

Abstract

In most medical decisions, probabilities are ambiguous and not objectively known. Empirical evidence suggests that people's preferences are affected by ambiguity. Health economic analyses generally ignore ambiguity preferences and assume that they are the same as preferences under risk. We show how health preferences can be measured under ambiguity, and we compare them with health preferences under risk. We assume a general ambiguity model that includes many of the ambiguity models that have been proposed in the literature.

For health gains, ambiguity preferences and risk preferences were indeed the same. For health losses, they differed with subjects being more pessimistic in decision under ambiguity. Utility and loss aversion were the same for risk and ambiguity. Our results imply that reducing the clinical ambiguity of health losses has more impact than reducing the ambiguity of health gains, that utilities elicited with known probabilities may not carry over to an ambiguous setting, and that ambiguity aversion may impact value of information analyses if losses are involved. These findings are highly relevant for medical decision making, because most medical interventions involve losses.