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Rhona C. Free

Eastern Connecticut State University



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Steven J. Shulman is a professor of economics at Colorado State University. He received his PhD, MA, and BA from the University of Massachusetts at Amherst. He is the editor of *The Impact of Immigration on African Americans* (2004) and the author of numerous scholarly articles on the economics of racial inequality, low-wage work, and immigration.

Brian Snowden is currently a senior teaching fellow (part-time) at the department of economics and finance at Durham University, UK. Previously, before retiring, he was professor of economics at Newcastle Business School, Northumbria University. He received his undergraduate and postgraduate degrees in economics from Leicester University. His main research interests are in the areas of macroeconomics and international growth and development. As well as numerous articles in academic journals, he has authored/coauthored/coedited 10 books in the area of economics, including *Conversations on Growth, Stability and Trade* (2002), and *Modern Macroeconomics: Its Origins, Development and Current State* (with H. R. Vane, 2002). His most recent book, *Globalisation, Growth and Development: Conversations With Eminent Economists*, was published in 2007.

• **Maritza Sotomayor** is a lecturer at Weber State University, Utah. She received her master's degree in economics in 1990 from Centro de Investigación y Docencias Económicas (CIDE), Mexico City, and her PhD in applied economics in 2008 from Universidad Autónoma de Barcelona, Spain. She has published chapters in books and coauthored journal articles. Her research interest includes intra-industry trade, *maquiladoras*, and Latin America's external trade.

Lawrence M. Spizman is professor of economics at the State University of New York at Oswego. He received his PhD in economics in 1977 from the State University of New York at Albany. He has been a practicing forensic economist since 1985. He has published 27 articles, with many of them in the field of forensic economics. Dr. Spizman has coauthored the seminal work on estimating the damages to a minor child, "Loss of Future Income in the Case of a Personal Injury to a Child: Parental Influence on a Child's Future Earnings." He is called to consult throughout the United States.

Mikael Svensson is an associate senior lecturer in economics at the Swedish Business School, Örebro University, Sweden. He is also an affiliated researcher at the Centre for Research on Child and Adolescent Mental Health at Karlstad University, Sweden. He received his PhD from the Swedish Business School at Örebro University in 2007. His current research interests include health economics and economic evaluation.

Leila Simona Talani joined the department of European studies of King's College London in 2009 as lecturer in International and European Political Economy. She was previously a lecturer in European Politics at the University of Bath and a research fellow and then lecturer at the

European Research Institute of the London School of Economics. In 2001 she spent a year as associate expert on migration issues at the United Nations Office for Drug Control and Crime Prevention in Cairo. She gained a PhD with Distinction from the European University Institute in Florence in 1998. Her thesis has been published as *Betting for and Against EMU: Who Wins and Who Loses in Italy and the UK From the Process of European Monetary Integration* (2000). She is also author of *European Political Economy: Political Science Perspectives* (2004), *Between Growth and Stability: The Demise and Reform of the Stability and Growth Pact* (2008), *Back to Maastricht* (2008), *EU and the Balkans: Policy of Integration and Disintegration* (2008), *The Future of EMU* (2010), *From Egypt to Europe* (2010), and *The Global Crash* (in press). Her current research interests focus on the political economy of migration flows from southern Mediterranean countries to the EU and on the credibility of exchange rate commitments and economic agreements.

Troy L. Tassier is an associate professor of economics at Fordham University in New York City. Prior to his position at Fordham, he was a postdoctoral research fellow at the Center for the Study of Complex Systems at the University of Michigan. He received a PhD in economics from the University of Iowa in 2002. Dr. Tassier's research focuses on complex systems research in economics and particularly diffusion processes in social networks. He has published papers on the effects of referral hiring and social network structure on labor market inequality and segregation, the evolution of social networks to optimize job information flows, and how the structure of social networks influences the spread of fads and fashions. His current research continues the study of job information networks as well as additional topics such as the spread of infectious diseases across social networks, how the structure of firms and other organizations influences problem-solving capabilities, and mechanisms of public goods provision.

