

Table 1. Maximum Abbreviated Injury Scale - Levels

Injury Severity		Example Injuries	General Prognosis
MAIS 1	Minor	Abrasion, laceration, strain, sprain, contusion	Treated and released (see also Section 1.4)
MAIS 2	Moderate	Simple broken bone, loss of consciousness, serious strain or sprain	Follow-up required, weeks to months to heal, but will heal
MAIS 3	Serious	Complicated fracture, serious joint injury, concussion, minor crush injury	Substantial follow-up needed, some minor disability likely
MAIS 4	Severe	Massive organ injury, heart laceration, loss of limb, crushed extremities	Hospitalization, substantial short-term and moderate long-term disability
MAIS 5	Critical	Spinal cord syndrome, crush syndrome with kidney failure	Extended hospitalization, significant long-term disability
MAIS 6	Maximum	Decapitation, massive destruction of head, spinal cord/column, brainstem, or torso, partial thickness burns to $\geq 90\%$ of body area	Usually (though not invariably) fatal (see also Table 3)

MAIS = maximum Abbreviated Injury Scale. Sources: AAAM [26]; MAIS 1-5 from [27]; MAIS 6 from [31,34,35].

Table 2. Hospitalized and Non-Hospitalized Injuries - Incidence and Economic Costs

Injury Severity	Incidence (distribution)		Cost per Injury Incident (2023\$)	
	Finkelstein <i>et al.</i> [18]	WISQARS [19]	Finkelstein <i>et al.</i> [18] + QoL [19]	WISQARS [19]
Non-hospitalized	96.3%	84.5%	\$85,300	\$88,000
Hospitalized	3.7%	15.5%	\$247,000	\$235,000

QoL = quality-of-life. Incidence of nonfatal injuries. Mortality rate zero for both groups.

Additional data available in [5], but are more dated (1985).

WISQARS [19] - 26,480,000 injuries (2023), medical and work costs and monetized QALYs (Section 1.2), using methods of [10,24].

Finkelstein *et al.* [18] - 49,978,023 injuries (2000), medical and work costs, supplemented using QoL costs of [19] (for better comparisons).

Table 3. Maximum Abbreviated Injury Scale - Incidence, Hospitalization, and Mortality

Injury Severity	Incidence (distribution)			Hospitalization Rate	Mortality Risk		
	Copes <i>et al.</i> [30]	Finkelstein <i>et al.</i> [18]	Blincoe <i>et al.</i> [11]		Copes <i>et al.</i> [30]	Gennarelli <i>et al.</i> [28]	Gennarelli & Wodzin [1]
MAIS 1	12.4%	76.6%	86.0%	0.007	0.002	0.007	0.007
MAIS 2	34.9%	20.7%	9.5%	0.233	0.002	0.017	0.008
MAIS 3	35.6%	1.9%	3.1%	0.815	0.053	0.054	0.035
MAIS 4	13.0%	0.3%	0.4%	1	0.224	0.202	0.146
MAIS 5	3.9%	0.1%	0.2%	1	0.459	0.453	0.396
MAIS 6	0.1%	0.3%	0.8%	1	0.893	0.873	0.790

MAIS = maximum Abbreviated Injury Scale. Nonfatal injury incidence and hospitalization. Mortality risk uses pooled fatal/nonfatal data.

Blincoe *et al.* [11] - 4,470,023 injuries/36,500 deaths (2019); motor vehicle accidents (reported and estimated non-reported); aggregated over victim types (e.g., vehicle occupants, bicyclists, pedestrians); MAIS 6 fatal.

Finkelstein *et al.* [18] - approx. 43,100,000 injuries (2000); excludes unknown MAIS (approx. 6,950,000).

Copes *et al.* [30] - 85,820 injuries/8,381 deaths (1982-1988).

Gennarelli & Wodzin [1] - 181,707 fatal/nonfatal ("past several years"); all persons had only a single injury.

