

Do Medical Malpractice Award Caps Adequately Compensate Economic Losses of Semi-Skilled Workers?

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Semi-skilled work represents occupations that have more complexities than unskilled work, but also markedly fewer complexities than more highly-skilled occupations. Semi-skilled workers typically work in positions, which require specific skills (i.e., vocational-technical). Not only is additional training time required to perform job duties, but also higher educational attainment is required, such as a high school or a vocational degree. These workers commonly earn greater than minimum wages, moreover, their wages vary greatly, dependent on the specific job. The present article examines prototype wage loss scenarios for three semi-skilled workers, using loss income projections. Based on three scenarios, it is proposed that medical malpractice caps most often fail to meet economic wage losses for semi-skilled workers. Rather, it is suggested that medical malpractice caps should be determined for individual workers, moreover, as present caps do not meet economic losses for semi-skilled workers. It was demonstrated in the present study that semi-skilled workers deemed unable to return to work as a result of medical malpractice most probably will not be adequately covered using present-day medical malpractice caps less than \$500,000.

Medical malpractice caps can be more problematic for someone with job skills beyond high school. Typically low-skilled workers earn lower incomes due to lack of job skills. Semi-skilled workers have usually acquired some training through perhaps a technical school or completion of a certificate-granting program. Higher wages are typically associated with acquisition of additional skills; therefore, the economics losses for these workers will be greater if they are injured through medical malpractice, in comparison to unskilled or low-skilled workers.

The largest components of economic losses are typically lost *future* wages. These losses may be incurred for years into the future, depending on the age of the person who sustained the injury and the nature of the losses. The benchmark for defining lost wages of a semi-skilled worker may be a person's *demonstrated* wages, as represented on tax returns. For example an individual may have been earning \$30,000, \$40,000 to \$45,000 annually. Lost future wages can also be outlined in wage earning *capacity*. For instance, a labor market analysis may reveal that a graphic designer has the capability of earning \$42,000 annually in a specific geographic region.

The goal of the present case study analyses is to assess the economic losses of three hypothetical individuals that have been injured because of medical negligence. Three case studies have been presented, in which the injured individuals differed across several individual characteristics, such as gender and age, but all of the workers earned relatively moderate wages, furthermore, commensurate with average household income in the U.S. All economic losses are calculated and "discounted." Subsequently, it is observed whether medical malpractice award caps, of varying amounts, satisfactorily compensate for the economic losses.

Assumptions for Case Studies

In each case review that follows a hypothetical individual has suffered an injury as a result of medical malpractice circumstance. Each case also involves three assumptions: 1) assumes the worker would have fulfilled worklife expectancy; 2) assumes the worker would have continued working to age 65; 3) assumes the worker would have continued working until age 67. All three case studies include lost wages. In some,

though not all, of the cases, the injured worker has incurred other losses such as loss of household production. Across all three cases demographic variables and economic features were derived from United States Bureau of Labor, Bureau of Labor Statistics databases, including *Work Estimates: Effects of Race and Age* (United States Department of Labor, Bureau of Labor Statistics, 1986) and representative Consumer Price Indexes (United States Department of Labor, Bureau of Labor Statistics, n.d.)

Discounting Present Values

The method of discounted present value was employed to evaluate future lost wages/ income incurred. In addition, this same method had been utilized calculate additional future losses. If past losses were incurred by a worker, the losses were simply added to the worker's total economic losses; since these were not future losses, it was not necessary to apply discounted present value. A worker's *total economic losses* were the summation of past and future lost wages, household production and any other losses. If the injured worker was able to return to the labor force and earn wages below what he/ she earned before the injury, or if the worker was currently employed in a reduced earning capacity, then those actual or potential *residual* wages were discounted and subtracted from the higher wages the worker could have earned, but for the injury.

Specific "discounting" processes were utilized in the present case study reviews. In accordance with *Culver v. Slater Boat Co.* (1983) the *below market discount rate method* is employed to estimate future losses. It is assumed that the recipient's settlement award can be invested so that proceeds from the investment can at least replace the stream of income/ compensation lost by the recipient and pay for medical expenses. Therefore discount rates (interest rates that can be earned on invested amounts) must be estimated.

