

Do We Double Count Damages in Severe Personal Injury Cases? ¹

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Introduction

In tort litigation involving persons who have sustained catastrophic injury, claimed damages can easily mount into the millions of dollars. Components of loss to the injured party and family members may include lost net earnings and benefits, the pecuniary value of the plaintiffs loss of his or her former ability to perform household services, the loss of advice and counseling services to family members (if the plaintiff has suffered mental impairment), the loss of companionship services (if the impairment interferes with the plaintiffs ability to spend time with family members) and the costs of lifetime medical care. Often, the last component is so large that the others appear relatively minor in magnitude. The underlying rationale in these cases is to compensate victims in such a way as to provide replacement funds sufficient to reinstate their former economic status. Generally, tort law is aimed at attempting to make whole the prior economic condition of victims of wrongful acts.

Except for lifetime medical care, these losses are typically treated in accordance with the following expression:

$$L = L_E + L_H + L_C + L_G \quad (1)$$

where L is the total estimated pecuniary loss, consisting of the present pecuniary value of the losses of E, net earnings; H, household services; C, companionship services; and G, guidance, advice and counsel (Tinari 1989, 76). Net earnings in this context refers to gross earnings adjusted for unemployment probability, income tax liabilities, fringe benefits and work-related expenses. In many jurisdictions, C and G are not recognized legally as separate loss elements. In such instances, the analytical framework is truncated to elements E and H. Of course, H may be interpreted broadly to include companionship and guidance services, but unfortunately most household activity studies tend to ignore or undercount these services. This leads to undercounting the value of household work. (Another potential incremental cost, i.e., the costs associated with the management of a large financial award, including investment and tax-based decisions, has its own special considerations and is not within the scope of this article.)

These loss components are comprised of two types of opportunity cost measures: E and H attempt to measure the value of income or services the plaintiff would have provided to himself (if unmarried and without dependents) or *provided to both himself and others* had he not suffered impairment. These losses may be categorized primarily as first-person opportunity costs. In contrast, C and G are estimates of the value of services that would have been *provided only to others*, i.e., received usually by spouses and children of the plaintiff, had the plaintiff not suffered impairment, and are thus opportunity cost measures to the plaintiff's family members. The latter loss components may be categorized as third person opportunity costs.

It is necessary to evaluate each of the four components separately because different theories, measurements and statistics must be applied to the valuation of each loss component. Generally speaking, these components are treated as being additive because they measure different types of loss that are replaceable separately. This is true even though the pre-impairment service elements may have been supplied simultaneously, to some extent, by the plaintiff, e.g., by providing advice while preparing a meal, because the award or settlement received by the plaintiff is intended to enable purchase of the services of persons who could provide the lost services, and these would normally be provided by different people possessing their own set of specialized skills. For example, advice could be acquired from a family counselor or financial advisor, while meal preparation could be acquired from a cook or home health aide. Thus, compensation for each of these services does not entail double counting or overcompensation.

Up to this point no consideration has been given to medical care costs. Given the preceding framework for evaluating losses, how should the value of lifetime medical care costs be treated? At present, the standard operating procedure is to add it to the others as if it were simply another additive loss component (See, for example, Marlin 1988; Martin 1994, 9-9; Speiser 1988, 384). As is shown below, and noted recently by Ward and Krueger (1994, 93), that is an erroneous practice because medical care costs invariably include compensation for services that duplicate some of the other loss components. The purpose of this paper is to explore the potential problem of double counting among the components of loss.

Nature of Redundancy

It is important to understand that lifetime medical care costs are not opportunity costs. While it is true that they are an attempt to help the plaintiff become *whole* to the greatest extent possible, they are not intended to compensate for lost income or lost services. Rather, such costs are a necessary response to the post injury medical condition of the severely injured party. Nevertheless, medical care costs generally are quite global in that they are designed to deal with every aspect of the victim's well-being. As such, a professionally prepared *life care plan* (LCP), typically written by a rehabilitation or medical expert, often incorporates services that duplicate other loss components. Thus,

were such costs aggregated by the economist with the lost opportunity cost components, the total loss figure, if awarded, would effectively over compensate the plaintiff.

Which loss components might be subject to duplicate compensation? Medical care of a severely impaired party may, in some instances, enable the person to provide third-person opportunity costs. While the pre-injury provision of advice to children by a brain damaged victim cannot be recouped by medical care, comprehensive medical care may be able to replace, at least partially, the ability of a parent to continue to offer companionship services to children, e.g., by enabling the impaired parent to get around in a wheelchair. Typically, the place for redundancy is that of first person opportunity costs which include lost earnings and household services. For example, had a plaintiff not been impaired, the income of that individual would have been used not only to purchase food, clothing, housing and utilities, but also entertainment, vacations, and a whole host of other goods and services. Now, in the plaintiff's present severely impaired condition, if home care costs at a facility include meals, housekeeping, utilities (heat, electricity, cable TV, telephone, etc.), then a claim to recoup these costs would be duplicating a part of lost earnings and lost household services.² With the objective of *making whole* the economic well-being of the plaintiff, it appears that a simple addition of the separate loss components could over estimate the total real value of loss. And because first person opportunity costs are the primary and typical components included in most loss appraisals written by economists in cases of severely injured persons, the problem of double counting is potentially widespread.