Gennarelli *et al.* [28] - 174,160 fatal/nonfatal (1982-1989).

Schellenberg *et al.* [34] additionally find a MAIS 6 mortality risk of 0.746 (19,247 fatal/nonfatal, 2007-2017).

Additional data (motor vehicle accidents) available in [45], but the study is smaller (1,840 injuries/247 deaths), more dated (1968-1969), and MAIS 6 was not used, and also in [46], but is smaller (5,333 injuries/201 deaths) and all persons had only a single injury.

Table 4. Maximum Abbreviated Injury Scale - Economic Costs

Injury Severity	Cost per Injury Incident (2023\$)			
	Graham <i>et al.</i> [29,47]	Finkelstein <i>et al.</i> [18] + QoL [11]	DOT [2,47]	Blincoe <i>et al.</i> [11]
MAIS 1	\$0	\$52,700	\$39,600	\$59,000
MAIS 2	\$1,450,000	\$490,000	\$620,000	\$551,000
MAIS 3	\$2,110,000	\$2,130,000	\$1,390,000	\$2,410,000
MAIS 4	\$924,000	\$3,590,000	\$3,510,000	\$4,270,000
MAIS 5	\$10,700,000	\$6,130,000	\$7,830,000	\$7,170,000
MAIS 6	\$13,200,000	\$11,200,000	\$13,200,000	\$11,800,000

Col = cost of injury. DOT = U.S. Department of Transportation. MAIS = maximum Abbreviated Injury Scale. QoL = quality-of-life. VSL = value of a statistical life. WTP = willingness-to-pay.

DOT VSL [47] - WTP measure; \$13.2 million; from wage-risk studies (Section 1.2); applied to [2] and [29].

Graham *et al.* [29] - QoL/WTP measure; disutility fractions (0, 0.11, 0.16, 0.07, 0.81, 1); based on the Functional Capacity Index [48]; MAIS 1 excluded (relatively minor); MAIS 6 fatal; applied to DOT VSL [47].

Finkelstein *et al.* [18] - Col/QoL measure; medical and work lost costs, supplemented using QoL costs of [11] (for better comparisons); excludes unknown MAIS (approx. 6,950,000).

DOT [2,47] - QoL/WTP measure; quality-adjusted portions of remaining life lost (0.003, 0.047, 0.105, 0.266, 0.593, 1); MAIS 6 fatal; applied to DOT VSL [47].

Blincoe *et al.* [11] - Col/QoL measure; motor vehicle accidents (2019); includes medical, EMS, productivity, workplace, insurance, legal costs, and monetized QALYs (Section 1.2); MAIS 6 estimated as weighted average of MAIS 5 (25%) and deaths (75%), on the basis that MAIS 6 resemble fatalities 75% of the time [34].

