Editorial

The Visibility and Divisibility of Quality-Adjusted Life-Years

The history of health-related utility measurements in general, and quality-adjusted life-years (QALYs) in particular, dates back to at least the 1970s. One of the pioneers in this field, George Torrance, has described a variety of methodological approaches for both measuring and comparing health quality indicators.\(^1\)\(^-\)\(^3\) His articles have assisted in not only explaining how to measure health utility but also how to interpret differences in these measures. In the past few years, hundreds of published articles have reported QALY measures to estimate the benefits of novel health services and pharmacologic interventions, leaving decision-makers with the challenge of deciding when to expend financial resources to reap the corresponding (quality-adjusted) health benefits.

With the increasing number of reports that estimate the impact of new drugs and technologies on QALYs, it is important to know what a QALY is worth. Traditionally, the value of a QALY has been approximated at US $50,000.\(^4\) There have been recent attempts to determine the contemporary value of a QALY.\(^5\) It is interesting to note that although some argue that the value should be higher, the $50,000 benchmark for a QALY has not increased over time. That is, the same $50,000 figure has been used for nearly 15 years. Stated differently, if there were a market for QALYs, the inflation rate would be unsurpassed by any other product category. It may seem perplexing that the value attributed to a QALY has not increased over time. However, one possible reason for this may simply be that many clinical decision-makers still do not really know what a QALY is. Alternatively, perhaps not all QALYs have the same value.\(^6\)

Another reason that it is difficult to assess the value of QALYs is that most interventions do not yield benefits as a single QALY. Instead, a new drug may provide a fraction of a QALY to patients, or a new technology may yield several QALYs for a fraction of the patients who use it. This begs the question of whether QALYs are truly divisible and, if so, whether the prorated value of a partial QALY is equal to the fraction of a QALY that is gained. For example, if a new technology extended life by the equivalent of 1 QALY, then many researchers and decision-makers would support spending an additional $50,000 on the intervention. If another technology extended life by the equivalent of a quality-adjusted life-day (ie, only 1 additional day rather than an additional year, after adjusting for the utility of the health state), many would argue that, in general, there would be no real justification for paying for the new technology. The mathematical value of that quality-adjusted life-day on a $50,000-per-QALY basis is only $136.99, but many would still argue that it would not seem worth the expense.

For some, measuring the utility associated with the quality of life in 2 different health states for purposes of resource allocation is inherently problematic.\(^7\)\(^,\)\(^8\) For others, it is disheartening that only a few decision-makers have become comfortable with basing their choices on cost-effectiveness studies using QALYs.\(^9\) Whatever the future may hold for the development of new methods related to QALYs, the one thing that appears certain is that their use supports the value of patient preferences in health care decision-making, which most in the health care field should be able to espouse as beneficial.

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REFERENCES

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