To take these elements into account, forensic economists need to broaden their framework to incorporate both the costs of lifetime care as well as appropriate downward adjustments to minimize double-counting of losses. Of course, although each case will differ in the particulars, the following serves as a general framework for proper inclusion of lifetime care costs in the calculation of loss:

$$L = L_E + L_H + L_C + L_G + L_{CN} \quad (2)$$

$$L_{CN} = L_{CG} - (p_1 L_E + p_2 L_H + p_3 L_C + p_4 L_G) \quad (3)$$

where LCG is the present value of gross lifetime care costs, the pi are the corresponding probabilities/percentages of each of the other loss components duplicated in the life care costs (LC estimate, and LCN is the present value of the net lifetime care costs (after subtraction of double counted items). By substitution and transposition, the relationships may be expressed as follows:

$$L = L_E(1-p_1) + L_H(1-p_2) + L_C(1-p_3) + L_G(1-p_4) + L_{CG} \quad (4)$$

Thus, for any pi that are zero, the loss components revert to their full calculated values. As is demonstrated in this article, estimation of the actual overlap is not especially difficult, although it does require careful review of the elements

contained in the life care plan. To understand the various ways compensation redundancy may occur, two actual life care plans are examined in the following section.

Review of Actual Life Care Plans

Two cases of severely injured persons have been selected for review here: the case of Mary Shannon, a two-year old girl, and that of John Williams, a 47 year old male. (All names are fictitious.) For each case, background details are summarized and the claimed losses (rounded for the sake of simplicity) are explained. Then an analysis is provided to ascertain the extent, if any, of double counting of losses.

The life care plan for Mary Shannon included (a) routine future medical care (pediatrician, dentist, etc.), (b) surgical intervention in several dimensions, (c) transportation (taxi services for 5 years; ambulance transport as needed), (d) diagnostic testing/educational assessment, (e) home and facility care, (f) home furnishings and accessories, (g) drug and supply needs, (h) rehabilitation evaluations, physical and other therapies, (i) counseling, therapists and other specialists.

A. Mary Shannon (Economist's Report Prepared 8/19/92)

Date of Birth	8/28/86
Date of Event	8/17/88
Life Expectancy	67 Years
Accident	Ingestion of an Unknown Quantity of Potassium Hydroxide
Hospitalization	Treatment for Two Years at Children's Hospital (East Coast)
Post Discharge Inpatient	Home Care Nursing Services Provided Transferred to Care Facility to Achieve Nutritional Management
Discharge	To Her Mother's Care, Expected in about 6 Weeks
Siblings	Six Others, with Ages Ranging from 2 to 14 Years
Mother	Recently Divorced Single Parent
Prognosis	Continued Lifetime Care Needed

The economist's report included two major loss components: earnings and benefits and medical care costs, added together. A review of the details of the LCP reveals that many of the specialized services are expected to terminate upon Mary's attainment of age 21 years. The home care and home furnishings elements, by and large, do not appear to overlap normal expenditures but refer to specialized care and accessories. However, the LCP does include the following items that, though not overwhelmingly large in relative pecuniary terms, could reasonably be assumed to be typically purchased out of regular income: food processor, hand-held shower, computer, air conditioner, therapeutic horseback

riding, and medical care costs such as routine dentist and pediatrician visits, x-rays and routine lab tests.

Two elements of the LCP entail substantial costs that appear to overlap typical household expenditures and services: an adaptive van (every 5 to 7 years) at \$24,000 and 16 hours daily of licensed practical nursing (LPN) services. The van duplicates to a large extent typical expenditures on an automobile (less the special features of the van). Ward and Krueger (1994, 93) point out that counting the full cost of a van for transportation is a common form of duplication of damages. If one assumes that two-thirds of the cost of the van overlap or duplicate the normal family expenditures on a vehicle for the plaintiff had she not been impaired, then the lifetime costs of the vehicle, purchased every six years, on average, amounts to \$192,000. Given the present value of the loss of earnings and benefits of \$900,000, the duplication represents a little more than 21% of the earnings loss claim.