Table 5. Injury Severity Score - Incidence and Mortality

ISS	Incidence (distribution)		Mortality Risk		ISS (cont.)	Incidence (cont.)		Mortality Risk (cont.)	
	Copes <i>et al.</i> [44]	Kilgo <i>et al.</i> [50]	Copes <i>et al.</i> [44]	Kilgo <i>et al.</i> [50]		Copes <i>et al.</i> [44]	Kilgo <i>et al.</i> [50]	Copes <i>et al.</i> [44]	Kilgo <i>et al.</i> [50]
1	13.28%	14.69%	0.003	0.007	26	0.83%	0.78%	0.237	0.276
2	1.49%	3.09%	0	0.003	27	0.39%	0.50%	0.191	0.144
3	0.11%	0.40%	0	0.006	29	1.18%	1.11%	0.226	0.175
4	18.79%	19.64%	0.003	0.006	30	0.14%	0.20%	0.208	0.318
5	8.85%	8.25%	0.005	0.004	32	0.16%	0.06%	0.290	0.288
6	0.83%	1.26%	0	0.004	33	0.17%	0.18%	0.324	0.292
8	3.57%	2.17%	0.008	0.008	34	0.85%	0.66%	0.331	0.300
9	19.80%	20.84%	0.025	0.023	35	0.11%	0.15%	0.407	0.387
10	6.60%	5.62%	0.020	0.020	36	0.10%	0.13%	0.440	0.192
11	0.37%	0.75%	0	0.012	38	0.21%	0.30%	0.356	0.376
12	0.80%	0.71%	0	0.009	41	0.27%	0.20%	0.449	0.393
13	3.65%	2.89%	0.029	0.025	42	0.02%	0.04%	0.727	0.498
14	2.33%	2.66%	0.024	0.020	43	0.11%	0.19%	0.385	0.413
16	3.91%	2.41%	0.146	0.128	45	0.07%	0.09%	0.583	0.478
17	3.03%	3.01%	0.104	0.047	48	0%	0.02%	1	0.462
18	1.11%	1.11%	0.088	0.074	50	0.12%	0.15%	0.564	0.546
19	0.64%	0.79%	0.063	0.052	51	0.01%	0.01%	0.667	0.694
20	1.14%	0.68%	0.141	0.087	54	0.01%	0.02%	0.800	0.611
21	0.72%	0.68%	0.123	0.063	57	0%	0.03%	1	0.602
22	1.13%	1.42%	0.087	0.055	59	0.01%	0.02%	0.667	0.694
24	0.59%	0.51%	0.099	0.074	66	0%	0.01%	1	0.773
25	2.46%	1.48%	0.382	0.438	75	0.03%	0.08%	0.926	0.812

Incidence of nonfatal injuries. Mortality risk uses pooled fatal/nonfatal data.

Copes *et al.* [44] - 13,925 injuries/951 deaths (1982-1985); aggregated over age groups and injury types.

Kilgo *et al.* [50] - 342,319 injuries/19,057 deaths (1994-2002).

Table 6. Injury Severity Score (ISS) - Maximum Abbreviated Injury Scale (MAIS) Map

