

## **Assessing Damages in Personal Injury and Wrongful Death Litigation: The State of Pennsylvania**

James Rodgers  
Robert Thornton\*

### **I. Introduction**

In this article we discuss the method by which economic damages are computed in personal injury (PI) and wrongful death (WD) cases in the state courts of Pennsylvania. Section II provides a discussion of controlling statutes, case law, court rules and pattern jury instructions. Section III discusses estimating lost earnings. Section IV discusses discounting earnings to present value. Fringe benefits are discussed in Section V, while Section VI discusses the treatment of income taxes. Household services are discussed in Section VII, and the personal maintenance deduction is discussed in Section VIII. Section IX discusses medical expenses and life care plans, and Section X deals with hedonic damages, pain and suffering and other intangibles. Section XI discusses a sample case involving the death of a child. Section XII discusses some practice issues. Concluding remarks are made in Section XIII. Regrettably, there are still some situations where there is a lack of clarity in the how damage computations are to be made, and these are noted.

### **II. The Legal Framework<sup>1</sup>**

#### **A. Statutes**

According to early common law, damages resulting from the death of a person were traditionally not recoverable. In other words, the right of recovery ceased with the death of the person. In Pennsylvania (as in most other states) this situation was remedied in the 1850s with

---

\* James Rodgers is Professor Emeritus of Economics, Penn State University, and Robert Thornton is Professor of Economics, Lehigh University. The paper was presented at a NAFE-sponsored session on July 13, 2003, at the meetings of the Western Economics Association in Denver, Colorado.

<sup>1</sup> Parts of this section have been taken from James Rodgers and Robert Thornton, "Making Operational the Concept of 'Maintenance Consumption,'" *Journal of Legal Economics*, Spring/Summer, Vol. 8, no. 3, 1998, pp. 1-33.

the passage of so-called wrongful death and survival statutes. A wrongful death action deals with the impact of the death upon persons other than the decedent, usually surviving family members. The measure of loss is usually those damages suffered by the family members dependent upon the decedent for support. A survival action, on the other hand, compensates a decedent's estate for damages sustained by the decedent himself. It continues the action that the decedent could have exercised had he survived – hence the term *survival statute*. In Pennsylvania, an 1851 statute stipulated that “no action hereafter brought to recover damages for injuries ... shall abate by reason of the death of the plaintiff; but the personal representatives of the deceased may be substituted as plaintiff, and prosecute the suit to find judgment and satisfaction.” The 1851 statute also contained a provision (section 19) relating to a wrongful death action, which stipulated that “whenever death shall be occasioned by unlawful violence or negligence, and no suit for damages be brought by the party injured during his or her life, the widow of any such deceased...or the personal representative may maintain an action for and recover damages for the death...” This part of the statute has since become known as the “Death Act.”

Strictly interpreted, this first survival statute provided that the action or suit could be *continued* by the representative of the decedent if the suit was filed by the decedent before he died – a “survival-of-suit” situation. Later amendments to the act provided that an action could also be *initiated* by the personal representative of the decedent if the suit was not filed before he died – a “survival-of-cause-of-action” situation. Specifically, the Fiduciaries Act of 1917 (section 35b) provided that the personal representative of the decedent could initiate a survival suit if the decedent had not begun such an action during his lifetime. This provision was later declared unconstitutional in the case of *Strain v. Kern* (1923) but re-emerged in the Survival Act of 1937 and the Fiduciaries Act of 1949.

The above laws have long constituted the principal statutory foundation for PI and WD actions in Pennsylvania. However, a recent statute, Act 13, the Pennsylvania Medical Care Availability and Reduction in Error Act (“MCARE”), was enacted by the Pennsylvania legislature on March 20, 2002. Since it deals with discounting methods to be used in medical liability actions, we will defer discussion of this statute to a later section of the paper.

### **B. Key Cases**

Pennsylvania court cases have played an important role in further defining and elaborating upon the provisions laid down by the statutes. The cases most relevant for forensic economists involved in PI and WD damage estimation have dealt with the allowable types and measures of losses, the deduction of personal maintenance (consumption) from lost earnings, and the discounting of future losses to present value. We review the most important of these court cases below.

A very significant court ruling dealing with the personal maintenance deduction arose in 1971 in *Incollingo v. Ewing* (1971). In the trial court decision, it was noted that the suit was commenced while the plaintiff was still alive. (In other words, it was a survival-of-suit case). Therefore, according to *Radobersky v. Imperial Volunteer Fire Company* (1951), damages were to be awarded on the basis of the decedent’s expected gross earnings, with no deduction for personal maintenance. This requirement contrasted sharply with damages awards in survival-of-cause-of-action cases, where according to the prior *Murray* decision (1948), personal maintenance expenses were to be deducted from the decedent’s expected earnings. In the appeal of the *Incollingo* decision, however, Supreme Court Justice Pomeroy argued that the continued coexistence of two rules regarding the maintenance deduction – maintenance to be deducted in survival-of-cause-of-action cases) but not in survival-of-suit cases – resulted in an “unjustifiable disparity in the measure of damages in survival actions” (p. 228). The court therefore determined

that hereafter in *all* survival actions the economic loss to a decedent's estate was to be measured by the decedent's estimated future earning power less the estimated cost of personal maintenance.

Just as significant in the *Incollingo* decision was the court's almost-in-passing assertion that the personal maintenance deduction was to be applied from the time of death through the decedent's estimated working life span (p. 229). There was no explanation in the court's decision as to why the period of the deduction should be changed from that of expected *survival life* as in earlier decisions to that of expected *work life*.

The most complete clarification (to date) of what the personal maintenance deduction should include was made in the case of *McClinton v. White* (1982). In a survival action involving the deaths of two teenagers, the trial court had earlier instructed the jury to deduct from each decedent's earning potential "the probable cost of his necessary economic living expenses, those expenses necessary to sustain his life until the day of his retirement...." In providing further instruction to the jury, the trial judge said that personal maintenance was "what he would have spent to sustain his life, to subsist, and to live on... what he would have spent for those things which are essential to the individual's *personal and physical subsistence*" (authors' emphasis). The trial court's decision was appealed on the grounds that the maintenance cost deduction should not have been limited to the amounts necessary for physical subsistence. Acting on the appeal, the Superior Court rejected the trial court's "subsistence" definition of maintenance expenses. Instead, the Superior Court gave its approval to the definition advanced nearly 20 years earlier by Robert Bernstein as "that necessary and economical sum which a decedent would be expected to spend, based upon his station in life, for food, clothing, shelter, medical attention, and some recreation" (p. 225). The Superior Court also argued that "it was helpful to view the decedent from an economic perspective as a producer of earnings," as in

Rhode Island, New Hampshire, and Connecticut (p. 226). As such, the court argued, maintenance expenses should refer to those costs to the decedent “which would have been reasonably necessary for him to incur in order to keep himself in such a condition of health and well-being that he would maintain his earning power” (p. 227). Furthermore, the court argued, “Since maintenance expense involves only those costs reasonably necessary for the production of earnings, the term does not include all the personal expenditures that would have been made by the decedent had he lived” (p. 227).