Peter Skogman Thoursie received his PhD from Stockholm University and is now an associate professor at the Institute for Labour Market Policy Evaluation (IFAU), Uppsala in Sweden. His research deals primarily with empirical labor economics.

Frederick G. Tiffany is an associate professor of economics at Wittenberg University in Springfield, Ohio. He received his BA in economics from Kenyon College (1977) and PhD in economics from the University of Pennsylvania (1988). He teaches intermediate microeconomic theory, game theory, industrial organization, managerial economics, mathematics for economists, and public finance. His current research interest is the market for college education, especially the use of price discrimination by monopolistically competitive colleges.

Kiril Tochkov holds an MA in Chinese studies from the University of Heidelberg, Germany, and an MA and PhD in economics from the State University of New York at

FORENSIC ECONOMICS

LAWRENCE M. SPIZMAN

State University of New York at Oswego

The National Association of Forensic Economics (NAFE) defines forensic economics as “the scientific discipline that applies economic theories and methods to the issue of pecuniary damages as specified by case law and legislative codes” (National Association of Forensic Economics, n.d.-a). During the litigation process, economists determine the value of economic damages, testify, and critique the opposing experts’ economic analysis.

The purpose of this chapter is to provide a general overview of the economic issues in a typical personal injury and wrongful death litigation tort, which is a private or civil wrong. The chapter also discusses the ethical issues involved when using different methodologies to estimate damages.

Economic damages typically are presented to the trier of fact (which can be a jury or judge) as the last phase of a trial. The importance of this should not be underestimated. Before there can be any award for economic damages, the plaintiff (the one suing for damages) must show that the defendant (the one being sued) is liable. If an attorney offers a meticulous case for liability but the economist presents unrealistic damage estimates, then the initial favorable impression of the trier of fact may be reversed if the opinions of the last expert to testify are perceived as bogus.

Before a trial, the plaintiff and defendant participate in settlement negotiations. During these negotiations, the plaintiff will present the demands for economic damages while the defendant might have a counteroffer. The plaintiff will usually retain an economist to estimate the economic damages. The plaintiff’s economist will be identified and will have to present a report showing how the results were derived. In federal cases as well as in some state jurisdiction cases, the economists may be deposed and asked a series of questions to find out how damages

were estimated. This information will later be used at a trial. The defense may or may not list an economist as an expert to counter the claims of the plaintiff. However, the defense often will retain a consulting expert to help prepare and critique the plaintiff’s economic analysis. The defense does not disclose who the consulting expert is, nor does the consultant testify. The plaintiff’s economic expert will not know if there is a defense expert critiquing and checking the results of his or her analysis. If the case settles before trial, the expert’s work is complete. Even though most cases settle before trial, it is prudent for the testifying expert to estimate damages assuming that a trial will occur. A testifying expert is sworn to tell the truth. Therefore, the economic analysis must be based on accurate information even if there is only a remote chance that a trial will occur. Spizman (1995) discussed the negotiating strategy process between the plaintiff and defendant given the small probability of a trial occurring.

Forensic economics as a formal academic discipline began in 1986 with the formation of NAFE. NAFE started publishing the first journal devoted exclusively to forensic economics, the *Journal of Forensic Economics*, in 1988. NAFE also published the journal *Litigation Economic Digest* for several years before it ceased publication. In addition, NAFE sponsors sessions devoted to forensic economics at the major economic conferences. The American Academy of Economics and Financial Experts started publishing the *Journal of Legal Economics* in 1991. The American Rehabilitation Economics Association began publishing *The Earnings Analyst* in 1998.

Arguably the most important book in forensic economics is by Martin (2009). First published in 1988, it had 21 annual supplements and includes special sections written by more than 40 leading forensic economists.

Kaufman, Rodgers, and Martin (2005) published a compilation of major articles dealing with personal injury or wrongful death. Ireland et al. (2007) and Brookshire, Slesnick, and Ward (2007) discussed the major issues of forensic economics.