ISS	MAIS		AIS Triplet		Shares		Total	Body Regions	Avg. MAIS
	Theory	Valid	#1	#2	#1	#2			
1	[1]	[1]	(1, 0, 0)	-	100%	-	-	[1]	1.00
2	[1]	[1]	(1, 1, 0)	-	100%	-	-	[2]	1.00
3	[1]	[1]	(1, 1, 1)	-	100%	-	-	[3]	1.00
4	[2]	[2]	(2, 0, 0)	-	100%	-	-	[1]	2.00
5	[2]	[2]	(2, 1, 0)	-	100%	-	-	[2]	2.00
6	[2]	[2]	(2, 1, 1)	-	100%	-	-	[3]	2.00
8	[2]	[2]	(2, 2, 0)	-	100%	-	-	[2]	2.00
9	[2, 3]	[2, 3]	(2, 2, 1)	(3, 0, 0)	8.03%	91.97%	101,267	[1, 3]	2.92
10	[2, 3]	[3]	(3, 1, 0)	-	100%	-	-	[2]	3.00
11	[2, 3]	[3]	(3, 1, 1)	-	100%	-	-	[3]	3.00
12	[2, 3]	[2]	(2, 2, 2)	-	100%	-	-	[3]	2.00
13	[3]	[3]	(3, 2, 0)	-	100%	-	-	[2]	3.00
14	[3]	[3]	(3, 2, 1)	-	100%	-	-	[3]	3.00
16	[3, 4]	[4]	(4, 0, 0)	-	100%	-	-	[1]	4.00
17	[3, 4]	[3, 4]	(3, 2, 2)	(4, 1, 0)	57.06%	42.94%	11,590	[2, 3]	3.43
18	[3, 4]	[3, 4]	(3, 3, 0)	(4, 1, 1)	84.68%	15.32%	4,550	[2, 3]	3.15
19	[3, 4]	[3]	(3, 1, 1)	-	100%	-	-	[3]	3.00
20	[3, 4]	[4]	(4, 2, 0)	-	100%	-	-	[2]	4.00
21	[3, 4]	[4]	(4, 2, 1)	-	100%	-	-	[3]	4.00
22	[3, 4]	[3]	(3, 3, 2)	-	100%	-	-	[3]	3.00
24	[3, 4]	[4]	(4, 2, 2)	-	100%	-	-	[3]	4.00
25	[3, 4, 5]	[4, 5]	(4, 3, 0)	(5, 0, 0)	30.08%	69.92%	6,751	[1, 2]	4.70
26	[3, 4, 5]	[4, 5]	(4, 3, 1)	(5, 1, 0)	50.94%	49.06%	3,031	[2, 3]	4.49
27	[3, 4, 5]	[3, 5]	(3, 3, 3)	(5, 1, 1)	89.80%	10.20%	1,942	[3]	3.20
29	[4, 5]	[4, 5]	(4, 3, 2)*	(5, 2, 0)	75.48%	24.52%	4,588	[2, 3]	4.25
30	[4, 5]	[5]	(5, 2, 1)	-	100%	-	-	[3]	5.00
32	[4, 5]	[4]	(4, 4, 0)	-	100%	-	-	[2]	4.00
33	[4, 5]	[4, 5]	(4, 4, 1)	(5, 2, 2)*	19.05%	80.95%	735	[3]	4.81
34	[4, 5]	[4, 5]	(4, 3, 3)	(5, 3, 0)	66.46%	33.54%	2,701	[2, 3]	4.34
35	[4, 5]	[5]	(5, 3, 1)	-	100%	-	-	[3]	5.00
36	[4, 5]	[4]	(4, 4, 2)	-	100%	-	-	[3]	4.00
38	[4, 5]	[5]	(5, 3, 2)	-	100%	-	-	[3]	5.00
41	[4, 5]	[4, 5]	(4, 4, 3)*	(5, 4, 0)	72.73%	27.27%	880	[2, 3]	4.27
42	[4, 5]	[5]	(5, 4, 1)	-	100%	-	-	[3]	5.00
43	[4, 5]	[5]	(5, 3, 3)	-	100%	-	-	[3]	5.00
45	[4, 5]	[5]	(5, 4, 2)	-	100%	-	-	[3]	5.00
48	[4, 5]	[4]	(4, 4, 4)	-	100%	-	-	[3]	4.00
50	[5]	[5]	(5, 4, 3)	(5, 5, 0)	87.84%	12.16%	633	[2, 3]	5.00
51	[5]	[5]	(5, 5, 1)	-	100%	-	-	[3]	5.00
54	[5]	[5]	(5, 5, 2)	-	100%	-	-	[3]	5.00
57	[5]	[5]	(5, 4, 4)	-	100%	-	-	[3]	5.00
59	[5]	[5]	(5, 5, 3)	-	100%	-	-	[3]	5.00
66	[5]	[5]	(5, 5, 4)	-	100%	-	-	[3]	5.00
75	[5, 6]	[5, 6]	(5, 5, 5)	(6, 0, 0)	0.48%	99.52%	1,467	[1, 3]	6.00

AIS triplets from [31,32,33,50], and the total count is the sum of their study sizes. Asterisks indicate triplets that are not listed in the table in [49]. “Theory” is all theoretical MAIS-ISS pairs. “Valid” is only MAIS-ISS pairs that can actually occur. Shares are empirical prevalence by AIS triplet (used to compute the average MAIS). Body regions impacted is the total non-zero elements in the AIS triplet. Dashes indicate not applicable or not specified.

