cost-effectiveness analysis using QALYs is inconsistent with benefit-cost analysis. The results of these analyses can imply different conclusions about appropriate policy choice.”

One reason why analysts often rely on QALYs for valuation is the lack of direct estimates of WTP for these types of illnesses. By providing WTP estimates, this study helps to fill an important research gap and could lead to significant changes in how the benefits of alternative strategies are weighed in government decisionmaking.

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Contact: Steve Gibb, 202.422.5425 skgibb@aol.com to arrange an interview with the author(s). Note to editors: The complete study is available upon request from Steve Gibb or here: http://onlinelibrary.wiley.com/doi/10.1111/j.1539-6924.2011.01617.x/full