Ethics and Assumptions of Damage Models

The discipline of forensic economics is unique in economics because most academic forensic economists are also consultants to the legal community. Since forensic damage models are based on assumptions that may favor one side in litigation, practitioners are confronted with ethical issues dealing with the impact of their models' assumption on litigants. Consequently, forensic economists must go beyond the simplifying assumptions made in introductory economics classes and understand the consequences of the models' assumptions. Because experts are not advocates for either the plaintiff or defendant (attorneys are), it is crucial that their assumptions be consistent and not change depending on which side retains them. Neutrality can be difficult to maintain when the marketplace rewards those providing opinions beneficial to the retaining side. The ethical consistency dilemmas are real and not abstract. Different sections in this chapter will address these ethical consistency issues. However, it is important to realize that each case is unique and that research and new data may warrant changing methodology on specific issues. Changes must be defended if they differ from past practices.

Law

Each state, as well as the federal government, has different laws pertaining to estimating economic damages. Nevertheless, the methodology of estimating damages within the legal parameters is remarkably consistent from one jurisdiction to another. The purpose of estimating damages is to restore the plaintiff's economic condition to what it was prior to the tort, or to make the plaintiff whole.

Life, Work Life, and Healthy Life Expectancy

Each component of damages depends on how long the loss lasts. Lost earnings depend on work life expectancy, which is the number of years the plaintiff would have worked if not injured or deceased. Long-term health care resulting from an injury and pension losses depend on the plaintiff's life expectancy. Other losses such as household services last as long as the plaintiff is healthy enough to provide those services. Skoog and Ciecka (2003) provide work life expectancy

tables, while Arias (2005) generates life expectancy tables. *Healthy Life Expectancy* (Expectancy Data, 2010) provides tables for healthy life expectancy. All these tables are broken down by various demographic characteristics such as age, gender, race, and educational levels.

Because all expectancy tables are based on the age of the plaintiff, an important issue in determining expectancies is whether to use the plaintiff's age on the date of the incident or on the date of the trial. Using the age on the date of trial extends an individual's work life and life expectancy beyond what it would be if using the date of the incident. Thus, the number of years the loss continues is increased. Damages should commence based on the plaintiff's age on the date of the incident rather than on the date of trial, unless the laws of a specific jurisdiction require otherwise. Ethical consistency requires that the forensic economist not choose one starting date for the plaintiff in order to have a longer life or work life expectancy and another starting date for the defense to get lower expectancies.

Although the trial date is generally not used to determine expectancies, it is used to delineate past losses from future losses. This is important because future losses, not past losses, are discounted to present value.

Life Expectancy

Life expectancy is the number of years an average person would have lived but for the tort. Life expectancy is relevant if the plaintiff requires lifetime medical care and has a lifetime-defined benefit pension plan. Pain and suffering, which is awarded by the trier of fact and not calculated by an economist, also can be awarded for life. Arias (2005) presents life expectancy by age, gender, and race. The use of race-neutral tables to determine life expectancy is often required by case law. If the law does not specify race-neutral life expectancy tables, then the forensic economist should not choose to use race tables when those tables favor one side and use race-neutral tables when it favors another side. For example, suppose black males have lower life expectancies than white males and the all-male life expectancy category is what is normally used. The black male category should not be used when the plaintiff is black in order to get a lower life expectancy if the defendant is estimating damages. If the black male was a physician, would his life expectancy be any different than a white male physician? Switching life tables to benefit one side over the other raises the ethical consistency issue.

The plaintiff's age on the date of the incident should be used to determine life expectancy. Suppose a female was 35 at the time she was involved in an accident and the trial occurred 3 years after the accident. The correct work life should be for a 35-year-old female. Using the work life for a 38-year-old female would add more years to the work life. The probability of the plaintiff living from 35 to 38 is

100% since she is already 38 years old. If losses continue for 30 more years, adding one additional year to work life can significantly increase losses when the effects of 30 years of compounding damages are considered. The last extra year will be the largest yearly loss. Ethical consistency requires using the same methodology for the plaintiff and defendant.

