



HHS Standard Values for Regulatory Analysis, 2024

Aaron Kearsley

Key Points

- This Data Point updates several standard monetary values used in regulatory impact analyses developed by the U.S. Department of Health and Human Services. All estimates are reported in constant 2023 dollars unless otherwise noted.
- HHS's current central estimate of the value per statistical life is \$13.1 million.
- This Data Point also reports HHS's full range of current and future estimates of the value per statistical life, and other standard values derived from the value per statistical life, including the value per quality-adjusted life year, value per statistical life year, and values per statistical case of COVID-19 that vary by case severity.
- HHS's current default estimate of the hourly value of time for unpaid activities is \$19.24.
- The current monetary threshold associated with the requirements of the Unfunded Mandates Reform Act is \$183 million.
- This Data Point and its recommendations will be updated annually.

Background

The U.S. Department of Health and Human Services (HHS) analyzes the benefits, costs, and other impacts of significant proposed and final rulemakings, consistent with the requirements of several executive orders and statutes. HHS develops these analyses according to technical guidance published by the U.S. Office of Management and Budget (OMB)¹ covering all federal agencies and HHS *Guidelines* developed and maintained by the Office of the Assistant Secretary for Planning and Evaluation (ASPE).²

Each year, ASPE updates its default recommendations for several key inputs commonly used in HHS regulatory impact analyses (RIAs). This Data Point updates and reports HHS's estimates of the value per statistical life (VSL), other values derived from the VSL estimates, and an estimate of the hourly value of time for unpaid activities. This Data Point also updates the monetary threshold used for determinations related to the Unfunded Mandates Reform Act of 1995. All estimates are reported in constant 2023 dollars unless otherwise noted. Unrounded estimates are available in a supplemental table to this Data Point.³

¹ U.S. Office of Management and Budget. 2023. Circular No. A-4, "Regulatory Analysis." <https://www.whitehouse.gov/wp-content/uploads/2023/11/CircularA-4.pdf>.

² U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. 2016. "Guidelines for Regulatory Impact Analysis." <https://aspe.hhs.gov/reports/guidelines-regulatory-impact-analysis>.

³ Please refer to the landing page of this Data Point for a link to the most recent version of the Supplementary Table. Kearsley, A. "HHS Standard Values for Regulatory Analysis, 2024." Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. January 2024. <https://aspe.hhs.gov/reports/standard-ria-values>.

Estimates of the Value per Statistical Life

The HHS *Guidelines* discuss an approach to valuing mortality risk reductions based on estimates of individual willingness to pay, commonly referred to as the value per statistical life. HHS's VSL estimates are based on a criteria-driven literature review commissioned by ASPE to identify values that are suitable for use in its regulatory impact analyses.⁴ The *Guidelines* and an appendix published subsequently⁵ provide background information on the VSL estimates, including technical guidance on applying the estimates and the process for updating these values.

The VSL estimates reported in the literature review correspond to a 2013 base year.⁶ We update these values to a 2023 base year by adjusting for inflation⁷ and changes in real income.⁸ These adjustments increase the VSL estimates in nominal terms by about 44% compared to 2013. From the 2023 base-year VSL estimates, we report estimates for 2024 and future years. These estimates increase over time in real terms, consistent with a long-term annual growth rate for real earnings of 1.0%⁹ and an assumption that the VSL income elasticity is 1.0. For mortality risk changes occurring in 2024, we adopt \$6.1 million, \$13.1 million, and \$19.9 million for the low, central, and high estimates of VSL, respectively. For impacts in other years, including the base year, please refer to Table 1 or the unrounded estimates available in a supplemental table to this Data Point.

Table 1. VSL Estimates by Year (constant 2023 dollars)

Year	Low Estimate	Central Estimate	High Estimate
2023	\$6.1 million	\$13.0 million	\$19.7 million
2024	\$6.1 million	\$13.1 million	\$19.9 million
2025	\$6.2 million	\$13.2 million	\$20.1 million
2026	\$6.2 million	\$13.4 million	\$20.3 million
2027	\$6.3 million	\$13.5 million	\$20.6 million
2028	\$6.4 million	\$13.6 million	\$20.8 million
2029	\$6.4 million	\$13.8 million	\$21.0 million
2030	\$6.5 million	\$13.9 million	\$21.2 million
2031	\$6.6 million	\$14.0 million	\$21.4 million
2032	\$6.6 million	\$14.2 million	\$21.6 million
2033	\$6.7 million	\$14.3 million	\$21.8 million

⁴ Robinson, L.A. and Hammitt, J.K., 2016. "Valuing reductions in fatal illness risks: Implications of recent research." *Health Economics*, 25(8), pp. 1039-1052.