Probably no rules for damage estimation put forth by court cases in Pennsylvania have attracted more attention than those dealing with discounting future damages to present value. Prior to 1980, the rule followed in Pennsylvania courts was that future damages were to be reduced to present value using *simple* interest at the rate of six percent. It is unclear why either simple interest or a rate of six percent was required since in most other states discounting to present value using compound interest was allowed.<sup>2</sup> By itself the mandatory use of simple six percent interest – as opposed to six percent compound interest – in present value calculations tended to raise the value of the plaintiff’s claim. On the other hand, Pennsylvania courts were not allowed to use inflation projections and estimate productivity growth in calculating the value of lost earnings; and of course these disallowances tended to reduce the value of such claims.

In 1980, however, in its *Kaczkowski v. Bolubasz* decision, the Supreme Court of Pennsylvania took an important step toward providing more rational economic guidelines for deciding monetary damages in wrongful death and survival actions.<sup>3</sup> In the decision, the use of six percent simple interest discounting was eliminated. Furthermore, the decision permitted inflation and future productivity growth to be considered as variables affecting the amount of

---

<sup>2</sup> See Lee Swartz and Conrad Siegel, “Simple Interest – Its Use in Future Economic Loss Cases,” *Pennsylvania Bar Association Quarterly*, March 1976, pp. 216-29.

<sup>3</sup> Parts of the discussion above have been excerpted from Eli Schwartz and Robert Thornton, “The Economics of Lifetime Income, *Kaczkowski v. Bolubasz*,” *Forum*, American Bar Association, Vol. 18, No. 4, Summer 1983.

awards. In the *Bolubasz* decision, the court held that the rate of future inflation of prices and of wages could be assumed to equal the interest (discount) rate. This led to the so-called *total offset method* of calculating the basic present value of lost future earnings. However, in addition to the total offset, the court held that the rise in earnings due to the increase in productivity could, upon proper foundation, also be considered in calculating damages.

The *Bolubasz* decision of 1980 represented an improvement over past practices for the calculation of earnings losses in wrongful death and survival actions in Pennsylvania. However, there remain a number of serious flaws in the economic reasoning underpinning the decision that we will discuss later in the section on the total offset rule.

### ***C. Pattern Jury Instructions***

In addition to statutes and opinion from courts in key cases, additional insight into the way damages are to be computed in PI and WD cases in Pennsylvania is provided by the “pattern jury instructions” for damages. The Pennsylvania Supreme Court Committee for Proposed Standard Jury Instructions was first appointed in 1968 to develop model or “pattern” jury charges. Since that time, the committee has published several comprehensive volumes of suggested civil (as well as criminal) model instructions to assist jurors (as well as judges and attorneys).<sup>4</sup> The following pattern jury instructions for damages in (i) personal injury and (ii) death and survival cases have been taken from the volume *Proving Damages in Personal Injury and Death Cases* published by the Pennsylvania Bar Institute.<sup>5</sup> The first set of instructions (6.00, 6.01, 6.01D and 601.L) refers to personal injury cases. The second (6.10) deals with death cases, and the instruction on productivity (6.22) covers both injury and death cases.

---

<sup>4</sup> As the word “pattern” suggests, the pattern jury instructions are not mandatory. Rather, they serve as model instructions that may influence those that a jury receives from the judge.

<sup>5</sup> See Pennsylvania Bar Institute *Damages: Tactics in Personal Injury & Death Cases*, Harrisburg, Pennsylvania, 1999 [PBI No. 1999-2402], pp. 198-204 and 234-240. A later edition with the same title was published in 2001 [PBI No. 2001-2934], but the pattern jury instructions for wrongful death were omitted from the 2001 edition.

## 6.00 (Civ) DAMAGES

If you find that the defendant is liable to the plaintiff, you must then find an amount of money damages which you believe will fairly and adequately compensate the plaintiff for all the physical and financial injury he (she) has sustained as a result of the accident. The amount which you award today must compensate the plaintiff completely for damage sustained in the past, as well as damage the plaintiff will sustain in the future.

## 6.01 (Civ) PAST LOST EARNINGS AND LOST EARNING CAPACITY

The plaintiff is entitled to be compensated for the amount of earnings that he (she) has lost up to the time of the trial as a result of his (her) injuries. This amount is the difference between what he (she) probably could have earned but for the harm and any less sum which he (she) actually earned in any employment. (It is not essential to recovery that the plaintiff should have been employed at the time of the accident, but his opportunities for employment are relevant in determining the amount that he probably could have earned.)

The “Subcommittee Notes” to this section indicate that Comment (c) to Restatement of Torts, §924 (1934) accurately states the law of Pennsylvania. These notes quote the part of Comment (c) which states that “it is immaterial that the plaintiff would not have worked during the period of incapacity if he could have worked. In such case his earning capacity was hurt, whether or not he would have chosen to exercise it, and he is entitled to damages by the extent to which his capacity for earnings has been reduced.” Hence, a person injured on vacation or taking a vacation after being injured is entitled to full compensation for that period. In regard to collateral sources, the note goes on to say that “continuation of salary or wage benefits during periods of disability, pursuant to contractual provisions of sick pay and disability income, are

collateral sources of income which do not inure to the benefit of defendants.” The note cites *Kagarise v. Shover* (1971) in this regard. Citing 75 Pa.C.S.A. §1722, as amended July 1, 1990, for claims arising under automobile insurance policies after July 1, 1990, the note also states that an individual who was eligible to receive insurance benefits or workers’ compensation cannot recover these losses in tort action. Furthermore (see *Pratt v. Stein* (1982)), the plaintiff’s own testimony regarding his loss of wages has been held sufficient proof to permit a judge to instruct on past lost earnings.

#### 6.01D FUTURE LOSS OF EARNINGS AND LOST EARNING CAPACITY

(For instruction on loss of future productivity, see 6.22 (Civ).) The plaintiff is entitled to be compensated for any loss or reduction of future earning capacity that he (she) will suffer as a result of the injuries sustained in this accident. In determining this amount, you must ascertain the difference between the yearly amounts which the plaintiff probably would or could have earned [during his life expectancy but for] [for the period during which he will be disabled by] his injuries, and the amounts he (she) will probably be able to earn during [the period of his (her) life expectancy] [such period]. In determining this amount, you may consider the type of work that the plaintiff has done, the type of work which, in view of his (her) physical condition, education, experience and age, he (she) would have been doing and will be doing in the future, the extent and duration of the plaintiff’s injuries, together with all other matters reasonably relevant. The amount of lost future earning capacity which you determine would have been sustained by the plaintiff should be expressed by you in a dollar amount.

The “Subcommittee Note” to this section recognizes the variation in the nature, severity and duration of injuries through use of the alternative parenthetical phrases, which “are to be used selectively in accordance with the evidence as to the period and nature of the disability claimed.” The note also indicates that the Restatement of Torts, §924, Comment (d) (1934), forms the basis of this charge. The note goes on to discuss the issue of whether future earnings will increase or decrease, stating that the charge intentionally leaves this question to the jury, but pointing out that in so doing, the charge is in conflict with charges, based on old case law, that a plaintiff’s earnings will necessarily decrease as he gets older. In *Burns v. Pennsylvania R.R.* (1908), the Pennsylvania Supreme Court reversed a charge instructing a jury to take any one year of future earnings and multiply it by the working life expectancy to determine future earning capacity. The court stated that total life expectancy must be considered in determining future earning capacity, but added that the jury must also consider the fact that over the plaintiff’s life expectancy his earning capacity will eventually diminish. (p. 228) The assumption that earnings eventually decrease with age was reiterated in *Reetler v. Pennsylvania R.R.* (1913), wherein the Court stated, “As men grow older and less able to work their earning power is not so great, and this *fact* must be taken into consideration.”