Another potential problem in estimating damages occurs with partial years of loss. The first and last year loss is usually a partial year unless the tort commenced on January 1 or ended on December 31. For example, if an injury occurred May 4, 2009 (2009.34), the first year's loss is only 66% of the year since 34% has already occurred. If the loss continues until the plaintiff's work life expectancy year 2045.3, then the loss is only for 30% of the year 2045. Sometimes, the first year and last year are rounded to complete years with the false claim that they offset each other. The final year's loss is the highest because of growth and compounding, and the first year's loss is the lowest, and thus they cannot offset each other. Rounding to full years in one case and using partial years in another to get a loss favorable to either the defendant or plaintiff would be ethically inconsistent.

Work Life Expectancy

Smith (1982) used the increment-decrement Markov model, which considers the probability of an individual's movement from being active to inactive in the labor force. Smith (1986) updated these tables using 1979 data. The Department of Labor stopped publishing work life tables but continues providing data through the Current Population Survey, allowing economists to keep work life tables up-to-date. One of the most recent tables was published by Skoog and Ciecka (2003).

Work life tables show the number of years, on average, a person will be working or actively looking for work throughout his or her life. The tables do not tell us when an individual retires from the labor force. For example, a 42-year-old female with a bachelor's degree who is currently employed has, on average, 19.03 years of working or actively looking for work for the remainder of her life. Her work life is to age 61.03. This does not mean she will retire at age 61.03; rather, it tells us the number of continuous years she can be expected to either work or look for work. The tables take into account a worker's being out of the labor force for various reasons. In essence, work life frontloads the person's remaining years in the labor force because she may still be working past her work life. Thus, if a female is out of the labor force for childrearing purposes, that is factored into her work life expectancy. For example, if a worker leaves the labor force to get a degree in business administration or is injured temporarily and later returns to work, then that is factored into the work life tables.

To properly use work life tables, you need to know whether the plaintiff was active or inactive at the time of

the injury. Age, gender, and levels of education also determine work life. Because work life tables frontload the loss, some forensic economists use the life, participation, and employment (LPE) method. This method takes the probabilities of participation in the labor force, survival, and unemployment to determine the expected value of future earnings.

Healthy Life Expectancy

Some damages such as household services may not continue for life because as a person's health normally deteriorates with age, the amount of household services he or she is able to perform diminishes. To account for this deterioration, *Healthy Life Expectancy* (Expectancy Data, 2010) publishes tables showing the number of years a person considers his or her health to be excellent without any limitations to activities. Even though a person's health may decline, he or she is still capable of performing household services. *Healthy Life Expectancy* also has tables of full-function life expectancy (FFLE), which has fewer years than life expectancy but more than healthy life expectancy (HLE). The ethical consistency issue requires the use of either HLE or FFLE to determine the number of years household services would have continued but for the tort. Using one table for the plaintiff and another for the defendant would be inconsistent and therefore unethical.

Wage and Salary Loss

Past and future earning losses resulting from an injury or death are recoverable. Legal parameters determine whether expected earnings (earnings the plaintiff expected to earn prior to the tort) or earning capacity (earnings the plaintiff had the ability to earn prior to the tort) are to be used. Upon establishing preinjury earnings, postinjury earnings (residual earnings) have to be determined and deducted from lost earnings. In wrongful deaths, there are no residual earnings. Vocational rehabilitation experts usually determine the future earnings potential given the impaired condition of the plaintiff.

Since 1040 tax forms can show additional income (such as spouse's income, business income, and royalties), the best sources for preinjury earnings are W-2 tax forms. The Social Security Administration also provides yearly earnings that can easily be obtained if the plaintiff's W-2 forms are unavailable.

When the plaintiff's work history is well documented, it is easier to establish the base earnings necessary to estimate future earning losses. If earnings vary from year to year, average earnings can be used to determine the base earnings. It is debatable how many prior years to use in establishing the average, but 3 to 5 years should be appropriate. Past earnings should be in current dollars (constant dollar equivalents) before taking an average. For example,

if using average earnings from 2003 through 2008, then 2003 earnings should grow by the rate for 5 years, and 2004 earnings grow by 4 years, 2005 by 3 years, and so forth. The average is based on the current dollar earnings.