Discount rates are based on the rate of return from risk-free 30 year U.S. Treasury Bonds, which can replicate the recipient's lost income amounts over time. The average interest rate (composite yield on portfolio of risk-free US Government securities) from 1982-2011 is 4.00 percent. The average annual increase in cost of living (1990-2011) is approximately 2.72 percent. Therefore, the below market discount rate utilized in all scenarios is 1.28 percent (4.00 - 2.72). Also, *trail dates* were not assumed, but rather the standard practice of using a *reference date* as the beginning date of future economic loss calculations was utilized. It is also assumed that the exact amount of *future* medical expenses cannot presently be determined, or the injured party has qualified for disability benefits to defray some of these costs. Any medical expenses incurred are past medical expenses.

Case Study 1: Edward Simonson

Demographic Review

Edward Simonson, age 48, currently resides in Commerce, TX. Mr. Edmonson presented himself to a public hospital in Dallas, TX with complaints of headaches. Attending physician at the public hospital assessed that headaches were stress-related and released Mr. Simonson without additional recommendations or treatments. Ten days following the initial visit, Mr. Simonson again presented himself to the same hospital, with the same Emergency Room physician completing the evaluation. Again, the patient was diagnosed as having stress-related headaches, without recommendation for additional treatments. Mr. Simonson continued having the headaches and received conservative treatment. Approximately, three months after the initial visit, Mr. Simonson presented himself a third time to the public hospital; however, a different physician was treating patients, and the physician recommended completion of a MRI, which the patient completed on the following date. MRI revealed presences of hemorrhage, which required surgical intervention. As a result of surgical complications and damage resulting from the hemorrhage, Mr. Simonson incurred a stroke, severely limiting his ability to return to the workforce following surgery.

Mr. Simonson had been a Truck Driver for 20 years prior to the reported incident. He had a Commercial Drivers' License, in addition to several endorsements, such as Tandem and Hazardous Materials. Although he did not graduate from high school, he was able to not only obtain his General Education Diploma, but also complete his driving test without assistance. His earnings ranged from approximately \$45,000 to \$67,000 over the last ten years, with an average income of \$54,989.

Demographic Parameters

Date of birth: October 31, 1964

Date of accident (injury): April 26, 2008

Anticipated Trial Date: N/A

Reference Date: June 7, 2010

Age at accident (injury): 43.48 years

Age at reference date: 44.60 years

Date of accident (injury) to reference date: 2.12 years

Life expectancy at reference date: 29.90 years

Life and Worklife Expectancy

Life expectancy at accident (injury): 30.80 years (National Center for Health Statistics, 2010)

Worklife expectancy (and potential time to full retirement) at accident (injury), were used in following scenarios:

- Scenario 1 (Worklife: Utilizing figures from Ciecka, Donley & Goldman, 2000-2001; Donley & Goldman, 1999-2000): 14.85 years
- Scenario 2 (To full retirement age of 67): 23.52 years
- Scenario 3 (To age of 70): 26.52 years

Worklife expectancy (and potential time to full retirement) at reference date, used in the following scenarios:

- Scenario 1 (Worklife: Utilizing figures from Ciecka, Donley & Goldman, 2000-2001; Donley & Goldman, 1999-2000): 13.90 years
- Scenario 2 (To full retirement age of 67): 22.40 years
- Scenario 3 (To age of 70): 25.20 years

Lost Past/ Future Wages

This represents income Mr. Simonson could have earned in absence of the injury. Lost income (earnings) is estimated based on his previous income. Mr. Simonson wages would have averaged \$54,989 over the last several years based on demonstrated income.

Lost Benefits

Given that Mr. Simonson was a skilled laborer, working with retirement benefits under a major trucking company, lost benefits were calculated.

Lost Household Services

This represents the value of household activities that can no longer be performed because of the injury (illness). Given that Mr. Simonson is a widower with one dependent grandchild living at home, lost household services is estimated to be \$969 annually.

Annual and Residual Earning Capacity

Post-accident residual earning capacity working full time, used as offset: hourly wage is \$8.75. Annual earning capacity is \$19,688.

Medical Expenses

Mr. Simonson has incurred \$21,101 in medical expenses.