Table 7. Logistic Regression Models Predicting MAIS Level from ISS

Model Type	MAIS-ISS	Y	X	Coefficients	
				Constant	Slope
Multinomial Logistic Regression	Theoretical (<i>n</i> =71)	MAIS 3	ISS	-7.46 (<i>p</i> =0.044)	0.705 (<i>p</i> =0.040)
		MAIS 4		-12.5 (<i>p</i> =0.002)	0.940 (<i>p</i> =0.008)
		MAIS 5		-16.2 (<i>p</i> <0.001)	1.04 (<i>p</i> =0.003)
	Valid only (<i>n</i> =50)	MAIS 3	ISS	-6.78 (<i>p</i> =0.075)	0.687 (<i>p</i> =0.069)
		MAIS 4		-12.0 (<i>p</i> =0.006)	0.956 (<i>p</i> =0.016)
		MAIS 5		-15.9 (<i>p</i> =0.001)	1.08 (<i>p</i> =0.007)
Model Type	MAIS-ISS	Y	X	Statistics	
				Log-Likelihood	Chi-Squared
Likelihood Ratio Test	Theoretical (<i>n</i> =71)	MAIS	ISS	LL-full = -52.5 LL-simpler = -59.5	$\chi^2 = 14.0$ (<i>p</i> =0.001, <i>dof</i> =2)
	Valid only (<i>n</i> =50)	MAIS	ISS	LL-full = -33.6 LL-simpler = -38.2	$\chi^2 = 9.08$ (<i>p</i> =0.011, <i>dof</i> =2)

ISS = Injury Severity Score. MAIS = maximum Abbreviated Injury Scale. "Theoretical" is all MAIS-ISS pairs that could occur in theory. "Valid" is only MAIS-ISS pairs that can actually occur. MAIS 2 is the reference level for the multinomial regressions. ISS 1-3 and ISS 75 (five valid MAIS-ISS pairs) excluded from the training data (Section 3.2). Caveats regarding using these equations and probability recoding procedures are described in Section 3.2. Ordinal logistic regression results (not shown) are the basis of comparison for the likelihood ratio tests. Chi-squared statistic is equal to twice the difference between the log-likelihood (LL) of the "full" model (multinomial) and that of the simpler model (ordinal). Degrees of freedom (*dof*) is the number of additional parameters in the "full" model versus that in the simpler model.

Table 8. Reduced-Form Injury Severity Score Linear Regression Models

Dependent (Y)	X	Form	Coefficients		R ²	Resid. Norm.
			Constant	Slope		
ln(MAIS-avg)	ln(ISS)	U	-0.0854 (p=0.254)	0.441 (p<0.001)	0.894	0.995
		C1	0	0.415	0.891	-
Graham <i>et al.</i> [29,47]	ISS	U	-0.474 (p=0.515)	0.187 (p<0.001)	0.643	0.993
Finkelstein <i>et al.</i> [18] + QoL [11]			0.483 (p=0.105)	0.116 (p<0.001)	0.808	0.993
DOT [2,47]			-0.125 (p=0.755)	0.154 (p<0.001)	0.800	0.986
Blincoe <i>et al.</i> [11]			0.622 (p=0.067)	0.132 (p<0.001)	0.810	0.993
Graham <i>et al.</i> [29,47]	ISS	C2	0	0.176	0.640	-
Finkelstein <i>et al.</i> [18] + QoL [11]			0	0.149	0.701	-
DOT [2,47]			0	0.176	0.729	-
Blincoe <i>et al.</i> [11]			0	0.158	0.779	-
Graham <i>et al.</i> [29,47]	ISS	C3	-0.178	0.178	0.642	-
Finkelstein <i>et al.</i> [18] + QoL [11]			-0.0980	0.151	0.705	-
DOT [2,47]			-0.138	0.178	0.739	-
Blincoe <i>et al.</i> [11]			-0.0999	0.159	0.777	-

DOT = U.S. Department of Transportation. ISS = Injury Severity Score. MAIS = maximum Abbreviated Injury Scale.

QoL = quality-of-life. Cost predictions in million 2023\$ ($n=44$). Dashes indicate not applicable or not specified.

U - Unrestricted (no parameter restrictions).

C1 - Constrained to intersect: MAIS 1 at ISS 1 / MAIS 6 at ISS 75.

C2 - Constrained to intersect: \$0 at (non-existent) ISS 0 / MAIS 6 cost at ISS 75.

