



Measuring the effect of disability on the lifetime earnings of lawyers, doctors and other professionals

Because they often return to work, their loss-of-earning capacity can be wrongly assessed

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Professional workers, when they sustain a permanent impairment, typically experience the largest loss-of-earning capacity of any type of client. However, oftentimes vocational rehabilitation professionals and economists will opine that they have not experienced a loss-of-earning capacity when the professional worker is capable of returning to work. This is particularly true when the impairment is physical in nature.

The assumption is that professional workers do not engage in physically demanding work, which is true; therefore, physical limitations are considered irrelevant. Unfortunately, the data tells a different story. Professional workers meeting the definition of a physical disability earn significantly less than their non-disabled counterparts. In addition, they experience lower levels of employment and tend to exit the labor market earlier than those with no disability. These findings have been consistently reported for multiple years as a result of data collected through the American Community Survey published by the U.S. Department of Commerce, Census Bureau.

A professional degree educates and prepares an individual for a highly specialized profession by providing relevant skills and experience and promoting practical analysis over theory and research, which is the typical focus of Ph.D. degrees. A professional degree will

typically also have an additional requirement of licensure or certification in order to practice the profession.

Because of the difficulty and duration of their training, depth of knowledge related to their area of expertise, and relative rarity of their skills, on average, workers with a professional degree earn more and experience higher levels of employment than any other group of workers. Due to this demand and due to the fact that most of their work is classified as sedentary or light in terms of physical exertion, professional workers who sustain a permanent physical or mobility disability are often able to continue working. Among individuals with a disability, professional workers have the highest levels of employment.

Professional workers are often able to continue functioning within their profession due to their training, typically low physical exertion requirements, and the need for their abilities. Using the model commonly found in worker's compensation, because the individual is capable of returning to their customary employment there is no loss-of-earning capacity. However, this model tends to ignore future worklife, relevant earnings data, and the rate of future growth of earnings.

Available data and past studies have confirmed two important facts regarding the effects of disability on earning capacity. On average, individuals with a disability earn less and experience lower levels of employment than their non-disabled counterparts. This fact remains constant for both men and women at every age

and at every level of educational attainment. Professional workers, on average, also experience this reduction in annual earnings and levels of employment. Because of the great need for their services, many injured professional workers will continue working and earning considerable amounts of money. Assuming their current situation proves no loss-of-earning capacity ignores the data available and developments likely to occur as the aging process unfolds interacting with a disability.

Young professionals

For young professional workers especially, a reduction in worklife expectancy has an enormous impact on their earning capacity. Typically the years of highest earnings and levels of employment occur in the late forties and through the fifties before reducing somewhat as the individual approaches retirement age. A young worker experiences a much larger loss-of-earning capacity when they sustain a disability because on average they will experience lower levels of employment than they would absent injury over a greater number of years. Furthermore, they also experience a reduction in earning capacity because they are early in their careers and have not yet experienced the significant increases in earnings that occur during career progression.

Workers with a disability experience average compensation growth at a rate below that of their non-disabled counterparts, meaning that even if they currently receive compensation at a rate comparable



to their non-disabled counterparts, over time they would be expected to receive lower compensation increases and ultimately not reach the same level of peak earnings. This pattern is similar to children who experience a brain injury and “grow into their disability.” They are often at a similar level to their peers immediately following injury, but will continue to fall further and further behind as they reach increasingly difficult challenges in school. A professional worker may continue working in their chosen profession, but compensation increases build upon one another and any disability during career progression that lowers productivity or limits opportunities will compound over time.

Cognitive disability

A cognitive disability can have obvious consequences on a professional worker’s earning capacity. A brain injury can reduce work efficiency, require outside oversight, diminish concentration or memory, or dramatically increase stress as well as fatigue. A professional worker’s training and the application of their skills can be affected by a brain injury. But many experts will opine that a physical disability will have little to no impact on a professional worker’s earning capacity, especially if it does not preclude the individual from performing their pre-injury job functions. The data does not support this assertion.

The data shows significant differences in the earnings between professional workers without a disability and those with a physical or mobility disability. The American Community Survey (ACS) defines a physical disability as a condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying. The ACS defines a mobility disability as having serious difficulty walking or climbing stairs. Both of these disability types do not present obvious barriers to the occupational duties of most professional workers, but their effects are clearly seen in

the data on earnings and levels of employment.

