Value of a Statistical Life and Comprehensive Value of Life

Recently, the Department of Transportation has determined that the best current estimate of the economic value of preventing a human fatality is $5.8 million. However, new relative value coefficients for preventing injuries of different severity have not been developed. NHTSA is conducting research to revise the previously developed estimates. The revised estimates will be published when they become available. In the interim, we have adjusted the current estimates to reflect the revised $5.8 million statistical life for both crash avoidance and crashworthiness Federal motor vehicle safety standards resulting in new comprehensive costs of $6.1 million per fatality. Tables VII-1 shows the comprehensive values used for each injury severity level, as well as the relative incident-based weights for nonfatal injuries, AIS 1-5.

Table VII-1
Comprehensive Costs and Relative Value Factors Reflecting $5.8 million Value of a Statistical Life (VSL), in 2007 Economics

CPI	Factor	MAIS 1	MAIS 2	MAIS 3	MAIS 4	MAIS 5	Fatal
1.346066	Medical	$3,204	$21,032	$62,585	$176,747	$447,509	$29,741
1.204077	EMS	$117	$255	$443	$999	$1,026	$1,003
1.277512	Market Prod	$2,234	$31,960	$91,283	$135,977	$560,451	$760,577
1.277512	Household Produce	$731	$9,354	$26,924	$35,782	$190,743	$244,696
1.204077	Ins. Adm.	$892	$8,319	$22,749	$38,934	$82,114	$44,695
1.277512	Workplace	$322	$2,495	$5,450	$6,002	$10,464	$11,117
1.204077	Legal	$181	$5,998	$19,034	$40,559	$96,153	$122,982
1.277512	Travel Delay	$993	$1,081	$1,201	$1,276	$11,697	$11,687
1.204077	Property Damage	$4,628	$4,761	$8,187	$11,840	$11,374	$12,369
1.277512	QALYs	$9,118	$186,525	$262,189	$784,777	$2,674,628	$4,889,799
New Comprehensive Costs		$22,420	$271,780	$500,045	$1,232,893	$4,086,149	$6,128,666
Injury Subtotal		$16,799	$265,938	$490,657	$1,219,777	$4,063,088	$6,104,610
QALY Relatives		0.0019	0.0381	0.0536	0.1605	0.5470	1.0000

Comprehensive relatives (Crash Avoidance)	0.0037	0.0443	0.0816	0.2012	0.6667	1.0000
Comprehensive relatives (Crashworthiness)	0.0028	0.0436	0.0804	0.1998	0.6656	1.0000

QALYs: Quality-Adjusted Life-Years

Note that the $5.8 million value of a statistical life contains elements found in 3 of the factors in the above table (QALY's, household productivity, and the after-tax portion of market productivity). The value of statistical life is thus represented within these 3 factors and is not shown separately.

These values were taken from the most recent study on the cost of crashes published by NHTSA[2], updated to reflect the recent revision in the value of a statistical life specified in guidance from the Office of the Secretary of Transportation. This guidance, which was published on February 5th, 2008, changed the value of a statistical life (VSL) to $5.8 million.

[2] L. Blincoe, A. Seay, E. Zaloshnja, T. Miller, E. Romano, S. Luchter, R. Spicer, (May 2002) "The Economic Impact of Motor Vehicle Crashes, 2000". Washington D.C.: National Highway Traffic Safety Administration, DOT HS 809 446.