Distinct from a registered nurse whose services are included in the LCP, the LPN services partially replace the household services (meal preparation, bed-making, cleaning, etc.) the plaintiff would have provided for herself absent her impairment. However, the very large component of the LCP which LPN services comprise do not overlap any other loss component because the economist's report did not include a household services loss component.

Conclusion:

A modest amount of double counting was uncovered. For example, in light of the fact that routine medical care over Mary's lifetime very likely would have been funded via her own earnings and fringe benefits coverage had she not been impaired, and that such care would now be provided in the normal course of her prospective medical evaluations contained in the LCP, it may be argued that some overlap between the earnings loss component and the cost of the LCP is present. In addition, the cost of the adaptive van duplicates, to a great degree, the cost of automobile purchases over the plaintiff's life expectancy, which purchases would have been made out of her earnings.

The damages consultant's report included four loss components. The first three were earnings and benefits, household services, and the cost of care, added together for a total present value of \$4.46 million. Hedonic damages were also cited, but no measure of their magnitude was provided because, according to the consultant, "there is no fully satisfactory economic way of estimating their magnitude."

Lifetime care costs were calculated on the assumption that the plaintiff would continue living at a skilled nursing care home. In addition to the annual cost of residence at the home, the consultant's report included the costs of prescription drugs, physical therapy, and oxygen, all based on current actual expenditures.

Thus, the issue in question is whether or not these care costs duplicate the expert's valuation of the earnings and the household services loss components. Nursing care facilities generally provide residents with shelter, meals, utilities, and various entertainment/recreational activities, as well as room cleaning, making of the bed, washing of clothes and linens, and so forth. Since these goods and services accrue only to the plaintiff and not his family, there is obviously only partial overlap.

B. John Williams (Consultant's Report Prepared 7/8/92)

Date of Birth	2/7/42
Date of Event	12/30/89
Life Expectancy	25.98 Years
Accident	Brain Hemorrhage
Hospitalization (Mid-	Treatment for 3 Months at Suburbia Hospital
Care Continuation Months	Central) and Memorial Hospital (East Coast) Transferred to Rehabilitation Facility for 3 (East Coast)
Care Continuation Marital Status Time	Transferred to Nursing Care/Convalescent Home Spouse; Three Children Living at Home at the of the Event
Occupation Company	Vice-President of Sales for a Machinery
Prognosis Is	Continued Lifetime Care Needed as the Plaintiff
Remains	Permanently Paralyzed on His Right Side, Bedridden and Is Unable to Speak and Care for Himself

Considering first household services, the expert calculated the value of services Mr. Williams regularly provided "to himself, to his wife, to his three children, and to his household." Thus, a small portion of the estimated value of household services, namely, those services that the plaintiff performed primarily for his own benefit, would be taken care of by the personnel at the nursing care home. For purposes of this discussion, given the size of the plaintiff's family, it is estimated that roughly 15% of such services may be assigned to the direct benefit of the plaintiff.³ Since the estimated value of household services was assigned a present value of \$170,000, then it could be argued that approximately \$25,500 of that estimate is redundant.

Turning to the valuation of his lost earnings, the portion that the plaintiff would have spent on himself and yet which is incorporated in the cost of the nursing care residence is clearly duplicative. Included in the duplication would be many of

the same elements normally considered part of personal maintenance or personal consumption expenditures typically calculated in death cases. Thus, if one estimates that about 25% of the plaintiff's remaining lifetime earnings would have been spent on himself, and given \$1.8 million as the present value of his earnings (absent fringe benefits), the resulting overlap amounts to approximately \$450,000 not an insignificant sum. Ward and Krueger (1994, 93) note that a common form of damages duplication is inclusion of full wage loss when the individual is institutionalized where costs include room and board.

A year-and-a-half later, a separate life care plan was submitted on behalf of the plaintiff. The LCP expanded considerably the scope and costs of the lifetime care of Mr. Williams and included a) medical equipment and supplies, b) physical and other therapies, c) various medical evaluations, d) nursing care, e) medications, f) home modifications, g) future hospitalizations, and h) transportation. A review of the details of the LCP reveals that most of the services are specialized and are designed to deal with the plaintiff's present and expected medical needs. But the LCP also assumes that the plaintiff would reside at home, not a nursing care facility, and would require registered nursing services 24 hours daily as well as home modifications and a modified van for transportation.

Two elements of the LCP entail substantial costs that appear to overlap the loss of income and household services: a customized van (every 5 years) at \$30,000 to \$35,000, and 24 hours daily of registered (RN) services at an annual cost of \$349,000. The van duplicates to a large extent typical expenditures on an automobile (less the special features of the van). If it is assumed that one-third of the van costs constitutes specialized adaptations, then the redundancy with the income loss amounts to about \$21,667 ($213 \times \$32,500$) every five years. Over his remaining lifetime, this totals \$108,335 or nearly 6.0% of estimated lifetime earnings.