The Subcommittee viewed the assumption in these older cases that earnings decrease with age as “no longer of such general application as to permit its use as a fixed rule of law. While decreasing earning capacity may remain a fact in certain unskilled, manual occupations, it is certainly contrary to the experience of most wage earners. For this reason, changes in earning capacity are properly left to the jury’s determination.” (p. 201)

There is additional discussion by the Subcommittee of what a plaintiff who seeks recovery for total loss of earning capacity must show: (1) a permanent injury; and (2) a total impairment of earning power. In *Gary v. Mankaymer* (1979), the Court held that total

impairment of earning power may be shown even where there is only a partial physical impairment preventing the plaintiff from performing all the physical functions necessary for continued employment.

6.22 (Civ) FUTURE LOSS OF EARNINGS AND LOST EARNING CAPACITY  
WHERE LOSS OF FUTURE PRODUCTIVITY IS PROVEN

(1) *Live plaintiffs* (use in conjunction with 6.01D)

The plaintiff is entitled to be compensated for any loss or reduction of future earning capacity that he (she) will suffer as a result of a decrease in or loss of future productivity.

(2) *Decedents* (use in conjunction with 6.10(3)) (see below)

The plaintiff is entitled to be compensated for any loss of future earnings that the decedent will suffer as a result of a loss of future productivity.

(3) Definition of productivity (use in both live and death cases)

Future productivity is the increase in wages or compensation which plaintiff (decedent) would have received, had he not sustained the injury. Plaintiff has submitted evidence through an (actuary) (economist) who has computed his (decedent's) loss of earnings, adding a productivity factor. If you believe that plaintiff (decedent) has sustained a loss of productivity you may use this evidence as a guide in reaching your decision as to the amount of plaintiff's (decedent's) loss (or reduction) of future earning capacity.

The "Subcommittee Note" to 6.22 (Civ) references the opinion of Justice Nix in *Kaczkowski v. Bolubasz* (1980). In considering productivity, Justice Nix followed the approach taken in *Feldman v. Allegheny Airlines* (1975), which considered the decedent's college grades, her employment history, the opinion of her held by her co-workers, her employment goals, and

the potential jobs for which she was qualified. Based on these factors, the court predicted her incremental salary increases over her work life expectancy. In regard to future inflation, Justice Nix adopted the approach in the Alaska case, *Beaulieu v. Elliot* (1967) and refined in *State v. Guinn* (1976), which assumes that the effect of future inflation will completely offset the interest rate thereby eliminating any need to discount the award to its present value. Justice Nix further held that “upon proper foundation, the Court shall consider the victim’s lost future productivity.” Because interest and inflation are offset, inflation must necessarily be deducted from increased earnings to establish productivity.

#### 6.01L LOSS OF CONSORTIUM

The plaintiff’s spouse is entitled to be compensated for the loss of the injured party’s services to him (her) and the loss of companionship of his (her) spouse.

The “Subcommittee Note” to this section mentions that “the issue of whether the right to sue for loss of consortium arises where the marriage occurs after the accident is somewhat clouded under Pennsylvania law, but at least one case has permitted recovery where the accident took place less than a month prior to the marriage. *Sutherland v. Auch Inter-Boro Transit Company* (1973). The contrary view that “a prospective husband takes his future bride as he finds her” has been followed in at least one lower court case, *Scatori v. Gradison Auto Bus Co., Inc.* (1967), on the theory that “he should not be entitled to marry a cause of action.”

Children do not have a general cause of action for loss of parental consortium. In *Steiner by Steiner v. Bell Telephone Co.* (1986), the Superior Court specifically rejected such a claim as being without legal basis or growing consensus in its favor and because it is a “policy determination which can most thoroughly and representatively be considered and resolved by the legislature....”

## 6.10 (Civ) DAMAGES IN DEATH CASES

The plaintiff, as the administrator (-trix) of the estate of the decedent, claims damages under the Wrongful Death Act and the Survival Act. He (she) is entitled to make claim under both Acts, but the damages must not overlap or duplicate themselves.

A. Under the Wrongful Death Act, the damages recoverable by the plaintiff are as follows:

The plaintiff is entitled to be awarded an amount which will cover all hospital, medical, funeral, burial and estate administration expenses incurred. (It has been stipulated that these expenses amount to \$\_\_\_\_\_).

(1) The plaintiff is entitled to be awarded an amount that will fairly and adequately compensate the family of the decedent (wife, children, parents, etc.) for their loss of such contributions as they would have received between the time of the death of the decedent and today. This includes all monies that the decedent would have spent for or given to his (her) family for such items as shelter, food, clothing, medical care, education, entertainment, gifts and recreation.

(2) The plaintiff is entitled to be awarded the value of all sums that the decedent would have contributed to the support of his (her) family between today and the end of his (her) life expectancy.

(3) In addition to the monetary contributions that the decedent would have contributed to his (her) family's support, the plaintiff is entitled to be awarded a sum which will fairly and adequately compensate his (her) family for the pecuniary value of the services, society and comfort that he (she) would have given to his (her) family had he (she) lived, including such elements as work

around the home; provision of physical comforts and services; provision of society and comfort.

(4) The plaintiff, on behalf of the surviving children, is entitled to be awarded an amount which will fairly compensate for the loss of the services that the decedent as a father (mother) would have contributed to his (her) children. It will be your duty to consider the monetary value of such services as guidance, tutelage and moral upbringing which you believe the children would have received, up to such time as you believe such services would have been provided, had the death not occurred.

B. Under the Survival Act, the damages recoverable by the plaintiff are as follows:

(1) If a period intervenes between accident and death: The plaintiff is entitled to be awarded the total amount the decedent would have earned between the time of the accident and his death.

(2) The plaintiff is entitled to be awarded the total net amount that the decedent would have earned between the date of his death and today. Net earnings are determined as follows: You must first calculate the total amount of the decedent's gross earnings, including fringe benefits, between the date of death and today; from this amount, you deduct the amount of monetary contributions he would have made to his (her) family during this period (which you have already awarded to the plaintiff under the Wrongful Death Act) and the amount of money that the decedent would have spent on himself for his personal maintenance during this period. The probable cost of maintenance includes only the necessary and

economical living expenses, such as food, shelter and clothing, that the decedent would have been required to spend in order to maintain life during this period.

(3) The plaintiff is entitled to be awarded the value of the net amount that the decedent would have earned between today and the end of his life expectancy.

Again, net earnings for this period are determined as follows: You must first calculate the total amount of the decedent's gross earnings between today and the end of his life expectancy; from this amount you must deduct the probable cost of his necessary and economical living expenses required to sustain life during this period [together with the amount of monetary contributions he would have made to his (her) family during this period (which you have already awarded under the Wrongful Death Act)]. Your award to the estate for total lost future net earnings thus represents the total net earnings over the decedent's work life expectancy.