Edward Simonson Economic Losses

- Scenario 1. Assuming Mr. Simonson would have fulfilled his worklife expectancy, Table 1 shows his lost past earnings at \$109,978 and lost past benefits at \$13,127. Lost past household services total \$1,352. Past medical expenses are \$21,101. Lost *future* earnings/ benefits and household services total \$792,623 (Less: present value of post-accident residual earning capacity of \$229,502 = \$563,121). Therefore his total economic losses in this scenario total \$708,679
- Scenario 2. Assuming Mr. Simonson would have worked until age 67, Table 2 shows his lost past earnings at \$109,978 and lost past benefits at \$13,127. Lost past household services total \$1,352. Past medical expenses are \$21,101. Lost *future* earnings/ benefits (including \$25,000 in medical expenses) and household services total \$1,260,746 (Less: present value of post-accident residual earning capacity of \$369,461=\$891,285). Therefore his total economic losses in this scenario total \$1,036,843.
- Scenario 3. Assuming Mr. Simonson would have worked until age 70, Table 3 shows his lost past earnings at \$109,978 and lost past benefits at \$13,127. Lost past household services total \$1,352. Past medical expenses are \$21,101. Lost *future* earnings/ benefits (including \$25,000 in medical expenses) and household services total \$1,453,762 (Less: present value of post-accident residual

Table 1

Economic Losses of Semi-Skilled Workers and Medical Malpractice Caps (Worklife)

	Simonson	Bergeron	O'Flynn
Economic Loss (wages and benefits)	\$708,679	\$870,071	\$ 1,598,457
Economic Loss (HH production)	\$1,352	\$2,012	NA
Economic Loss (medical)	\$21,101	NA	NA
Economic Loss (total)	\$731,132	\$872,083	\$1,598,457
Medical Malpractice Cap (\$500,000)	not adequate	not adequate	not adequate
Medical Malpractice Cap (\$1 million)	adequate	adequate	not adequate
Medical Malpractice Cap (\$2 million)	adequate	adequate	adequate

Table 2*Economic Losses of Semi-skilled Workers and Medical Malpractice Caps (work until age 65)*

	Simonson	Bergeron	O'Flynn
Economic Loss (wages and benefits)	\$1,036,843	\$1,082,712	\$ 1,794,494
Economic Loss (HH production)	\$ 1,352	\$2,012	NA
Economic Loss (medical)	\$ 21,101	NA	NA
Economic Loss (total)	\$1,059,296	\$1,084,724	\$ 1,794,494
Medical Malpractice Cap (\$500,000)	not adequate	not adequate	not adequate
Medical Malpractice Cap (\$1 million)	not adequate	not adequate	not adequate
Medical Malpractice Cap (\$2 million)	adequate	adequate	adequate

earning capacity of \$427,169=\$1,026,593). Therefore his total economic losses in this scenario total \$1,172,151.

Case Study 2: James Bergeron

Demographic Review

Mr. James Bergeron, 37 years of age, worked as a Surveillance System Monitor for approximately 12 years prior to the identified reference date. Mr. Bergeron was admitted for glaucoma surgery, but two surgical complications occurred. First, wrong eye was surgically manipulated, and, second, surgical complication occurred while completion surgery on in healthy eye. As a result of surgical complications, Mr. Bergeron had not only loss of vision, but also a reduction in available visual fields. In the capacity as a Surveillance System Monitor, Mr. Bergeron could not maintain this position. Alternative employment options were not available to Mr. Bergeron, based on his training and marketable skills.

Demographic Parameters

Date of birth: March 6, 1967

Date of accident (injury): December 21, 2012

Anticipated Trial Date: N/A

Reference Date: January 1, 2009

Age at accident (injury): 37.79 years

Age at reference date: 41.82 years

Date of accident (injury) to reference date: 4.02 years

Life and Worklife Expectancies

Life expectancy at reference date: 36.30 years

Life expectancy at accident (injury): 40.70 years (National Center for Health Statistics, 2010)

Worklife expectancy (and potential time to full retirement) at accident (injury), data was used in the following scenarios:

- Scenario 1 (Worklife: Utilizing figures from Ciecka, Donley & Goldman, 2000-2001; Donley & Goldman, 1999-2000): 22.80 years
- Scenario 2 (To full retirement age of 67): 29.21 years
- Scenario 3 (To age of 70): 32.21 years

Worklife expectancy (and potential time to full retirement) at reference date, used in the following scenarios:

- Scenario 1 (Worklife: Utilizing figures from Ciecka, Donley & Goldman, 2000-2001; Donley & Goldman, 1999-2000): 19.30 years
- Scenario 2 (To full retirement age of 67): 25.21 years
- Scenario 3 (To age of 70): 28.21 years

Lost Past/ Future Wages

This represents income Mr. Bergeron could have earned in absence of the injury (death). Lost income (earnings) is estimated based on his previous income. Mr. Bergeron wages have averaged about \$50,150 over the last several years as a Surveillance System Monitor.