C3 - Constrained to intersect: MAIS 1 cost at ISS 1 / MAIS 6 cost at ISS 75.

Average MAIS is incidence-weighted by ISS value (Table 6) and modeled using a power function (log-log linear).

Some predictions of the unrestricted models (U) are out-of-range (Section 3.3).

p-values and residuals analysis not presented for the constrained models (because they are algebraically rather than statistically fit). R² values are presented, to facilitate comparisons with the other models.

Residuals normality (far right column) is the correlation between the residuals: (1) empirical cumulative distribution function; and (2) fitted cumulative normal distribution. Greater values are sought.

Table 9. Maximum Abbreviated Injury Scale - Clusters

Total Clusters Fit	Feature Type	Data Source	Cluster Assignments (MAIS ranges)		
			C1	C2	C3
$k = 2$	Incidence	Copes <i>et al.</i> [30] Finkelstein <i>et al.</i> [18] Blincoe <i>et al.</i> [11]	1-3	4-6	-
	Hospitalization	Blincoe <i>et al.</i> [11]			
	Mortality	Copes <i>et al.</i> [30] Gennarelli <i>et al.</i> [28] Gennarelli & Wodzin [1]			
	Costs	Graham <i>et al.</i> [29,47] Finkelstein <i>et al.</i> [18] + QoL [11] DOT [2,47] Blincoe <i>et al.</i> [11]			
$k = 3$	Incidence	Copes <i>et al.</i> [30] Finkelstein <i>et al.</i> [18] Blincoe <i>et al.</i> [11]	1-2	3-4	5-6
	Hospitalization	Blincoe <i>et al.</i> [11]			
	Mortality	Copes <i>et al.</i> [30] Gennarelli <i>et al.</i> [28] Gennarelli & Wodzin [1]			
	Costs	Graham <i>et al.</i> [29,47] Finkelstein <i>et al.</i> [18] + QoL [11] DOT [2,47] Blincoe <i>et al.</i> [11]			

MAIS = maximum Abbreviated Injury Scale. QoL = quality-of-life. K-means clustering (k in total). Cluster assignments do not vary across data features (for a given value of k). Ranges are inclusive. Incidence of nonfatal injuries. Mortality risk uses pooled fatal/nonfatal data. Dashes indicate not applicable.

Table 10. Injury Severity Score - Clusters

Total Clusters Fit	Feature Type	Data Source	Cluster Assignments (ISS ranges)					
			C1	C2	C3	C4	C5	C6
$k = 2$	Incidence	Copes <i>et al.</i> [44] Kilgo <i>et al.</i> [50]	1-30	32-75	-	-	-	-
	Mortality	Copes <i>et al.</i> [44] Kilgo <i>et al.</i> [50]						
	Costs	Graham <i>et al.</i> [29,47] Finkelstein <i>et al.</i> [18] + QoL [11] DOT [2,47] Blincoe <i>et al.</i> [11]						
$k = 3$	Incidence	Copes <i>et al.</i> [44] Kilgo <i>et al.</i> [50]	1-22	24-45	48-75	-	-	-
	Mortality	Copes <i>et al.</i> [44] Kilgo <i>et al.</i> [50]						
	Costs	Graham <i>et al.</i> [29,47] Finkelstein <i>et al.</i> [18] + QoL [11] DOT [2,47] Blincoe <i>et al.</i> [11]						
$k = 4$	Incidence	Copes <i>et al.</i> [44] Kilgo <i>et al.</i> [50]	1-14	16-30	32-48	50-75	-	-
	Mortality	Copes <i>et al.</i> [44] Kilgo <i>et al.</i> [50]						
	Costs	Graham <i>et al.</i> [29,47] Finkelstein <i>et al.</i> [18] + QoL [11] DOT [2,47] Blincoe <i>et al.</i> [11]						
$k = 5$	Incidence	Copes <i>et al.</i> [44] Kilgo <i>et al.</i> [50]	1-13	14-26	27-38	41-54	57-75	-
	Mortality	Copes <i>et al.</i> [44] Kilgo <i>et al.</i> [50]						
	Costs	Graham <i>et al.</i> [29,47] Finkelstein <i>et al.</i> [18] + QoL [11] DOT [2,47] Blincoe <i>et al.</i> [11]						
$k = 6$	Incidence	Copes <i>et al.</i> [44] Kilgo <i>et al.</i> [50]	1-11	12-22	24-34	35-45	48-59	66-75
	Mortality	Copes <i>et al.</i> [44] Kilgo <i>et al.</i> [50]						
	Costs	Graham <i>et al.</i> [29,47] Finkelstein <i>et al.</i> [18] + QoL [11] DOT [2,47] Blincoe <i>et al.</i> [11]						

