

QALYs and Value Assessment

Description

QALYs and Value Assessment

Mayvis Rebeira PhD, Canadian Health Policy Institute

ABSTRACT

This literature review highlights the limitations of using Quality-Adjusted Life-Years or QALYs, in assessing the value of therapies through its use in cost-effectiveness analysis. Objective: To highlight key issues and limitations with the use of QALYs and present alternative methods to assess value-for-money for evaluating innovative therapies: Methods and Results: Key considerations highlighted include ethical considerations, use of QALYs for resource allocation, underestimating impact of therapy, ageist bias and double jeopardy with respect to people with disabilities or permanent ill-health. Methodological and other limitations covered include lack of established threshold in cost-effectiveness analysis and QALY derivation. Recommendations: Several recommendations are proposed that can either be used in conjunction with QALYs or replace the current QALY metric in value assessment. Conclusion: QALYs are deeply embedded in health technology assessments. For a long period, it represented the only measure that attempts to quantify the impact of a therapy on an individual's health and wellbeing. Given the limitations highlighted here, use of QALYs in value assessments can lead to sub-optimal decisions and impact health outcomes of patients. The gradual inclusion of alternate measures can lead to better evaluation of value-for money of new interventions whilst enabling a more just and fair system for all patients.

ACKNOWLEDGMENTS: N/A

CITATION: Rebeira, Mayvis (2022). QALYs and Value Assessment. *Canadian Health Policy*, NOV 2022. Toronto: Canadian Health Policy Institute. ISSN 2562-9492, <https://doi.org/10.54194/DFUL2957>, www.canadianhealthpolicy.com.

CORRESPONDENCE: mayvis.rebeira@utoronto.ca

DISCLAIMER: N/A

DISCLOSURE: No conflicts were declared.

OPEN ACCESS: N/A Not sponsored.

REVIEW: This article was subject to peer review.

SUBMITTED: 2 NOV 2022 | **PUBLISHED:** 24 NOV 2022

REFERENCES

1. Neumann, P. J., Cohen, J. T., & Weinstein, M. C. (2014). Updating cost-effectiveness—the

- curious resilience of the \$50,000-per-QALY threshold. *N Engl J Med*, 371(9), 796-797.
2. Rebeira, Mayvis (2016). Limitations of Economic Evaluations for Health Technology Assessments in Canada. *Canadian Health Policy*, October 17, 2016. Toronto: Canadian Health Policy Institute. URL: www.canadianhealthpolicy.com
 3. NICE UK (National Institute for Health and Care Excellence) (<https://www.nice.org.uk/>); GRADE website (www.gradeworkinggroup.com)
 4. Drummond, M. F., Sculpher, M. J., Claxton, K., Stoddart, G. L., & Torrance, G. W. (2015). *Methods for the economic evaluation of health care programmes*. Oxford university press.
 5. McCabe, C., Claxton, K., & Culyer, A. J. (2008). The NICE cost-effectiveness threshold. *Pharmacoeconomics*, 26(9), 733-744.
 6. Braithwaite, R. S., Meltzer, D. O., King Jr, J. T., Leslie, D., & Roberts, M. S. (2008). What does the value of modern medicine say about the \$50,000 per quality-adjusted life-year decision rule? *Medical care*, 349-356.
 7. Kaura, S., Nanavaty, M., Seetasith, A., Nyandege, A., & Khan, Z. M. (2015). Literature review of the use of ICER thresholds in Healthcare decision-making. *Value in Health*, 18(3), A90.
 8. Pettitt, D. A., Raza, S., Naughton, B., Roscoe, A., Ramakrishnan, A., Ali, A., ... & Brindley, D. A. (2016). The limitations of QALY: a literature review. *Journal of Stem Cell Research and Therapy*, 6(4).
 9. Rawles, J. (1989). Castigating QALYs. *Journal of medical ethics*, 15(3), 143-147.
 10. Kappel, K., & Sandøe, P. (1992). QALYs, age and fairness. *Bioethics*, 6(4), 297-316.
 11. Singer, P., McKie, J., Kuhse, H., & Richardson, J. (1995). Double jeopardy and the use of QALYs in health care allocation. *Journal of medical ethics*, 21(3), 144.
 12. Broome, J. (1994). Fairness versus doing the most good. *The Hastings Center Report*, 24(4), 36-39.
 13. Neumann, P. J., & Cohen, J. T. (2018). QALYs in 2018—advantages and concerns. *Jama*, 319(24), 2473-2474.
 14. Payne, K., McAllister, M., & Davies, L. M. (2013). Valuing the economic benefits of complex interventions: when maximising health is not sufficient. *Health economics*, 22(3), 258-271.
 15. Torrance, G. W. (1986). Measurement of health state utilities for economic appraisal: a review. *Journal of health economics*, 5(1), 1-30.
 16. Torrance, G. W. (1970). A generalized cost-effectiveness model for the evaluation of health programs.
 17. Harris, J. (1987). QALYfying the value of life. *Journal of medical ethics*, 13(3), 117-123.
 18. Whitehead, S. J., & Ali, S. (2010). Health outcomes in economic evaluation: the QALY and utilities. *British medical bulletin*, 96(1), 5-21.
 19. Lakdawalla, D. N., Doshi, J. A., Garrison Jr, L. P., Phelps, C. E., Basu, A., & Danzon, P. M. (2018). Defining elements of value in health care—a health economics approach: an ISPOR Special Task Force report [3]. *Value in Health*, 21(2), 131-139.
 20. Chapman, R. H., Berger, M., Weinstein, M. C., Weeks, J. C., Goldie, S., & Neumann, P. J. (2004). When does quality-adjusting life-years matter in cost-effectiveness analysis?. *Health economics*, 13(5), 429-436.
 21. Mehrez, A., & Gafni, A. (1991). The healthy-years equivalents: how to measure them using the standard gamble approach. *Medical Decision Making*, 11(2), 140-146.
 22. Keeney, R. L., Raiffa, H., & Meyer, R. F. (1993). *Decisions with multiple objectives: preferences and value trade-offs*. Cambridge university press.