Value of statistical life

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Key points

- Willingness to pay is an appropriate way to estimate the value of reductions in the risk of unforeseen fatality by chance – known as the value of statistical life.
- Based on international and Australian research a credible estimate of the value of statistical life is $5.87 million and the value of statistical life year is $253,000 in 2025 dollars.

This note provides guidance on how officers preparing the cost-benefit analysis in regulatory impact statements or impact analysis should measure and articulate the benefit of reducing the risk of fatality or physical harm.

A number of policy proposals aim to reduce this risk, for example, workplace health and safety laws, warning labels on tobacco products and transport safety measures such as seat belt laws.

Different methods have been proposed for valuing reductions in the risk of physical harm and this note sets out an appropriate method.

Value of statistical life

The *value of a statistical life (VSL)* is an estimate of the value society places on reducing the risk of dying. By convention, the life is assumed to be the life of a young adult with at least 40 years of life ahead. It is a statistical life because it is not the life of any particular person.

A related concept is the *value of a statistical life year (VLY)*, which is an estimate of the value society places on a year of life.

The value of a statistical life or VSL is most appropriately measured by estimating how much society is willing to pay to reduce the risk of death. However, there are different methods of measuring society's willingness to pay to reduce the risk of death.

- A direct method is to ask individuals through a survey what they would pay to reduce the risk of dying. This is referred to as a 'stated preference' method. There is evidence that willingness to pay surveys overestimate willingness to pay when compared to actual consumer choices

subject to a budget constraint (Brown et al., 1996; Neill et al., 1994; Bishop and Heberlein, 1979).

- A method which incorporates a budget constraint is to observe how much consumers pay for products that reduce the risk of death or injury, for example, the purchase of safety items in a car. This is referred to as a 'revealed preference' method.
- An indirect method is to observe how much workers are willing to pay (through reduced wages) for an improvement in workplace safety. This is also known as a 'revealed preference' method.

Following a review of research into VSL and VLY and of international guidelines for life and health values, Abelson (2007) suggested public agencies adopt a VSL of $3.5 million per individual, a constant VLY of $151,000 applied to all ages, and age-specific VSLs for older persons using a constant VSL anda private time preference discount rate of 3 per cent per annum. Each of these are measured in 2007 dollars.

Importantly, research into VSL and VLY, including by Abelson (2007), has argued that the estimates should vary according to the characteristics of the people affected and the nature of the risk or hazard. For example, society may be willing to spend more to prevent the death of a young person, or to avoid conditions that significantly reduce a young person's quality of life.

VSL calculations are not suited to wellbeing measures, happiness scales or measures of life satisfaction (Viscusi 2018).

Guidance for preparing Impact Analysis

Ideally the value of statistical life would be estimated for each policy proposal taking into account the types of risks addressed and the people affected. However, as noted by the United States Environmental Protection Agency (USEPA 2000), this is likely to be too costly for most proposals.

For this reason, and consistent with the advice of international regulatory agencies (USEPA 2000), the Office of Impact Analysis (OIA) advises officers preparing Impact Analyses to use estimates derived from previous studies. Although now dated, the Abelson estimates of VSL and VLY were based on empirical evidence that had been assessed to ensure that it was comprehensive and rigorous, and rigorous and remain the best available estimates of VSL and VLY for public agencies to use. Using ABS Wage Price Index data[1] to express these estimates in 2025 dollars gives a VSL of $5.87 million, and a VLY of $253,000 based on a private time preference discount rate of 3 per cent.

[1] **Australian Bureau of Statistics, 2025, Wage Price Index, Cat. No. 6345.0, Financial Year Index Numbers.**

Applying the estimate

Assume that a policy proposal is expected to reduce the number of workplace fatalities. It will take two years for industry to implement. It will prevent one death in the first year, two deaths in the second year and three deaths per year when it has been fully implemented. It is expected to cost industry $5 million per year during implementation and $2 million per year after implementation.