(4) The plaintiff is entitled to be awarded such an amount as you believe will fairly and adequately compensate for the mental and physical pain, suffering and inconvenience that the decedent endured from the moment of his injury to the moment of his death as a result of this accident.

C. You are to add each of these items of damages together in its proper category and return the verdict in two lump sum amounts, one under the Wrongful Death Act and the second under the Survival Act.

The "Subcommittee Notes" indicate that only spouses, children and parents are included in the Wrongful Death Act; therefore, only these relatives are permitted to make a claim for lost monetary support or the pecuniary value of lost services. In the case of the death of a minor, the minor's net earnings (gross earnings less the cost of personal maintenance) would be considered as "support" recoverable by the parents. (See *Alleva v. Porter* (1957) in this regard.) In some

circumstances, a child may provide support to parents after reaching majority, or be expected to support the parents after their retirement, as in *Gaydos v. Domabyl* (1930). The period of support depends on the evidence and is properly a jury issue.

While pecuniary loss is normally thought of as the amount of the decedent's probable earnings that would have gone to benefit of children, parents or spouse, the "Subcommittee Notes" indicate that the concept of pecuniary loss "is broad enough to include the value of probable services which would, in the ordinary course of events, be of benefit to one within this class."<sup>6</sup> The services not only include day-to-day activity, but also 'companionship, comfort, society, guidance, solace, and protection.'"<sup>7</sup>

As found, e.g., in *Incollingo v. Ewing* (1971), the "Subcommittee Notes" indicate that because the decedent continues to incur the cost of maintenance until death, his estate is entitled to recover the gross amount of his prospective earnings between injury and death. After death, the measure of loss is "net earnings." This is not "savings" or "accumulations" but gross earnings less the cost of maintenance. The cost of maintenance does not include some expenditures (e.g., for taxes, gifts, contributions, extravagant spending on expensive cars or extensive travel, gambling) made during one's lifetime. The Subcommittee also states that "retirement and Social Security income is admissible to establish loss in a wrongful death and survival action," citing *Thompson v. Philadelphia* (1972). In addition, the Subcommittee states that "since retirement benefits represent past earnings put aside for the future and from which past cost of maintenance has already been deducted, it would be improper to allow a 'double' deduction by again

---

<sup>6</sup> See *Gaydos v. Domabyl*, supra, 301 Pa. at 530; accord, e.g., *Haddingan v. Harkins*, 441 F.2d 844 (3<sup>rd</sup> Cir. 1970); *McKee v. Jamestown Baking Co.*, 101 F.Supp. 794, 796 (W.D. Pa), *aff'd*, 198 F.2d 551 (3<sup>rd</sup> Cir. 1952).

<sup>7</sup> See *Spangler v. Helm's New York-Pittsburgh Motor Express*, 396 Pa. 482, 485, 153 A.2d 490 (1959); accord *Filer v. Filer*, 301 Pa. 461, 465-66, 152 A. 567 (1930).

deducting costs of maintenance during the retirement period.”<sup>8</sup>

### III. Estimating Lost Earnings

It is clear from the foregoing review of statutes, case law and pattern jury instructions that the measure of loss in Pennsylvania in injury and death cases is both loss of actual earnings and loss of earning capacity. Lay evidence in the form of testimony of employers and fellow workers can be used to calculate future earnings. Spouse and friends may also testify with respect to what would have been the decedent’s future intentions. A qualified expert is permitted to testify to projected earning potential; and accepted tables, tax returns, and union contracts of the decedent and similarly-situated workers may be used. Proof of merit-based increases in salary, untainted by inflationary increases, is admissible in determining future earning capacity. Precise proof is not necessary, however, as damages in death cases are based upon the best available evidence.

Future earning capacity is not limited to actual wages. The following sources of future earnings may be included in determining future earning capacity: (a) entitlement to future VA subsistence allowances; (b) retirement, pension, and social security benefits; and (c) fringe benefits. The types of information that may be used to determine past and future losses are the earnings history of the plaintiff or decedent and other information about prospective employment, if there is evidence that the plaintiff would have changed employment. Earning

---

<sup>8</sup> The Subcommittee’s reasoning against the deduction of maintenance costs for retirement income does not appear to flow from any specific Pennsylvania court decision, however, and is not always followed. See, for example, *Buck v. Sholevar and Peters* (1999) where the trial judge ruled that social security income may be considered to be a measure of lost *earnings capacity* and hence subject to the maintenance deduction. Because of the lack of clear-cut and consistent case law, there is disagreement among practicing forensic economists over whether maintenance should or should not be deducted from pension income received during the retirement period. Those who think that a deduction should be made usually argue that **remaining alive is a condition for receiving pension income and that some consumption expenses must be incurred to remain alive**. Those who argue against the deduction contend that pension income should be considered as deferred earnings. They draw a distinction between the *production* of earnings, which **requires maintenance expenses as a cost of producing earnings**, and the *deferred receipt* of those earnings, for which there is no "cost of production."

capacity does not include (a) loss of trust income and loss of capital investment income or (b) income to be received under contract for the sale of a business, where such payments are not dependent on the decedent's continued life.<sup>9</sup> The commonly-used procedures by which economic experts estimate past and future loss of earnings or earning capacity are discussed in various sources dealing with personal injury damages.<sup>10</sup>

#### **IV. Discounting Earnings to Present Value**

##### ***A. The Total Offset Rule***

As we have noted, prior to the *Kaczkowski v. Bolubasz* (1980) decision of the Pennsylvania Supreme Court, the use of six percent simple interest discounting was required for the purpose of determining the present value of future damages in tort actions. In its *Kaczkowski v. Bolubasz* decision the Pennsylvania Supreme Court endorsed the “offset” method of calculating the present value of future losses. According to the Court, the rate of future inflation can be assumed to equal the interest rate used to discount future losses to their present value. Justice Nix of the Pennsylvania Supreme Court (writing the majority opinion) argued that “as a matter of law...inflation shall be presumed equal to future interest rates with these factors offsetting. Thus, the courts of the Commonwealth are instructed to abandon the practice of discounting lost future earnings.” (pp. 1038-39) In arguing thus, Justice Nix noted that “since over the long run interest rates and, therefore, the discount rates will rise and fall with inflation, we shall exploit this natural adjustment by offsetting the two factors in computing lost future earning capacity.” (pp. 1037-38) In support of his reasoning, Justice Nix made reference to the

---

<sup>9</sup> A review of the case law pertinent to the determining of lost earnings is found in Chaps. 2 and 3 of Pennsylvania Bar Institute, *Damages: Tactics in Personal Injury and Death Cases*. Harrisburg, PA: Pennsylvania Bar Institute, PBI No. 2001-2934, 2001.

<sup>10</sup> See, for example, Gerald D. Martin, *Determining Economic Damages* (Santa Ana, California: James Publishing, Inc., 2002); also, Thomas R. Ireland, Stephen M. Horner and James D. Rodgers, *Valuing Economic Damages in Personal Injury and Wrongful Death Actions: A Reference Guide* (Tucson, Arizona: Lawyers & Judges Publishing Co., Inc., 2002, CD-ROM).

offset methods adopted by the Alaska Supreme Court in *Beaulieu v. Elliott* and refined in *State v. Guinn*.