Lost Benefits

Given that Mr. Bergeron was a semi-skilled laborer working with retirement benefits under a major energy company, lost benefits are calculated as necessary.

Lost Household Services

This represents the value of household activities that can no longer be performed because of the injury (illness). Given that Mr. Bergeron is a widower with

three young children living at home, lost household services are estimated to be \$5,278 annually.

Post-Accident Residual Earning Capacity

Post-accident residual earning capacity working full time, used as offset, would be at hourly wage of \$8.50, which gives an annual earning capacity of \$22,120.

James Bergeron Economic Losses

- Scenario 1. Assuming Mr. Bergeron would have fulfilled his worklife expectancy, Table 1 shows his lost past earnings at \$163,044 and lost past benefits at \$16,525. Lost past household services total \$20,120. Lost *future* earnings and benefits and household services total \$963,030 (Less: present value of post-accident residual earning capacity of \$315,248=\$647,782). Therefore his total economic losses in this scenario total \$847,471.
- Scenario 2. Assuming Mr. Bergeron would have worked until age 67, Table 2 shows his lost past earnings at \$163,044 and lost past benefits at \$16,525. Lost past household services total \$20,120. Lost *future* earnings and benefits and household services total \$1,241,859 (Less: present value of post-accident residual earning capacity of \$412,161=\$829,698). Therefore his total economic losses in this scenario total \$1,029,387.
- Scenario 3. Assuming Mr. Bergeron would have worked until age 70, Table 3 shows his lost past earnings at \$163,044 and lost past benefits at \$16,525. Lost past household services total \$20,120. Lost *future* earnings and benefits and household services total \$1,362,875 (Less: present value of post-accident residual earning capacity of \$466,682=\$896,193). Therefore his total economic losses in this scenario total \$1,095,882.

Case Study 3: Thom O'Flynn Economic Losses

Demographic Profile

Mr. Thom O'Flynn, 45 years of age, had worked for Hewlett Packard as a Circuit Board Assembler for approximately 13 years prior to completion of a carpal tunnel release surgery in 2010. Prior to surgery, Physician Assistant inappropriate marked the injured wrist, causing not only for the wrong wrist to be the identified operated unit, but also the correctly identified wrist to be not surgically addressed. As second and alternative opinions were sought after the malpractice error, Mr. O'Flynn's wrists' strength and endurance remained poor, eventually causing him to be unable to complete job duties as a Circuit Board Assembler. Alternative employment may be explored following resolution of the medical malpractice claim. Over the last three years, Mr. O'Flynn's average income was \$80,570.

Demographic Parameters

Date of birth: September 19, 1959

Date of accident (injury): October 23, 2003

Anticipated Trial Date: N/A

Reference Date: September 12, 2012

Age at accident (injury): 44.09 years

Age at reference date: 52.98 years

Date of accident (injury) to reference date: 8.90 years

Life and Work Expectancy

Life expectancy at reference date: 27.40 years

Life expectancy at accident (injury): 35.2 years (National Center for Health Statistics, 2010.)

Worklife expectancy (and potential time to full retirement) at accident (injury), used in following scenarios:

Table 3

Economic Losses of Semi-skilled Workers and Medical Malpractice Caps (Work until age 67)

	Simonson	Bergeron	O'Flynn
Economic Loss (wages and benefits)	\$1,172,151	\$1,153,310	\$ 1,891,324
Economic Loss (HH production)	\$ 1,352	\$2,012	NA
Economic Loss (medical)	\$ 21,101	NA	NA
Economic Loss (total)	\$1,194,604	\$1,155,322	\$ 1,891,324
Medical Malpractice Cap (\$500,000)	not adequate	not adequate	not adequate
Medical Malpractice Cap (\$1 million)	not adequate	not adequate	not adequate
Medical Malpractice Cap (\$2 million)	adequate	adequate	adequate