The policy is expected to be reviewed after nine years. The steps to estimate the net present value of the proposal are set out in Table 1 below (a 7 per cent real discount rate is used in this hypothetical example). The base year of the proposal is 2025.

Over the life of the proposal (nine years), the proposal will prevent 24 deaths. It will cost industry $24 million to comply with the proposal. The net present value is [0.87+6.29+13.62+12.73+11.90+11.12+10.39+9.71+9.08 = $85.69 million.

Table 1: Application of discount rates to value a statistical life

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
Deaths prevented	1.00	2.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
VSL ($m)	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87
Benefits[a] ($m)	5.87	11.73	17.60	17.60	17.60	17.60	17.60	17.60	17.60
Costs ($m)	5.00	5.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Net Benefit ($m)	0.87	6.73	15.60	15.60	15.60	15.60	15.60	15.60	15.60
Discount factor	1.00	1.07	1.14	1.23	1.31	1.40	1.50	1.61	1.72
Discounted benefit[b]	0.87	6.29	13.62	12.73	11.90	11.12	10.39	9.71	9.08

[a] benefit = deaths prevented * VSL. [b] discounted benefit = net benefit/discount factor.

Note that in the example above, the key assumptions that determine the net present value are the costs imposed on business to comply with the proposal and the number of lives likely to be saved. When conducting sensitivity analysis, it is these parameters that should be changed (rather than making arbitrary changes to the VSL or the discount rate).

Injury, disease and disability

Many policies have the benefit of reducing the risk of injury, disease or disability. One method to value these benefits is to adjust the value of statistical life year (which could be interpreted as the value of a year of life free of injury, disease and disability) by a factor that accounts for the type of injury, disease or disability.

The Australian Institute of Health and Welfare's Australian Burden of Disease Study 2024 has calculated Disability-adjusted life years (DAYLY) according to disability weights sourced from the Global Burden of Disease Study 2013 (Vos, Theo et al 2013). As an example, an amputated foot with a disability weight of 0.3 would equate to 30 per cent of a VLY or $73,500 per year (0.3*$245,000) when measured in 2025 dollars.

References

Abelson (2007), Establishing a Monetary Value for Lives Saved: Issues and Controversies, Working Papers in Cost benefit Analysis WP 2008-2, Department of Finance and Deregulation.

Australian Institute of Health and Welfare (2024), 'Australian Burden of Disease Study 2024: Frequently Asked Questions' https://www.aihw.gov.au/reports/burden-of-disease/australian-burden-of-disease-study-2024/contents/frequently-asked-questions.

Bishop, R. and Heberlein T. (1979), 'Measuring Values of Extramarket Goods: Are Direct Measures Biased?' American Journal of Agricultural Economics, vol. 61, pp. 926-930.

Brown, T., Champ, P., Bishop, R. and McCollum, D. 1996, 'Which response format reveals the truth about donations to a public good?' Land Economics, vol. 72, pp. 152-66.

Vos, Theo et al (2013), 'Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013', The Lancet, Volume 386, Issue 9995, pp. 743-800.

USEPA (United States Environmental Protection Agency) (2000), Guidelines for Preparing Economic Analyses, Office of the Administrator, EPA 240-R-00-003, September.

Mathers C., Vos T., and Stevenson C. (1999), The burden of disease and injury in Australia, AIHW cat. no. PHE 17, AIHW, Canberra.

Neill, H., Cummings, R., Ganderton, P., Harrison, G. and McGuckin T. (1994), 'Hypothetical Surveys and Real Economic Commitments', Land Economics, vol. 70, pp. 145-54.

OECD (2012), Mortality Risk Valuation in Environment, Health and Transport Policies, OECD Publishing, http://dx.doi.org/10.1787/9789264130807-en.

Viscusi, W. (2003), 'The value of a statistical life: a critical review of market estimates throughout the world', Journal of Risk and Uncertainty, vol. 27(1), pp. 5-76.

Viscusi, W. (2018) 'Pricing Lives: Guideposts for a safer society', Princeton, Princeton University Press, pp. 209-210.