Earning capacity can be used in the absence of earning records. Earning capacity considers those occupations that an individual is capable of entering. Earnings for broad occupational categories are found in National Occupation and Wage Estimates (U.S. Department of Labor, 2007b) and State Occupational Employment and Wage Data (U.S. Department of Labor, 2007c).

If the plaintiff is an injured child or a recent graduate, then a broader category of average earnings is required. One such category is educational attainment. Wages for different age, gender, and race cohorts can be found in the U.S. Census Bureau (2007) and Expectancy Data (2008, 2009, 2010).

When broad statistical averages are required, then median (not mean) earnings should be used. For example, if 9 of 10 workers in the sample earn \$50,000 and one earns \$250,000, mean earnings are \$70,000. One high-salaried worker skews the average upward. If the sample size is small, this becomes all the more important. Median earnings are \$50,000 because half the workers earn more and half earn less. Since median earnings are less than mean earnings, the ethical consistency issue requires that the mean not be used if retained for the plaintiff and the median if retained for the defense.

Union or professional dues should be deducted from lost earnings because they are a cost to the plaintiff's job maintenance. Even though union dues are small, ethical consistency issues require that you be consistent when choosing to deduct union dues.

Growth of Earnings

Once the plaintiff's current wage or salary is established, the future growth rates of wages have to be determined. If past employment records are available, then average past growth rates can be used to project future increases. When employment records are not available or suitable, then the use of general wage or price indexes such as the Consumer Price Index (CPI) or Employment Cost Index (ECI) can be used for estimating wage growth rates. The implied assumption when using the CPI to determine wage growth rates is that the plaintiff's wages will only increase by the level of the CPI, which shows the increase in the price level for goods and services. An index that gives a broader measure of wage and salary increases is the ECI. The ECI not only shows the historical growth rate for all workers but also allows tailoring the growth rates to a specific industry group. In addition to showing straight time salary and wage rates, the ECI includes earning incentives, cost of living adjustments, and production and earning bonuses. In addition, the ECI has an index for employee-provided benefits.

The number of past years required to establish the average growth rate is not universally agreed upon and should be justified. However, to avoid the ethical consistency issue, the same number of years to estimate the average should be used for both plaintiffs and defendants rather than using one number that provides a higher growth rate for the plaintiff and then using a different number that provides a lower growth rate for the defense.

The compounding of growth rates can magnify the total value of losses when there is what appears to be a small percentage difference. The longer the timeframe growth is, the greater the loss.

Fringe Benefit Losses

Employer-provided fringe benefits that are lost due to the injury have value that the plaintiff or the plaintiff's family can recover. It is important not to double count fringe benefit losses. For example, if the plaintiff received 3 weeks of paid time off annually and the plaintiff is already being compensated for 52 weeks of lost earnings, then including another 3 weeks of earnings for time off would be double counting the loss.

The two largest components of fringe benefit losses are often health insurance and retirement benefits. When employee fringe benefits are well established, then those benefit amounts should be used as a basis for lost fringe benefits. When it is unclear what the benefits are or if fringe benefits have not been established, then statistical averages of fringe benefits as a percentage of total earnings can be used.

One data source that provides fringe benefits as a percentage of earnings is *Employer Costs for Employee Compensation* (U.S. Department of Labor, 2008). Growth rates for fringe benefits can be determined from the *Employment Cost Index* (U.S. Department of Labor, 2009a).

Employee Benefits in Private Industry (U.S. Department of Labor, 2007a) provides information on the participation of workers receiving different types of fringe benefits and the frequency of benefit use. The *Employer Health Benefits Annual Survey* (Kaiser Family Foundation, 2009) provides information about the cost of employer-provided health insurance. Some state health insurance departments provide health cost by local jurisdictions.