⁵ U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. 2021. "Appendix D: Updating Value per Statistical Life (VSL) Estimates for Inflation and Changes in Real Income." <https://aspe.hhs.gov/reports/updating-vsl-estimates>.

⁶ The literature review provides population-average values in 2013 dollars at 2013 income levels, which range from \$4.2 million to \$13.7 million with a mid-point of \$9.0 million. HHS uses these values as the basis of its low, high, and central VSL estimates, respectively.

⁷ U.S. Bureau of Labor Statistics. CPI for all Urban Consumers (CPI-U), Not Seasonally Adjusted, <https://data.bls.gov/timeseries/CUUR0000SA0>. Annual figures for 2013 to 2023. Accessed January 11, 2024.

⁸ U.S. Bureau of Labor Statistics. Weekly and hourly earnings data from the Current Population Survey, Not Seasonally Adjusted. <https://data.bls.gov/timeseries/LEU0252881600>. Annual figures for 2013 to 2023. Accessed January 18, 2024.

⁹ Congressional Budget Office. June 2023. "The 2023 Long-Term Budget Outlook." Table C-1. Average Annual Values for Additional Economic Variables That Underlie CBO's Extended Baseline Projections: Growth of Real Earnings per Worker, Overall, 2023-2053. <https://www.cbo.gov/publication/59014>.

Estimates Derived from the Value Per Statistical Life

Value per Quality-Adjusted Life Year

The HHS *Guidelines* discuss several approaches to valuing morbidity risk reductions. One approach uses quality-adjusted life years (QALYs), a nonmonetary measure that integrates the duration and severity of illness. QALYs are derived by multiplying the amount of time an individual spends in a health state by a measure of the health-related quality of life associated with that state. To quantify benefits using this approach, analysts multiply estimates of the change in QALYs by a monetary value per QALY (VQALY).

The HHS *Guidelines* also detail HHS’s approach to estimating VQALY. This approach is designed to be consistent with the VSL estimates, life expectancy data,¹⁰ measurements of age-varying, but otherwise population-average, health-related quality-of-life scores,¹¹ and the approach to discounting used elsewhere in RIAs. HHS computes VQALY by dividing VSL by an estimate of discounted future QALYs. Specifically, we calculate the expected present value of remaining QALYs for an individual 40 years of age, consistent with the average age reported in the literature review of VSL studies, accounting for age-specific survival probabilities. Table 2 reports the intermediate calculation of future QALYs. Table 3 reports the range of VQALY estimates, which apply the measure of future QALYs to the full range of VSL estimates. For morbidity risk or other health-related quality-of-life changes occurring in 2024, we adopt \$276,000, \$591,000, and \$899,000 for the low, central, and high estimates of VQALY, respectively.

Table 2. Expected Present Value (PV) of QALYs and LYs at Age 40

Discount Rate	PV QALY	PV LY
0.0%	32.2	38.8
2.0%	22.2	26.5
3.0%	18.9	22.5
7.0%	11.6	13.5

Table 3. VQALY and VSLY Estimates for 2024 (constant 2023 dollars)

Discount Rate	2.0%	2.0%	3.0%	3.0%	7.0%	7.0%
Estimate	VQALY	VSLY	VQALY	VSLY	VQALY	VSLY
Low	\$276,000	\$231,000	\$323,000	\$272,000	\$529,000	\$453,000
Central	\$591,000	\$495,000	\$692,000	\$583,000	\$1,134,000	\$971,000
High	\$899,000	\$754,000	\$1,053,000	\$888,000	\$1,727,000	\$1,478,000

Value per Statistical Life Year

The HHS *Guidelines* discuss several sensitivity analyses related to VSL, including an approach that adopts a Value per Statistical Life Year (VSLY). HHS computes a VSLY similar to VQALY, except without adjustments for health-related quality of life that vary over time. Table 2, above, reports the intermediate calculation of future life years, and Table 3 reports a range of VSLY estimates. For the VSL sensitivity analysis, or to quantify benefits from impacts occurring in 2024 that will result in changes to life expectancy, we adopt \$231,000, \$495,000, and \$754,000 for the low, central, and high estimates of VSLY, respectively.

¹⁰ Centers for Disease Control and Prevention. November 7, 2023. “United States Life Tables, 2021.” Table 1. Life table for the total population: United States, 2021. <https://www.cdc.gov/nchs/data/nvsr/nvsr72/nvsr72-12.pdf>.

¹¹ Hamner, J., W.F. Lawrence, J.P. Anderson, R.M. Kaplan, and D.G. Fryback. 2006. “Report of Nationally Representative Values for the Noninstitutionalized US Adult Population for 7 Health-Related Quality-of-Life Scores.” *Medical Decision Making* 26(4), pp. 391-400.

