Abstract

We design and conduct a stated-preference survey to test whether willingness to pay (WTP) to reduce risk of acute illness is proportional to the corresponding change in expected quality-adjusted life years (QALYs). For the short-term illnesses we consider, proportionality is required by economic theory if QALYs measure utility for health. Proportionality implies a constant WTP per QALY and that WTP is proportional to changes in both health quality and duration of illness. WTP is elicited using double-bounded, dichotomous-choice questions in which respondents (randomly selected from the United States general adult population, n = 2,795) decide whether to purchase a more expensive food to reduce the risk of foodborne illness. Health risks vary by baseline probability of illness, reduction in probability, duration and severity of illness, and conditional probability of mortality. The expected gain in QALYs is calculated using respondent-assessed decrements in health-related quality of life if ill combined with the stated duration of illness and reduction in probability. We reject the hypothesis that WTP is proportional to changes in expected QALYs and find diminishing marginal WTP for severity and duration of illness prevented. Our results suggest that individuals do not have a constant rate of WTP for changes in QALYs, which implies that cost-effectiveness analysis using cost per expected QALY gained is not consistent with economic welfare theory.