If general statistical data are used, it is important to be familiar with both the data source and the actual data. For example, the *Employer Costs for Employee Compensation* (U.S. Department of Labor, 2008) tables data show the percentage of fringe benefits to the total compensation package. However, the total compensation package already includes fringe benefits so the percentage provided in the data should not be used. Instead, the economist should calculate fringe benefits as a percentage of wages and salaries and use that amount in estimating damages. The tables provide different categories of fringe

benefits so for each case the appropriate benefit can be used. Another source of general data of fringe benefits is the U.S. Chamber of Commerce's annual *Employee Benefits Study*. However, there are many statistical issues about the Chamber of Commerce study that should raise red flags about its use. Spizman (2008) suggests not using this study because of its bias and extremely small self-selected sample size.

Health Insurances

There are several ways to calculate the loss to the plaintiff or the plaintiff's family for medical insurance. No one method is absolutely correct, so the best method depends on the facts of each case. The first method is to award the plaintiff the cost of the employer's medical insurance premium. However, this may not allow the plaintiff to purchase comparable insurance because an employer's group rates are often lower than individual rates. A second approach is to get price quotes for health insurance to replace the coverage for comparable medical insurance. Some states' insurance departments provide comparable rates by state regions. Since employer-provided insurance benefits are well defined, it is critical to find the replacement value for similar coverage. Online price quotes simplify the process of getting costs. However, often online policies provide minimum coverage that would not make the plaintiff whole.

A third method of estimating insurance costs is used when it is not clear whether the plaintiff received or would have received medical insurance in the future. For example, when a minor child or a recent graduate is injured before entering the labor market, what value should be placed on lost health insurance? If a worker has an entry-level job without medical insurance but future employment opportunities would provide health insurance, how is that future insurance valued? Given these circumstances, general statistical data that take the average percentage cost of health insurance may be appropriate to use in estimating lost health insurance. Several issues should be considered when using statistical averages. Suppose that, on average, health insurance is 12% of wages and salaries. Consequently, a worker earning \$30,000 a year with family coverage will be allocated \$3,600 a year (\$300 per month) for health insurance losses. If the replacement cost is \$12,000 a year, then the plaintiff is undercompensated by \$8,400. If the plaintiff is an executive receiving the same coverage for the same price but earning \$200,000 a year, then losses would include \$24,000 a year for health insurance, thus overcompensating the plaintiff by \$12,000. Health insurance is a quasi-fixed labor cost and should be valued the same for all employees; that is, it is fixed per worker no matter how much workers earn or how many hours a week they work.

Regardless of how health insurance losses are determined, the employee's preinjury contribution to health insurance

should be deducted from any loss because that is an expense before the plaintiff incurred the loss.

Pension Loss

There are two types of pensions that workers usually participate in: a defined contribution and a defined benefit. A defined contribution is a percentage amount that an employer contributes to the employee's 401k or similar plan. The employer's contribution is the loss to the plaintiff. If an employee contributes to his or her own retirement plan, then that contribution should not be counted as a loss because the percent contribution is already being replaced from earnings; to replace it again would double count the loss. Since many employee pension contributions are tax deferrals, it is important to use Medicare earnings rather than Social Security reported earnings. Medicare earnings are higher because Social Security earnings are reduced by pension deferrals.

A defined benefit is often based on a formula that takes the number of years of employment multiplied by a final average salary multiplied by some percentage amount. Any pensions that accumulated before the injury should be deducted from the pension the plaintiff would have accumulated if not for the injury. For example, if a plaintiff had not been injured and would have received a monthly \$1,500 pension but instead, as a result of the injury, only received a \$400 pension monthly, the loss is \$1,100 a month. If a plaintiff starts receiving the \$400 a month pension before his or her normal retirement age, that amount is part of the offset against the full pension he or she would have received if not injured.

Other types of fringe benefits losses that may be considered are premiums paid by the employer on a life insurance policy and the use of a company car or cell phone for personal use.