Summary of Estimates and Sensitivity Analyses of Alternative Discount Rates

Table 3, above, presents estimates of the range of VQALY and VSLY estimates for impacts occurring in 2024 using a discount rate of 2.0%.¹² Calendar year 2024 is a transition year for the OMB guidance to federal agencies on the development of regulatory analysis.¹³ Thus, Table 3 also reports the central estimates for selected alternative discount rates, for analyses developed under the prior guidance,¹⁴ or for use in sensitivity analyses. For impacts in future years, analysts should adjust these estimates by 1.0% per year, consistent with projected real earnings,¹⁵ or apply the unrounded estimates available in a supplemental table to this Data Point.

Estimates of the Value per Statistical Case of COVID-19

In 2021, ASPE published a report that recommended an approach to monetize mortality and morbidity risks associated with COVID-19.¹⁶ The report summarized the impacts of COVID-19 on health and longevity, described the conceptual framework for valuation, investigated some of the contemporaneously available valuation research, and discussed the implications. The report also recommended estimates of the value per statistical case (VSC) of COVID-19 that varied by case severity. The lead authors of that report subsequently published a study that updated several of the inputs used to produce the VSC estimates.¹⁷ Consistent with the findings of the follow-up study, and updated estimates of VSL and VQALY, Table 4 reports central estimates of the COVID-19 VSC for impacts occurring in 2024.

Table 4. Central Estimates of COVID-19 VSC for 2024 (constant 2023 dollars)

Case Severity	Discount Rate	PV QALY	VQALY	VSC
Mild, Nonfatal	2.0%	0.009	\$591,000	\$5,000
Severe, Nonfatal	2.0%	0.019	\$591,000	\$11,000
Critical, Nonfatal	2.0%	3.577	\$591,000	\$2,113,000
Fatal	All			\$13,100,000

Estimates of the Value of Time

While developing the HHS *Guidelines*, ASPE commissioned research on methods for valuing time in HHS RIAs. One outcome of this effort was a report that examined the conceptual framework and general approach for monetization, considered contemporaneously available research and methods used by other U.S. regulatory agencies, and refined the approach for valuing changes in time use discussed in the HHS *Guidelines*.¹⁸ The report recommends applying a value of time based on compensation-based measures, such as hourly wages or

¹² These calculations apply a constant 2.0% discount rate. VQALY and VSLY calculated using OMB's discount-rate schedule for the long-term estimate of the social rate of time preference differ by about 0.01%. U.S. Office of Management and Budget. 2023. Circular No. A-4 Appendix, "Default Social Rate of Time Preference Estimates." <https://www.whitehouse.gov/wp-content/uploads/2023/11/CircularA-4Appendix.pdf>.

¹³ U.S. Office of Management and Budget. 2023. Circular No. A-4, "Regulatory Analysis." <https://www.whitehouse.gov/wp-content/uploads/2023/11/CircularA-4.pdf>. See Section "16. Effective Date" on page 93.

¹⁴ U.S. Office of Management and Budget. 2003. Circular A-4, "Regulatory Analysis." https://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/circulars/A4/a-4.pdf.

¹⁵ For example, $VQALY_{year} = VQALY_{2023} * (1+1.0\%)^{year-2023}$, where $VQALY_{2023}$ is reported in Table 3.

¹⁶ U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. 2021. "Valuing COVID-19 Mortality and Morbidity Risk Reductions in U.S. Department of Health and Human Services Regulatory Impact Analyses." <https://aspe.hhs.gov/reports/valuing-covid-19-risk-reductions-hhs-riais>.

¹⁷ Robinson, L., Eber, M., & Hammitt, J. 2022. "Valuing COVID-19 Morbidity Risk Reductions." *Journal of Benefit-Cost Analysis*, 1-22. doi:10.1017/bca.2022.11.

¹⁸ U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. 2017. "Valuing Time in U.S. Department of Health and Human Services Regulatory Impact Analyses: Conceptual Framework and Best Practices." <https://aspe.hhs.gov/reports/valuing-time-us-department-health-human-services-regulatory-impact-analyses-conceptual-framework>.

annual salaries, with default assumptions for adjustments to these measures that vary depending on whether the impacts affect paid activities, or unpaid activities.