In endorsing the offset reasoning in *Kaczowski v. Bolubasz*, the Court's intentions were commendable. As Justice Nix also argued in his opinion:

An additional virtue of the ... offset method is its contribution to judicial efficiency. Litigators are freed from introducing and verifying complex economic data. Judge and juries are not burdened with complicated, time-consuming economic testimony. (p. 1038)

By simplifying the present-value calculations, it thereby allowed Pennsylvania courts to sidestep such thorny problems as the appropriate interest rates (long term, short term, etc.) to use and what rates of future inflation and earnings growth to assume in discounting damages to the present.

However, there is no basis in economic theory or in fact for the assertion that the inflation rate and the interest rate tend to offset one another. Although it is true, as Justice Nix noted, that market interest rates *do* tend to rise and fall together with inflation, it does not follow that the two rates are therefore equal. In fact, the “nominal” market interest rate consists of two components: (1) an allowance for the market's expectation of future price level changes (expected inflation); and (2), the “real” interest rate (the market interest rate after the effect of inflation is removed). Thus, the inflation rate tends to be less than the market interest rate; and the Pennsylvania offset method amounts to actually assuming that inflation *plus an implicit productivity growth factor (equal to the “real” interest rate)* on the one hand are exactly offset by the interest rate on the other hand.

The Court also ruled that based on “proper foundation” lost future earnings could be adjusted for “expected productivity growth.” Consequently, in many – if not most – cases in Pennsylvania today, economic experts simply add on additional productivity growth factors ranging usually from 1% to 4% per year.

What implication does all of this have for economists who assume that inflation and the interest rate cancel one another, and then apply an additional explicit productivity growth factor? In many cases the results are inflated, upwardly biased estimates of the true present value of future earnings losses. This is so because the Pennsylvania offset method in effect allows productivity growth to be counted twice – once implicitly because of the erroneous assumption that inflation equals the interest rate, and again because an explicit productivity growth factor is added.

### ***B. Discounting Earnings in Medical Negligence Cases***

A recent statute, Act 13, the Pennsylvania Medical Care Availability and Reduction in Error Act (“MCARE”), was enacted by the Pennsylvania legislature on March 20, 2002. Section 510 of MCARE states: “Future damages for loss of earnings or earning capacity in a medical professional liability action shall be reduced to present value based upon the return that the claimant can earn on a reasonable secure fixed income investment. These damages shall be presented with competent evidence of productivity and inflation over time. The trier of fact shall determine the applicable discount rate based on competent evidence. The effective date of this section was set to be 60 days after the act was passed.” Because this law is new, case law has not yet developed to address such issues as the type of “reasonable secure fixed income investments” whose yields may be used for discounting to present value, or what constitutes “competent evidence of productivity and inflation over time.” In the absence of such case law, one procedure would be to use a portfolio of U.S. Treasury securities or AAA-rated municipal bonds having the same maturities as the length of the future damage period, to the extent that is possible. For purposes of projecting productivity and inflation over time, the expert can rely on the same types of methods for Pennsylvania cases as would be used in Federal Employees Liability Act (FELA) cases, or in cases in other states that allow inflation and productivity to be considered in estimating

the loss of future earnings. One acceptable procedure for projecting future economy-wide productivity increases and inflation would be to use the productivity and inflation forecasts made in the latest OASDI Trustees Report from the Office of the Chief Actuary of the Social Security Administration.<sup>11</sup> One method of projecting personal increases in productivity due to the accumulation of age and experience is to use the age-earnings profile data from the U.S. Bureau of the Census.<sup>12</sup>

### ***C. Discounting to Date of Trial or Date of Accident (Incident); Punitive and Delay Damages***

There has been some controversy as to whether the present value of damages (as well as life and work life expectancy) should be computed as of the date of the accident (or incident) or some other date, such as the date of the expert's economic damage report or the anticipated date of trial. One legal expert has stated that the pertinent date is the date of the accident.<sup>13</sup> In footnote 22 of the most famous federal case dealing with personal injury damages, *Jones & Laughlin Steel Corp. v. Pfeifer* (1983), the U.S. Supreme Court argued for discounting the entire lost earnings stream back to the date of the injury, with the plaintiff being awarded interest on that discounted sum for the period between injury and judgment to ensure that the award when invested will be able to replicate the lost earnings stream.

The date to which losses must be discounted arises as an issue only in medical negligence cases falling under MCARE. As far as the authors know, as yet no court case establishes whether in MCARE cases the computation of present value is to be made from the date of the alleged medical malpractice incident or from the date of trial. Also, as far as we know no case law

---

<sup>11</sup> The latest report is available at <http://www.ssa.gov/OACT/TR/TR03/index.html>.

<sup>12</sup> These data are shown at the web site: <http://www.census.gov/hhes/income/dinctabs.html>. Another source providing more detail is Expectancy Data, *Full-time Earnings in the United States: 2001 Edition*. Shawnee Mission, Kansas, 2002. The web site is: <http://www.expectancydata.com/catalog.html>.

<sup>13</sup> See Jules A. Townsend, "Date of Injury or Date of Trial: A Comment on Work Life Expectancy Calculations," *Litigation Economics Digest* (now renamed the *Litigation Economics Review*), Vol. 2, No. 2, Summer, 1997, pp. 168-71.

speaks to the question of whether work life and life expectancies are to be computed from the date of the accident (or incident), the date of the expert's report, or the anticipated date of trial.

Pennsylvania Rule of Civil Procedure 238 provides for "delay damages." For an action commenced on or after August 1, 1989, damages for delay are awarded "for a period of time from a date one year after the date original process was served in the action, up to the date of the award."<sup>14</sup> Furthermore, subsection (a) (3) provides that "damages for delay shall be calculated at the rate equal to the prime rate as listed in the first edition of the *Wall Street Journal* published for each calendar year for which damages are awarded, plus one percent, not compounded." (p. 268) In our experience, forensic economists rarely get involved in computing delay damages, and such damages are not routinely made part of economic appraisal reports.<sup>15</sup>

## **V. Fringe Benefits**

Fringe benefits are mentioned explicitly in the pattern jury instructions. In *Rivera v. Phila. Theological Seminary* (1984), fringe benefits were held to be a part of future earning capacity. The commonly-used, well-known procedures by which economic experts value fringe benefits (as discussed in such sources as Martin (2002) and Ireland, Horner, and Rodgers (2002)), apply in Pennsylvania.

## **VI. The Treatment of Income Taxes**

In some states and in federal cases, court decisions have required that income taxes on lost earnings be explicitly taken into account in calculating the present value of future lost

---

<sup>14</sup> From Section (a)(2) of Rule 238. See Pennsylvania Bar Institute, *Damages: Tactics in Personal Injury and Death Cases*. Harrisburg, PA: The Pennsylvania Bar Institute, [PBI No. 2001-2934] 2001, p. 267.