Social Security and Fringe Benefits

Federal Insurance Contributions Act (FICA) taxes are divided between employees and employers, with each paying 7.65% of the employees' salaries. The Social Security benefits portion of FICA is 6.2% on the first \$106,800 (2009 rates) of an employee's income. This includes 5.3% for Old Age Survivors and .9% for disability insurance. The Medicare tax portion of FICA is 1.45% of every dollar of earnings, with no limit on earnings. Whether or not Social Security benefits should be included as part of fringe benefits losses is a controversial issue. If a claim is being made for lost Social Security, then the 5.3% for Old Age Survivors should be used, not the full 7.65% employer contribution. Including Medicare and disability benefits as a loss would be double counting since they would be forthcoming to the injured plaintiff. One reason many economists do not include FICA taxes as part of lost fringe benefits is because taxes are ignored in most jurisdictions.

A more compelling reason not to include the plaintiff's portion of FICA as a loss is that the plaintiff no longer has to make a matching contribution to FICA, which offsets the employer's contribution.

Rodgers (2000) shows that using a percent loss for Social Security is a poor estimate of lost Social Security benefits. If there are any losses of Social Security, in most circumstances they are small. However, it is important to recognize that the circumstances of each case (e.g., an injured young child) can alter the approach used in determining whether FICA should be included as a part of fringe benefits losses.

Household Service Losses

Household services are those activities performed outside the paid marketplace that have pecuniary value that can be quantified by an economist. Household services provided by the plaintiff that he or she is no longer capable of doing because of the accident are economic damages. Household services may include cleaning, cooking and cleaning up, doing laundry, shopping, maintaining the home and vehicles, managing the household, providing transportation for the household, caring for children, and other types of services unique to the plaintiff.

Household services are not a loss if the plaintiff never performed them in the past and if there is no evidence to support that he or she would have performed them in the future. A method to determine the pre- and postinjury hours of household services is to have the plaintiff fill out a questionnaire asking how many hours were spent doing specific household work before and since the accident. The difference between the two is the reduction of household services, which would then be valued. The potential for self-reporting bias has to be recognized. However, the purpose of the survey is to show that a foundation for losses does exist. Without a foundation, it may be difficult to claim lost household services.

The *Dollar Value of a Day* (DVD; Expectancy Data, 2009) provides general statistical averages that estimate the hours of household services performed categorized by age, number of children, marital status, and gender. The DVD relies on the latest government data and is widely used. The DVD provides national average hourly wages for household services with adjustments for different geographic areas within each state.

It is important to remember that the role of the economist is to provide guidance to the trier of fact with respect to valuing losses. The trier of fact can increase or decrease losses based on the testimony of the plaintiff or the plaintiff's survivors. The DVD provides an excellent starting point for determining the number of hours of household services. While there are other sources and methods for computing household services, ethical consistency requires that the economist not choose one

source for the plaintiff and another for the defense. Consistency and neutrality are important.

Healthy Life

The aging process limits a person's ability to perform the same level of household services when older compared to when he or she was younger and healthier. Consequently, it may not be appropriate to use a person's life expectancy to project future losses of household services. The publication *Healthy Life Expectancy* (Expectancy Data, 2010) considers the diminution of household services because of aging by providing tables showing how many remaining years of healthy life expectancy an individual has based on age, race, and gender. The publication also provides full-function life expectancy tables, anticipating that household activities will be reduced rather than eliminated when an individual is sick.

Personal Consumption Deduction

Wrongful death requires that a deduction be made for the income the decedent would have used for his or her personal consumption of items such as food, clothing, and personal care. Some states allow for personal maintenance rather than personal consumption. Personal maintenance is the amount that would have been spent by the decedent to maintain himself or herself to attain his or her earning capacity. The percent deduction for the decedent's personal consumption can be found in Ruble, Patton, and Nelson (2007). The percentage deduction changes as family size and income change.

There is some difference of opinion as to whether fringe benefits should be reduced for personal consumption since the survivors would not have received the dollars the deceased would have spent on maintenance had he or she lived. Consequently, as a result of the plaintiff's death, the survivors did not lose these dollars. A personal consumption deduction may or may not be appropriate when dealing with household services. If the trier of fact determines that the decedent's household services cannot be split between members of the household, then it may not be appropriate to deduct personal consumption from household services. One solution is to estimate lost household services in death cases both with and without the personal consumption deduction.