Physical disability

There are numerous possible causes for the reduced earnings and levels of employment experienced by professional workers with physical or mobility disabilities. These workers may experience reduced productivity due to physically moving slower, distracting pain, required medications, additional doctor visits, need for accommodation, reduced opportunities, or employer prejudice. An attorney may need to leave for court or a meeting earlier to adjust for being unable to take stairs. A doctor may be unable to work in an emergency room because it requires standing and walking for prolonged periods of time. A surgeon may be limited in the number of hip replacements that she can perform due to the physicality of the procedure and a shoulder injury. A worker may have the opportunity to spend extra time at work to increase their production, but doing so takes time from other facets of their life. New challenges created by a disability in an individual’s life can create stress or distraction at work and lead to difficulties.

The standard employed by many vocational experts, determining what work an individual is “capable” of performing, is useful for the legal framework constructed for worker’s compensation but is out of place in civil litigation where a Trier of Fact is tasked with determining what is more likely than not to occur. A report on “capability” ignores many of the nuances involved in disability and the data produced by numerous studies. Two individuals may both be capable of employment in the same position, but their pay and probabilities of employment are impacted by the sum of their abilities. The sum of mental, physical, and social abilities a person has represents his or her human capital. Human capital determines a person’s earning capacity.

In the same way monetary capital can be invested for profits, human capital

is invested in the labor market in exchange for earnings and higher starting capital provides opportunity for higher returns. A disability, regardless of the type, reduces human capital because it diminishes the abilities available to the individual. An individual may have human capital at, above, or below the average for their cohort group pre-injury and they may be at, above, or below the average for their cohort group post-injury. However, if that individual sustained a permanent disability they also sustained a permanent reduction in earning capacity because their human capital has been reduced.

Following a physical injury many vocational rehabilitation experts may recommend retraining or additional education as a means of increasing human capital and mitigating a loss-of-earning capacity. Retraining and additional schooling does increase human capital and help the individual to increase their post-injury earnings, both important goals in vocational rehabilitation. However, it does not eliminate a loss-of-earning capacity. If the individual is capable of retraining or additional schooling after injury, then they were also capable of completing the same additional education or more absent injury. Sustaining a disability does not increase a person’s capacity to complete education or training. A high school graduate who sustains paraplegia can receive additional schooling to complete a baccalaureate degree and find employment, but they would have also been capable of completing that degree absent injury. The degree will help the individual to continue earning a living, but as previously mentioned, on average, their earnings and levels of employment will be below what they would have been absent injury.

Annual earning capacity

An individual’s annual earning capacity can be measured by using either an individual’s actual earnings or a proxy. In cases of mature workers – those with a demonstrated work history – their actual



	Non-Disabled	Non-Severe Cognitive Disability	Non-Severe Mobility Disability
Males	\$183,626	\$108,188 (-41 percent)	\$144,326 (-21 percent)
Females	\$121,800	\$84,604 (-31 percent)	\$99,037 (-19 percent)
All Workers	\$160,231	\$98,245 (-39 percent)	\$121,892 (-24 percent)

Table 1

earnings stated in present-day dollars can be utilized to best represent their pre-injury earning capacity. Oftentimes, the post-injury earning capacity is then represented by utilizing the earnings decrement that the statistically average individual with a particular disability (cognitive, mobility, physical, or sensory) experiences.

However, younger workers rarely have earnings that reasonably represent an average lifetime earning capacity. For these individuals a statistical proxy must be utilized. The American Community Survey (ACS) is the largest annual government survey administered in the United States and the primary source of statistical information concerning individuals with disabilities. The ACS provides information about the earnings and employment levels of individuals with disabilities. Generally, the ACS is the preferred source of earnings information when utilizing a proxy is necessary; however, for professional workers the ACS may not provide the best estimate of pre-injury earning capacity due to both the top-coding of high wage earners and the more specific data sources available to examine the earnings of professional workers¹.

Table 1 provides the average earnings figures for individuals without a disability, individuals with a non-severe cognitive disability, and individuals with a non-severe mobility disability. These earnings figures are statistical averages for full-time year-round workers and are

stated in 2015 dollars. As is apparent, both cognitive and mobility disabilities significantly reduce earnings for professional workers. These figures all pertain to non-severe disabilities. The disability effect would be much greater if the data pertained to a severe disability.

The Occupational Employment Statistics (OES) program, administered by the Bureau of Labor Statistics, produces employment and wage estimates annually for over 800 occupations. These estimates are available at several geographic levels that include the nation as a whole, individual states, and metropolitan areas. Since OES provides wage estimates by occupation, it may be preferable to utilize the OES wage information.