<sup>15</sup> An injured plaintiff or decedent may have received pay increases between the date of the injury and the date of trial. In estimating the amount of lost earnings from the date of injury to the date of trial, most economic experts incorporate in their calculations likely increases in the earnings that would have occurred for whatever reason (inflation, merit increases, etc.). In calculating future earnings losses subsequent to the date of trial, increases in earnings resulting from future inflation are impermissible. Incorporating such past pay increases is a separate issue from the one of adding delay damages.

earnings. This is not the case in Pennsylvania, where the courts have ruled that income tax consequences should not be considered by the jury in determining damages, and should not be mentioned either in argument or in jury instructions. (See *Gradel v. Inouye* (1980))

## **VII. Household Services**

As noted in the pattern jury instructions, in death cases, the spouse may claim a loss for the pecuniary value of services that the decedent provided. In *Tulewicz v. Southwestern Pennsylvania Transportation Authority* (1991), the Pennsylvania Supreme Court held that a verdict of \$2.5 million for a homemaker, whose total lost earning capacity, home services, and loss of guidance and tutelage had an economic value of less than \$357,000, was not excessive. A large award may properly be based upon the fact that the decedent was an excellent mother, a faithful and dutiful wife and other such intangibles. The basic procedures for estimating the value of lost household services (as described, e.g., in Martin (2003) and Ireland, Horner and Rodgers (2002)) are applicable to Pennsylvania. Facts about duties customarily performed, size of the family, number and ages of children, size of home, as supported by the injured person, or in death cases by the spouse and children, may be introduced to prove the size of the household service loss.

## **VIII. Personal Maintenance Expense Deduction in Death Cases<sup>16</sup>**

As in many other states, an award for damages for lost future earnings in death cases in Pennsylvania must include a deduction for the decedent's consumption, but this deduction is not the decedent's likely or probable consumption, but for the decedent's "costs of personal maintenance." The rationale is that the decedent was an "economic unit" capable of producing

---

<sup>16</sup> Parts of this section have been taken from James Rodgers and Robert Thornton, "Making Operational the Concept of 'Maintenance Consumption,'" *Journal of Legal Economics*, Spring/Summer, 1998, pp. 9-11.

earnings but that these earnings have a “cost of production.” (*McClinton v. White* (1982)) Only the net amount earnings, defined as gross earnings less the cost of personal maintenance, constitute survival action damages.

In *McClinton v. White*, the Superior Court of Pennsylvania defined personal maintenance as those costs reasonably necessary for the production of earnings. Such costs include those expenses necessary for a person to keep himself or herself in such a condition of health and well-being that earning power could be maintained. (p. 227) Even though the Pennsylvania Superior Court did not specifically itemize those expenses eligible to be called personal maintenance expenses, it did make reference to what it called an “instructive” article by Bernstein (1954) in the *Pennsylvania Bar Association Quarterly* which suggested including expenditures for food, clothing, shelter, medical outlays, and “some” recreation.<sup>17</sup> Thus, the cost of personal maintenance does not include all the personal expenditures that would have been made by the decedent. The inclusion of all personal expenditures in the cost of personal maintenance would limit recoverable net lifetime earnings to the amount of savings which the decedent would have accumulated and left to his estate at death. Nor, according to the Court, should personal maintenance be limited to the amounts just necessary to sustain life – i.e., a bare subsistence level.

The *McClinton v. White* explication of maintenance has given at least partial illumination to what was previously a definitional void. Nevertheless, based on the authors’ experiences, in Pennsylvania today there still exist widespread disparities among forensic economists in the calculation of maintenance deduction. These disparities include (a) differences in the items included under the heading of maintenance (e.g., some economists include transportation and personal care items; some economists don’t), (b) differences in the types of information and data

---

<sup>17</sup> See also Robert Bernstein, “Has the Measure of Damages under the Survival Act in Pennsylvania Been Modified?” *Pennsylvania Bar Association Quarterly*, Vol. 32, No. 1, 1960, pp. 47-54.

sources used (some economists use personal family data but many rely exclusively on consumer spending statistics from the Bureau of Labor Statistics), and (c) differences in the period of time over which maintenance is calculated (some economists do not deduct maintenance during the retirement period, while others do so explicitly or implicitly by excluding an estimate of lost retirement pensions under the assumption that the pensions and maintenance are offsetting).

## **IX. Medical Expenses and Life Care Plans**

Under Pennsylvania law, an injured plaintiff is entitled to be compensated for all past medical expenses reasonably incurred for the diagnosis and treatment of injuries. In addition, where the plaintiff's injuries will require, or will likely require, future medical care, the plaintiff is entitled to be compensated for those costs as well. According to *Ratay v. Liu* (1969), the plaintiff has the burden of proving that (1) medical treatment was rendered, (2) the treatment was necessary, (3) the treatment was for the injuries suffered, and (4) the charges were reasonable. Where the plaintiff's physicians accept payments from Medicare and Blue Cross as full payment of their bills, the plaintiff at trial is entitled to recover only the amount actually paid by Medicare and Blue Cross and not the original amount billed by the physicians. This was the decision in *Moorhead v. Crozer Chester Medical Center* (2001).

Life care plans are prepared to prove future medical expenses in those cases where the plaintiff has suffered serious and permanent injuries requiring future medical and medically-related expenses. The typical role of the economic expert is to use the life care plan as the basis for computing the total value of future medical costs from the date of trial to the end of the plaintiff's life expectancy.<sup>18</sup> The part of the life care plan of particular relevance to the economic expert is the section devoted to cost projections for the various aspects of the plaintiff's future

---

<sup>18</sup> For a discussion of life expectancy, "rating up," and actuarial issues arising in life care plans, see David Strauss, Robert Shavelle, Christopher Pflaum and Christopher Bruce, "Discounting the Cost of Future Care for Persons with Disabilities," *Journal of Forensic Economics*, Vol. 14, No. 1, Winter, 2001, pp. 79-87.

medical and therapeutic needs, including counseling, rehabilitation, medications, attendant care, transportation and home modification. The most useful life care plan projects one-time or sporadic costs separately, with the recurring costs projected on an annual basis, and “useful life” information provided for durable goods that normally function for longer than one year.<sup>19</sup>

According to *Easby v. Philadelphia Transportation Co.* (1961), an award for future medical expenses can include damages for institutional or home health care. In seeking to recover for future medical expenses, reasonable evidence of the plaintiff’s life expectancy must be introduced.<sup>20</sup> The Court in *Updyke v. BP Oil Co.* (1998) stressed that the instruction given to the jury must reflect evidence in the record on “such matters as sex, prior state of health, nature of daily employment, and its perils, if any, manner of living, personal habits, individual characteristics, and other facts concerning the injured party which may affect the duration of his or her life.” Any award for future medical expenses is not reduced to present value. In *Yost v. West Penn Railways Co.* (1939), the Court held that “present worth does not apply to damages awarded for future pain, suffering and inconvenience....Nor does it apply to future medical attention.”

For medical negligence cases, Act 13 provides that past damages for medical and other related expenses must be paid as a lump sum; however, future damages for medical and other related expenses must be paid year by year as periodic payments. The amount of damages may vary from year to year to account for different annual expenditure requirements. Payments may vary to allow for anticipated inflation and medical care improvements. The liable party or parties are required to fund the payments by means of an annuity contract, trust or other funding plan approved by the court. The Insurance Commissioner of Pennsylvania is required to publish

---

<sup>19</sup> For a discussion of the role of the economic expert in valuing life care plans, see Frank Slesnick, “Forecasting Medical Costs in Tort Cases: The Role of the Economist,” *Journal of Forensic Economics*, Vol. 4, No. 1, Winter, 1990, pp. 83-100; and Roger Feldman and Karl A. Egge, “Savings Offsets in Future Care Costs for the Severely Injured: New Thoughts on an Unsettled Issue,” *Journal of Forensic Economics*, Vol. 8, No. 3, Fall, 1995, pp. 239-45.