- Scenario 1 (Worklife: Utilizing figures from Ciecka, Donley & Goldman, 2000-2001; Donley & Goldman, 1999-2000): 17.47 years
- Scenario 2 (To full retirement age of 65): 20.91 years
- Scenario 3 (To age of 67): 22.91 years

Worklife expectancy (and potential time to full retirement) at reference date, used in the following scenarios:

- Scenario 1 (Worklife: Utilizing figures from Ciecka, Donley & Goldman, 2000-2001; Donley & Goldman, 1999-2000): 10.35 years
- Scenario 2 (To full retirement age of 65): 12.02 years
- Scenario 3 (To age of 67): 14.02 years

Lost Past and Future Wages

This represents income Mr. O'Flynn could have earned in absence of the injury (death). Lost income (earnings) is estimated based on his previous income. Mr. O'Flynn's wages have averaged about \$80,570 over the five years.

Lost Benefits

Given that Mr. O'Flynn was a semi-skilled laborer working with retirement benefits under a union contract, lost benefits are calculated as necessary.

Thom O'Flynn Economic Losses

- Scenario 1. Assuming Mr. O'Flynn would have fulfilled his worklife expectancy, Table 1 shows his lost past earnings at \$538,538 and lost past benefits at \$37,658. Lost *future* earnings total \$884,263 and lost benefits total \$137,998. Therefore his total economic losses in this scenario total \$1,598,457.
- Scenario 2. Assuming Mr. O'Flynn would have worked until age 65, Table 2 shows his lost past earnings at \$538,538 and lost past benefits at \$37,658. Lost *future* earnings total \$1,051,092 and lost benefits total \$167,206. Therefore his total economic losses in this scenario total \$1,794,494.

- Scenario 3. Assuming Mr. O'Flynn would have worked until age 67, Table 3 shows his lost past earnings at \$538,538 and lost past benefits at \$37,658. Lost *future* earnings total \$1,133,306 and lost benefits total \$181,821. Therefore his total economic losses in this scenario total \$1,891,324.

Further Analysis of Malpractice Caps Adequacy across Wages and Years of Loss

Tables 1-3 offers a brief guideline to assess the adequacy of caps for the identified case studies. Additionally, Table 4 addresses probable wage losses for semi-skilled workers at various wages and years of loss. Will caps at \$250K, \$500K, or \$1 million adequately compensate for economic losses of semi-skilled workers? The referenced tables were arranged to show the losses by wage rates of \$20, \$25 and \$30 per hour and an associated years or work life remaining in ten-year increments of 10, 20, and 30 years remaining. The economic losses include only lost *wages* with no other losses considered. The losses were furthermore discounted utilizing a 1.28 percent discount rate.

As wages rise and years of worklife remaining increase, the economic losses increase substantially. In almost all cases the cap would have to be set at an amount above \$1 million to offer adequate compensation in all scenarios. Only for those with 10 years of worklife remaining would a cap below \$1 million be adequate. It is also important to note that the table *does not* include other losses such as household production and medical expenses. If these were included, the amount of the cap would have to rise to potentially \$2 million and over to offer adequately cover losses/damages.

Conclusion

In the three aforementioned case studies and additional exercise (Table 4), medical malpractice award caps would not have adequately compensate semi-skilled workers for economic losses incurred as a result of medical malpractice. It is recommended that caps must be set at \$1 million or higher to properly compensate loss wages for injured semi-skilled work-

Table 4
Economic Losses of Semi-Skilled Workers by Years of Lost Employment and Wages

Years of Worklife Remaining	\$ 20 per hr.	\$ 25 per hr.	\$ 30 per hr
10 Years	\$ 410,742	\$ 513,428	\$ 616,114
20 Years	\$ 821,485	\$ 1,026,856	\$ 1,232,227
30 Years	\$ 1,232,227	\$ 1,540,284	\$ 1,848,341

ers. For caps set at \$500,000 and lower, wage losses most probably will be greater than prescribed caps. Perhaps, one of the potential reasons for under-compensation was the failure to index the size of the cap for inflation, which may be common to many tort reform laws. Additionally, caps must consider that workers earn variable wages, with some caps not adequately compensating workers that has loss of income associated with a respective medical malpractice claim.

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