In addition, the very large component of the LCP which RN services comprise overlap the household services loss component, as explained above. But with the home care option, little if any of the RN services overlaps the income loss component.

Conclusion:

A fair degree of double counting was uncovered. The very large component of the LCP which RN services comprise overlap other loss components, and the cost of the adaptive van duplicates, to a great degree, the cost of automobile purchases over the plaintiff's life expectancy, which purchases would have been made out of his earnings.

Conclusion

Based on the preceding discussion and analysis of two illustrative cases of severely injured persons, it should be evident that there is a very real potential for double counting of damages in cases of severely injured persons. In the cases analyzed, the extent of such overestimation of damages may be summarized by means of the following table 1.

In terms of the general framework for the calculation of damages, equation (4) above may be expressed as follows for each of the two cases we have examined:

$$L = L_E(1-0.21) + L_H(1-0) + L_C(1-0) + L_G(1-0) + L_{CG} \quad (4a)$$

$$L = 0.79 L_E + L_H + L_C + L_G + L_{CG}$$

Table I			
Case	Loss Elements	Estimated Extent of Duplication	Estimated Overlap
A.	E, LC	21%E	\$192,000
B.	E, H, LC	25%E + 15%H or 6%E + 15%H	\$475,500 or \$133,835
Key: E = Earnings H = Household Services LC = Lifetime Care			

$$L = L_E(1-0.25) + L_H(1-0.15) + L_C(1-0) + L_G(1-0) + L_{CG} \quad (4bi)$$

$$L = 0.75 L_E + 0.85 L_H + L_C + L_G + L_{CG}$$

$$L = L_E(1-0.06) + L_H(1-0.15) + L_C(1-0) + L_G(1-0) + L_{CG} \quad (4bii)$$

$$L = 0.94 L_E + 0.85 L_H + L_C + L_G + L_{CG}$$

Pecuniary overlap or double counting occurred in each case. The overlap with earnings ranged from 6% to 25%, and the overlap with household services was estimated at 15%. However, as a percent of total losses including the cost of lifetime care, the monetary amount of overlap is relatively modest. Nevertheless, duplication existed in each case, a fact that makes such duplication difficult to ignore from a purely analytical perspective. Thus, it would be unscientific simply to ignore the overlap and, furthermore, to subtract the double counted portions would not reduce the total valuation to any substantial degree. Subtraction, therefore, should be viewed as a matter of analytical refinement, of being as careful as possible in analyses of economic damages.

Some caveats are in order. First, in this paper the issue has not been addressed whether or not lifetime care costs replace part of pension income, during what would normally have been the plaintiff's retirement years. Pension income is often incorporated in the valuation of fringe benefits. Thus, it is likely that lifetime

care costs, because they provide full care for the plaintiff, replace a portion of pension benefits. Second, it is important to realize that a severely injured person's losses of income, household services, etc., are calculated over the plaintiff's *pre-injury* life expectancy and worklife expectancy. But lifetime care costs are calculated over the plaintiff's actual remaining post *injury* life expectancy. If this is the case, the value of the continuing health care component of economic loss should be appropriately reduced...." (Speiser 1988, 381). In turn, care must be taken in figuring the extent of double counting that may remain.

Finally, there may occur instances in which an economist is asked to undertake an analysis of the various components of loss but not asked to evaluate the present value of the cost of lifetime care. Some attorneys may hire another expert to do the latter and then present to the other side and, ultimately, to the jury the two separate reports, hoping that everyone will assume the losses are additive. That is why it might be prudent for economists, when asked to do an analysis of severely injured persons, to include a conditional statement in their reports, to the effect that there may be some overlap or double counting between the calculated loss components and the cost of lifetime care.

Endnotes

1. An earlier version of this article was presented at the annual meeting of the Midwest Economics Association, March 31, 1995. The author wishes to thank the anonymous referees for their helpful suggestions and Seton Hall University for support during his sabbatical. Any remaining errors are solely the responsibility of the author.
2. Meals and housekeeping in an institution may provide a lower utility level than comparable services provided in a normal house setting. In addition, the utility of consumption in general may be reduced because of the presence of injuries and impairments. Thus, it might be argued that undercounting of economic harm occurs in these dimensions. That is why, in most instances, the law allows added damages for "pain and suffering" or the loss of "enjoyment of life."
3. There exists substantial difficulty in determining the share of household services that would have been self-consumed by the injured party. Most household services are jointly produced/consumed such as automobile maintenance and repairs, house painting, repairs and maintenance, shopping and running errands, property care, house cleaning, cooking, washing clothes and utensils, and the like. Unfortunately, studies of household service production do not identify or attempt to measure the extent to which such services accrue to the personal benefit of each family member.

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