<sup>20</sup> See *Dipietro v. Great Atlantic & Pacific Tea Co.*, 315 Pa. 216, 173 A.168 (1934).

annually a list of insurers designated as qualified to participate in providing periodic payments, and each insurer on this list must have received the highest rating for claims paying ability by two independent financial services within the last 12 months. (Act 13, Section 509)

## **X. Hedonic Damages; Pain and Suffering; and Other Intangibles**

In *Willinger v. Mercy Catholic Medical Center* (1978), it was ruled that damages may not be awarded in a wrongful death or survival action in Pennsylvania for the loss of life's pleasures. However, for a living plaintiff in a personal injury case, the Pennsylvania Bar Institute's Suggested Standard Civil Jury Instructions (dated January 2002), Section 6.01I, states: "The plaintiff is entitled to be fairly and adequately compensated for past, present, and future loss of [his] [her] ability to enjoy any of the pleasures of life as a result of [his] [her] injuries." In our combined experience, in Pennsylvania, economic experts are virtually never called upon to write reports and testify regarding the economic value of the loss of enjoyment of life.

Under the survival act, the decedent's estate can recover for conscious pain and suffering if there is proof that the decedent was conscious at some point between the time of injury and the time of death.<sup>21</sup> A surviving spouse is entitled to recover the pecuniary value of the society and comfort she would have received from her husband, but she cannot claim loss of consortium in addition to loss of society and comfort, as that would permit a double recovery.<sup>22</sup> Parents of a deceased child are not permitted to recover wrongful death damages for the loss of society, services and consortium of the youngster unless a related pecuniary loss can be shown.<sup>23</sup>

## **XI. Sample Case Discussion: The Death of a Child**

Pennsylvania is somewhat unique in the treatment of the death of a child; hence, this type of case is used as an example to illustrate how damages would be computed in a given case.

---

<sup>21</sup> See *Williams v. Southeastern Pennsylvania Transportation Authority*, 741 A.2d 848 (Pa.Cmwlth. 1999).

<sup>22</sup> See *Linebaugh v. Lehr*, 505 A.2d 303 (Pa.Super. 1986).

<sup>23</sup> See *Jackson v. Tastykake, Inc.*, 648 A.2d 1214 (Pa.Super. 1994).

Suppose a 10-year-old boy is wrongfully killed in an accident. Under the survival act, the economic loss arising from the death of the child is computed as the child's future earning capacity less the cost of personal maintenance.

While an adult with labor market experience has a track record of earnings that may be very useful in developing an estimate of annual earning capacity, a child has no such track record. Resort to earnings statistics is required to fashion a projection of the child's earning capacity. Earnings statistics from the U.S. Bureau of the Census are the most obvious choice.<sup>24</sup> Suppose the child's parents are high school graduates and the economic expert assumes that the child would have attained that same level of education.<sup>25</sup> The most recent year's age-earnings profile for male high school graduates working full time the year round may be chosen to project the child's earnings over his working life, as represented by the statistical work life expectancy of a male with a high school diploma as of the assumed labor market entry age after high-school graduation. Use of the age-earnings profile incorporates the personal productivity increases embodied in the age-earnings cycle, but the profile is not allowed to shift up over time to incorporate the time period effects of inflation or economy-wide productivity increases. Incorporating the effects of inflation is not permissible, and, as discussed above, there is already a built-in allowance for economy-wide productivity increases implicit in the required assumption of equality between the interest rate that would be used for discounting and the rate of inflation. For the same reasons, no upward shift is allowed in the age-earnings profile between the time the child dies at age 10 and the time when the child is assumed to enter the labor force after graduating from high school. A downward adjustment is made to the earnings from the profile to

---

<sup>24</sup> Source: <http://www.census.gov/hhes/income/dinctabs.html>. A useful presentation of these data is provided in Expectancy Data, *Full-time Earnings in the United States: 2001 Edition*. Shawnee Mission, Kansas, 2002.

<sup>25</sup> More sophisticated methods could be used to predict the likelihood of various levels of education attainment but these are ignored here. See John Kane and Lawrence M. Spizman, "An Update of the Educational Attainment Model for a Minor Child," *Journal of Forensic Economics*, Vol. 14, No. 2, Spring/Summer, 2001, pp. 155-66.

allow for the possibility of unemployment, based on unemployment rates among male high school graduates. Because the Census earnings data do not include employer-provided fringe benefits, some allowance for employer-provided pension and health insurance is included, as an additional component of earning capacity. From lifetime total compensation (the sum of money earnings and fringe benefits) is deducted the cost of personal maintenance. Regarding the time period over which damages are to be computed, according to *Slavin v. Gardner* (1979), the measure of damages is the probable earnings which the decedent would have generated during his adult work-life span, less probable maintenance expenditures during adulthood. Because “adulthood” includes the post-retirement period, the time period for the deduction of maintenance is not a completely settled matter, especially where a claim is made for lost pension benefits that would have been paid over the decedent’s life expectancy. Personal maintenance in death cases involving children is typically computed as a percentage of money earnings, perhaps with an annual dollar floor (e.g., \$12,000 per year for the number of years of work life expectancy, or 40% of lifetime money earnings, whichever is greater).

## **XII. Some Practice Issues**

Depositions are rarely taken in Pennsylvania personal injury and wrongful death cases. Hence, reliance is placed on the economic expert’s report, and, if needed, testimony at trial. Some cases are adjudicated through arbitration. In such cases, the economic expert may testify, but often the economic expert’s report is submitted to the arbitrators to be considered with other evidence. Rules of evidence and discovery require that expert reports be submitted to the opposing side in a timely manner. Hence, there is no “trial by ambush.” Furthermore, it is expected that testimony at trial will be based on the written report disclosed to the opposing side. Any substantial deviation from that report during trial testimony is likely to result in sharp challenge if the change is favorable to the side retaining the expert.

### **XIII. Concluding Remarks**

Working as a forensic economist in Pennsylvania in cases of personal injury and wrongful death has its greatest peculiarities in the treatment of discounting future losses to present worth, in computing the personal maintenance deduction in wrongful death cases, and in computing losses in death cases involving children. In other respects, economic losses are computed in the manner suggested in standard treatments of damage appraisal methods published in the literature of forensic economics. The other significant difference in forensic practice in Pennsylvania compared to many other states and federal cases is that depositions are virtually never taken in Pennsylvania cases; rather, reliance is placed on the expert's written report. Experts who are named as experts and who may be called to testify at trial are expected to provide a written report. Furthermore, it is expected that testimony at trial will be based on the written report as disclosed to the opposing side.