Value of Time, Paid Activities

Many regulatory actions impose or alleviate costs on regulated entities that can be quantified by estimates of the incremental time spent on regulatory activities, such as reviewing the new regulations, developing protocols for compliance, collecting and reporting data, and training staff on implementation. When valuing changes in time use for on-the-job activities, the HHS *Guidelines* recommend applying compensation-based measures that account for taxes and benefits, as well as indirect costs not associated with production of a particular good or provision of a specific service. These indirect costs include overhead costs such as space rental and utilities, and other costs such as office supplies and administrative oversight. As a default assumption when industry- or program-specific data are not readily available, analysts may assume that the sum of these additional costs are equal to pre-tax wages, and calculate a fully loaded wage rate by multiplying pre-tax wages by 2. For example, if a regulatory action will result in additional time spent drafting legal documents, an analyst might identify a median hourly wage for lawyers of \$67.95,¹⁹ double this value to produce a fully loaded wage rate of \$135.89 per hour, and monetize the impact by multiplying the fully loaded wage rate by the hours spent on these activities. For rules requiring substantial amounts of labor, such as the hiring of additional, full-time employees, analysts might instead estimate the number of new employees needed and perform a similar calculation using annual salaries instead of hourly wages.

Value of Time, Unpaid Activities

Regulatory actions can also increase or decrease the time spent on certain activities by the general public outside of a work setting. For example, a regulatory action could affect the amount of time individuals spend filling out forms to receive government benefits, or the time consumers spend reading information contained on product labels. Such impacts can be quantified in regulatory impact analyses using a value of time that is based on the opportunity cost of foregone leisure. The HHS *Guidelines* recommend an hourly value of time based on after-tax wages to monetize changes in time use for unpaid activities. For this calculation, we start with median pre-tax hourly wage, measured across all occupations, of \$23.18.²⁰ We adjust this hourly rate downwards by an estimate of the effective tax rate for median income households of about 17%, resulting in a post-tax hourly wage rate of \$19.24, and adopt this as our default estimate of the hourly value of time for changes in time use for unpaid activities.

Unfunded Mandates Reform Act Threshold

The Unfunded Mandates Reform Act of 1995 (UMRA) “generally requires that each agency conduct a cost-benefit analysis, identify and consider a reasonable number of regulatory alternatives, and select the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule before promulgating any proposed or final rule that includes a Federal mandate that may result in expenditures of more than \$100 million (adjusted for inflation) in at least one year by State, local, and tribal governments, or by the private sector. Each agency must also seek input from State, local, and tribal governments.”²¹ Every year, HHS updates the UMRA monetary threshold for inflation using the gross domestic product implicit price

¹⁹ Bureau of Labor Statistics. Occupational Employment and Wage Statistics. Occupational Employment and Wages, May 2022, 23-1011 Lawyers. <https://www.bls.gov/oes/current/oes231011.htm>. \$65.26 hourly wage converted to 2023 constant dollars using CPI-U and reported with rounding. Unrounded inflation-adjusted hourly wage used in the subsequent calculation.

²⁰ Bureau of Labor Statistics. Occupational Employment and Wage Statistics. Occupational Employment and Wages, May 2022, 00-0000 All Occupations. https://www.bls.gov/oes/current/oes_nat.htm. \$22.26 hourly wage converted to 2023 constant dollars using CPI-U.

²¹ U.S. Office of Management and Budget, Office of Information and Regulatory Affairs. “2018, 2019, and 2020 Report to Congress on the Benefits and Costs of Federal Regulations and Agency Compliance with the Unfunded Mandates Reform Act” https://www.whitehouse.gov/wp-content/uploads/2021/01/2018_2019_2020-OMB-Cost-Benefit-Report.pdf.

deflator. We compare the index values for the most recent full year of data (2023) to the index for 1995.²² The index values used are 122.262 for 2023 and 66.939 for 1995, from which we compute a multiplier of 1.83. This multiplier, combined with the base-year threshold of \$100 million, results in an inflation-adjusted monetary threshold of \$183 million, reported in 2023 dollars.

²² Bureau of Economic Analysis. National Income and Product Accounts. "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product," annual series, at <http://www.bea.gov>. Gross Domestic Product. Accessed January 25, 2024.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Assistant Secretary for Planning and Evaluation

200 Independence Avenue SW, Mailstop 434E
Washington, D.C. 20201

For more ASPE briefs and other publications, visit:
aspe.hhs.gov/reports



ABOUT THE AUTHOR

Aaron Kearsley is a Senior Economist in the Office of Science and Data Policy within the Office of the Assistant Secretary for Planning and Evaluation.

ACKNOWLEDGEMENTS

This Data Point draws heavily from content appearing in the HHS *Guidelines* and its appendices. The author of the Data Point thanks Jennifer Baxter, Lisa A. Robinson, and HHS reviewers for their helpful comments and suggestions.

SUGGESTED CITATION

Kearsley, A. "HHS Standard Values for Regulatory Analysis, 2024." Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. January 2024.
<https://aspe.hhs.gov/reports/standard-ria-values>.

COPYRIGHT INFORMATION

All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

DISCLOSURE

This communication was printed, published, or produced and disseminated at U.S. taxpayer expense.

For general questions or general information about ASPE:
aspe.hhs.gov/about