ISS = Injury Severity Score. QoL = quality-of-life. K-means clustering (k in total). Cluster assignments do not vary across data features (for a given value of k). Ranges are inclusive. Incidence of nonfatal injuries. Mortality risk uses pooled fatal/nonfatal data. Dashes indicate not applicable.

Table 11. Average Injury Severity - Variation Across Studies and Severity Scales

Severity Scale	Data Source	Avg. Severity	MAIS Analogue		ISS Analogue	
			Unrestricted	Constrained	Unrestricted	Constrained
HOSP	Finkelstein <i>et al.</i> [18]	3.7%	-	-	-	-
	WISQARS [19]	15.5%	-	-	-	-
MAIS	Copes <i>et al.</i> [30]	2.61	-	-	10.7	10.1
	Finkelstein <i>et al.</i> [18]	1.28	-	-	2.11	1.80
	Blincoe <i>et al.</i> [11]	1.22	-	-	1.90	1.61
ISS	Copes <i>et al.</i> [44]	9.48	2.47	2.54	-	-
	Kilgo <i>et al.</i> [50]	9.01	2.42	2.49	-	-

HOSP = hospitalized/non-hospitalized. ISS = Injury Severity Score. MAIS = maximum Abbreviated Injury Scale. Analogue values computed using average MAIS power functions (Table 8). “Unrestricted” models do not have any parameter restrictions, and “constrained” models are fit so as to intersect two points: MAIS 1 at ISS 1 / MAIS 6 at ISS 75. Average severity value for HOSP is percent hospitalized. Dashes indicate not applicable or not specified.

Table 12. Average Injury Costs - Variation Across Studies and Severity Scales

Severity Scale	Data Source	Cost per Injury Incident (2023\$)				
		Graham <i>et al.</i> [29,47]	Finkelstein <i>et al.</i> [18] + QoL [11,19]	DOT [2,47]	Blincoe <i>et al.</i> [11]	WISQARS [19]
HOSP	Finkelstein <i>et al.</i> [18]	-	\$91,400	-	-	\$93,500
	WISQARS [19]	-	\$110,000	-	-	\$111,000
MAIS	Copes <i>et al.</i> [30]	\$1,810,000	\$1,650,000	\$1,490,000	\$1,900,000	-
	Finkelstein <i>et al.</i> [18]	\$402,000	\$240,000	\$252,000	\$268,000	-
	Blincoe <i>et al.</i> [11]	\$332,000	\$275,000	\$271,000	\$304,000	-
ISS	Copes <i>et al.</i> [44]	\$1,770,000	\$1,570,000	\$1,400,000	\$1,810,000	-
	Kilgo <i>et al.</i> [50]	\$1,710,000	\$1,460,000	\$1,290,000	\$1,680,000	-

HOSP = hospitalized/non-hospitalized. ISS = Injury Severity Score. MAIS = maximum Abbreviated Injury Scale. QoL = quality-of-life. Finkelstein *et al.* [18] costs supplemented using QoL costs from either [19] (HOSP) or [11] (MAIS/ISS) (for better comparisons). Dashes indicate not applicable or not specified.