### **References**

- Bernstein, Robert. "Damages in Personal Injury and Death Cases in Pennsylvania – A Supplement," *Pennsylvania Bar Association Quarterly*, 1954, 26(1), 26-35.
- Bernstein, Robert. "Has the Measure of Damages under the Survival Act in Pennsylvania Been Modified?" *Pennsylvania Bar Association Quarterly*, 1960, 32(1) 47-54.
- Expectancy Data, *Full-time Earnings in the United States: 2001 Edition*. Shawnee Mission, Kansas, 2002.
- Feldman, Roger and Karl A. Egge. "Savings Offsets in Future Care Costs for the Severely Injured: New Thoughts on an Unsettled Issue," *Journal of Forensic Economics*, 1995, 8 (3), 239-45.
- Ireland, Thomas R., Stephen M. Horner and James D. Rodgers, *Valuing Economic Damages in Personal Injury and Wrongful Death Actions: A Reference Guide* (Tucson, Arizona: Lawyers & Judges Publishing Co., Inc., 2002, CD-ROM).
- Kane, John and Lawrence M. Spizman, "An Update of the Educational Attainment Model for a Minor Child," *Journal of Forensic Economics*, 2001, 14(2), 155-66.

- Martin, Gerald D. *Determining Economic Damages* (Santa Ana, California: James Publishing, Inc., 2002).
- Pennsylvania Bar Institute *Damages: Tactics in Personal Injury & Death Cases*, Harrisburg, Pennsylvania, 1999 [PBI No. 1999-2402].
- Pennsylvania Bar Institute *Damages: Tactics in Personal Injury and Death Cases*. Harrisburg, PA: Pennsylvania Bar Institute, 2001 [PBI No. 2001-2934].
- Rodgers, James and Robert Thornton, "Making Operational the Concept of 'Maintenance Consumption,'" *Journal of Legal Economics*, 1998, 8(3), 1-33.
- Schwartz, Eli and Robert Thornton, "The Economics of Lifetime Income, *Kaczkowski v. Bolubasz*, 421 A.2d 1027 (Pa. 1980)" *Forum*, American Bar Association, 1983, 18(4), 728-31.
- Slesnick, Frank. "Forecasting Medical Costs in Tort Cases: The Role of the Economist," *Journal of Forensic Economics*, 1990, 4(1), 83-100.
- Swartz, Lee and Conrad Siegel. "Simple Interest – Its Use in Future Economic Loss Cases," *Pennsylvania Bar Association Quarterly*. March 1976, 216-29.
- Strauss, David, Robert Shavelle, Christopher Pflaum, and Christopher Bruce, "Discounting the Cost of Future Care for Persons with Disabilities," *Journal of Forensic Economics*, 2001, 14(1), 79-87.
- Townsend, Jules A., "Date of Injury or Date of Trial: A Comment on Work Life Expectancy Calculations," *Litigation Economics Digest* (Now renamed the *Litigation Economics Review*), 1997, 2(2), 168-71.

### **Cases and Statutes**

- Alleva v. Porter*, 184 Pa. Super. 335, 134 A.2d 501 (1957).
- Beaulieu v. Elliot*, 434 P.2d 665 (1967).
- Buck v. Sholevar and Peters*, Court of Common Pleas of Lehigh County, Pennsylvania, 96-C-529V (February 2, 1999).
- Burns v. Pennsylvania R.R.*, 219 Pa. 225, 68 A. 704 (1908).
- Dipietro v. Great Atlantic & Pacific Tea Co.*, 315 Pa. 216, 173 A.168 (1934).
- Easby v. Philadelphia Transportation Co.*, 402 Pa. 203, 204-05, 166 A.2d 494 (1961).

*Feldman v. Allegheny Airlines*, 385 F. Supp. 1271 (D.C. Conn. 1974), affirmed, 524 F.2d 284 (First Cir. 1975).

Fiduciaries Act of 1949, Commonwealth of Pennsylvania.

*Filer v. Filer*, 301 Pa. 461 (1930).

*Gary v. Mankaymer*, 485 Pa., 525, 403 A.2d 87 (1979).

*Gaydos v. Domabyl*, 301 Pa. 523, 152 A. 549 (1930).

*Gradel v. Inouye*, 421 A.2d 674 (Pa. 1980).

*Haddingan v. Harkins*, 441 F.2d 844 (3<sup>rd</sup> cir. 1970).

*Incollingo v. Ewing*, 444 Pa. A.2d 206 (1971).

*Jackson v. Tastykake, Inc.*, 648 A.2d 1214 (Pa.Super. 1994).

*Jones & Laughlin Steel Corp. v. Pfeifer*, 103 S.Ct. 2541 (1983).

*Kaczkowski v. Bolubasz*, Pa. 421 A.2d 1027 (1980).

*Kagarise v. Shover*, 218 Pa. Super. 287, 275 A.2d 855 (1971).

Laws of the General Assembly of the State of Pennsylvania Passed at the Session of 1851, Act of April 15, 1851, section 18.

*Linebaugh v. Lehr*, 505 A.2d 303 (Pa.Super. 1986).

*McClinton v. White*, Pa. 444 A.2d 85 (1982).

*McKee v. Jamestown Baking Company*, 101 F.Supp. (W.D.Pe), *aff'd* 198 F.2d (3<sup>rd</sup> Cir. 1952).

*Moorhead v. Crozer Chester Medical Center*, 564 Pa. 156, 765 A.2d 789 (2001).

*Murray v. Philadelphia Transportation Company*, 359 Pa., (1948).

Pennsylvania Medical Care Availability and Reduction in Error Act of March 20, 2002, section 510.

*Pratt v. Stein*, 298 Pa. Super. 92, 133-34, 444 A.2d 674, 696 (1982).

*Radobersky v. Imperial Volunteer Fire Company*, 368 Pa., 235 (1951).

*Ratay v. Liu*, 215 Pa. Super. 547, 551, 260 A.2d 484, 486 (1969).

*Reetler v. Pennsylvania R.R.*, 238 Pa. 1, 85 A. 1000 (1913).

*Rivera v. Phila. Theological Seminary*, 474 A.2d 605 (Pa. Super. 1984).

*Scatori v. Gradison Auto Bus Co., Inc.*, 42 Pa. D.&C., 2d 781 (Wash. 1967).

*Spangler v. Helm's New York-Pittsburgh Motor Express*, 396 Pa. A.2d (1959).

*Slavin v. Gardner*, 418 A.2d 361 Pa. Super. (1979).

*State v. Guinn*, 555 P.2d 530 (1976).

*Steiner by Steiner v. Bell Telephone Co.*, 358 Pa. Super. 505, 517 A.2d 1348 (1986).

*Strain v. Kern*, 277 Pa. 209 (1923).

Survival Act of 1937, Commonwealth of Pennsylvania.

*Sutherland v. Auch Inter-Boro Transit Company*, 366 F. Supp. 127 (E.D. Pa. 1973).

*Thompson v. Philadelphia*, 222 Pa. Super. 417, 294 A.2d 826 (1972).

*Tulewicz v. Southwestern Pennsylvania Transportation Authority*, 606 A.2d 425 (Pa. 1991),  
reargument 606 A.2d 427 (Pa. 1992)

*Updyke v. BP Oil Co.*, 717 A.2d 552 (Pa.Super. 1998).

*Williams v. Southeastern Pennsylvania Transportation Authority*, 741 A.2d 848 (Pa.Cmwlth.  
1999).

*Willinger v. Mercy Catholic Medical Center*, 393 A.2d 1188 (Pa. 1978).

*Windle v. Davis*, 275 Pa. 23, 29, 118 A.503 (1922).

*Yost v. West Penn Railways Co.*, 336 Pa. 407, 410, 9 A.2d 368, 369 (1939).