There are situations when personal consumption deductions are made for personal injury. For example, a severely injured person may have to spend the rest of his or her life in an extended-care facility that provides all services that the plaintiff formerly performed for himself or herself. If there is a claim for damages for the cost of the extended-care facility, then to count household services losses (which are being provided by the facility) would be double counting that loss.

Present Value

Since future dollars are worth less today, future losses must be discounted to present value. Each jurisdiction has different rules about discounting. Some states do not discount, while others specify what the discount rate should be. Because of the inverse relationship between discount rates and present values, choosing the appropriate discount rate can be a very contentious issue. That being said, what is widely accepted is that low risk and safety should be the guiding principle in choosing discount rates. This usually means U.S. government bonds. Kaufman et al. (2005) present the different approaches used to determine discount rates. Historical averages of some instruments, spot rates at the time of the analysis, short-term versus long-term rates, and net discount rates (the difference between the growth rate and the discount rate) can also be used. Because small differences in the discount rate (as well as growth rates) can affect total damages, justifying the rate being used for discounting is important. Bloomberg.com (n.d.) and *Federal Reserve Statistical Release* (n.d.) provide current rates.

Ethical consistency issues become most noticeable when determining the discount rate because lower discount rates favor the plaintiff while higher rates favor defendants. Whether retained by the plaintiff or defendant, the same discount rate should be used. It is considered unethical to choose a low rate for the plaintiff and a high rate for the defendant. Since court testimonies are a matter of record and prior economic reports are often seen and saved by opposing experts, it is not difficult to find inconsistencies in methodological approaches between plaintiff and defense cases that are not looked upon favorably by the courts.

Life Care Plan

Catastrophic injuries and disabilities to children or adults often require lifetime health and personal care. Life care planners provide plans that show the different components of care that the plaintiff will require in the future. Examples are prescription and nonprescription drugs, future medical care, and future attendant care. The life care plan presents the required care, the length of care, the frequency of care, and the current cost of the care. Once this information is provided, the economist then estimates the future cost of the life care plan. Each component of the life care plan grows by the appropriate inflation rate associated with the historical average from the Medical Care Price Index subsection of the CPI. Communications between the life care planner and economist to match the life care component to the medical care index component are useful. Items from the life care plan such as transportation are matched to the appropriate transportation index of the CPI. Double counting between the life care plan and other elements of damages must be avoided. For example, if the life care plan provides for all future medical care, then lost medical insurance should not

be an element of damages. If a special van is required for transportation, then only the additional cost of modifying the van is a loss and not the full cost of the van, since the plaintiff would have bought transportation regardless of the accident. If the life care plan includes funding for certain household services, care must be taken not to double count lost household services. If the jurisdiction where the trial is occurring requires discounting, the present value of the life care plan should be made.

Collateral Source Payments

Collateral sources are payments the plaintiff receives due to the injury from a third party from insurance or the government. Collateral sources are ignored and not deducted from any loss if the payment is made by an entity that is not the defendant. The reason is that the third party who is paying the plaintiff can have a lien on any recovery from the lawsuit. Thus, if that amount is deducted from the loss, the remaining award will not be large enough to cover damages, and the defendant will benefit because he or she has to pay less in damages. However, if the defendant paid for insurance, then he or she is entitled to deduct that amount from the award. Collateral sources are often a confusing aspect of damages, and legal guidance may be required.

Taxes

Deducting federal and state income taxes from any estimated loss depends on the jurisdiction in which the case is being tried. Taxes are generally ignored in most states and are deducted in federal jurisdictions. Nevertheless, it is important to find out how the court's jurisdiction treats taxes.

Conclusion

This chapter addressed the key issues of forensic economics while stressing the interrelationships between law and economics when dealing with wrongful death and personal injury litigation. Because forensic economics is intricately tied to changes in both statutes and common law, there is tremendous potential for future research and growth in the area. Many ethical dilemmas confronting a practitioner were highlighted. Most of the topics discussed in this chapter are developed more fully in Martin (2009) and the book of readings by Kaufman et al. (2005).

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