For example, if a 28-year-old female that just completed dental school with plans to stay in the Sacramento metropolitan area sustains a mild traumatic brain injury, we must use a proxy to best represent her future earning capacity. The OES shows that dentists working in the Sacramento metropolitan area earn an average of \$190,700 annually. This number is more accurate than if we were to use the ACS figure shown in Table 1 for all workers with a professional degree without a disability, \$160,231. It is important to note that even if we utilize the OES data for the pre-injury earning capacity, we can still utilize the ACS earnings decrement (stated as a percentage in parentheses in Table 1) for a particular disability since the OES does not measure disability status. In this particular case,

the reduction would be 39 percent according to Table 1, or a post-injury earning capacity of \$116,327.

Worklife expectancy

An individual's worklife expectancy is the 'how long' of lifetime earnings. It tells us the number of years of future earnings that should be considered when estimating a loss. Worklife expectancy is statistically measured. It is an average that combines the probabilities of life, participation in the labor force, and employment. It adjusts for periods when an individual may be out of the labor force, and is driven by variables such as age, gender, education, and disability status.

Table 2 (see next page) provides worklife expectancy values for persons with a professional degree and no disability, persons with a professional degree and a non-severe cognitive disability, and persons with a professional degree and a non-severe mobility disability as defined by the ACS. The worklife expectancy values take into account periods of unemployment and life events where an individual may not be in the labor force or employed. Both individuals with a non-severe cognitive disability and individuals with a non-severe mobility disability experience a substantial decline in worklife expectancy as shown in Table 2.

The statistically average female has a lower worklife expectancy than the statistically average male. It is important to consider a female's pattern of employment to determine whether a female exhibits a pattern of work most like that of the average female or average male.

Case Study

A 30-year-old attorney is struck by a car while crossing the street. He sustains a fractured femur requiring surgery, a fractured pelvis, a torn rotator cuff, and an L4-5 fusion as a result of the injury. Upon reaching maximum medical improvement, he continues to experience pain that limits him to no more than 30 minutes of walking or standing. In addition,



Table 2: Worklife Expectancies for Individuals with a Professional Degree			
	Non-Disabled	Non-Severe Cognitive Disability	Non-Severe Mobility Disability
Male Worklife Expectancy			
25	40.4 yrs.	21.5 yrs.	29.7 yrs.
35	32.1 yrs.	16.9 yrs.	23.6 yrs.
45	23.1 yrs.	10.8 yrs.	17.0 yrs.
55	14.5 yrs.	5.6 yrs.	10.3 yrs.
65	6.8 yrs.	2.9 yrs.	4.9 yrs.
Female Worklife Expectancy			
25	36.0 yrs.	23.8 yrs.	28.8 yrs.
35	27.7 yrs.	17.9 yrs.	22.3 yrs.
45	19.5 yrs.	12.0 yrs.	15.6 yrs.
55	11.3 yrs.	6.4 yrs.	8.5 yrs.
65	4.4 yrs.	2.8 yrs.	3.0 yrs.

Table 2

his ability to lift and carry items is significantly reduced. He has returned to work in his previous capacity and salary. At the time of his injury and at the time of his return to work the client earns a salary of \$100,000.

In an instance like this case, many vocational experts would only calculate time off work due to injury in order to assess economic damages. However, doing so would ignore the impact of disability on a professional worker's future worklife and potential for future increases in compensation. Data from the ACS provides averages for employment levels and earnings for professional workers that can be applied to this scenario in order to estimate the future impact of the disability. These estimates represent the loss based on averages, recognizing that an individual may fall at, below, or above the average both pre-injury and post-injury.

If one were to assume that the injured attorney would continue working his entire career earning the \$100,000 salary he is currently receiving at age 30 (a highly unlikely scenario) and calculate a loss-of-earning capacity based solely on his probable reduction in worklife, then the client would have experienced a loss of \$904,903 when an estimated

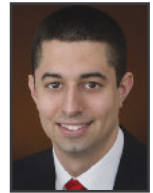
21.4 percent fringe benefit rate is included. His pre-injury worklife expectancy would have been reduced from 36.7 years to 29.2 years based on the physical disability that he sustained.

At age 30, few workers have reached their peak earnings, especially professional workers who often begin their careers later than other workers due to the additional education and training that they receive. The subject of this hypothetical would be expected to see significant increases in his compensation as he gained experience and increased productivity. If one were to consider the possibility of compensation increases based on the average age-specific earnings² for professional workers without a disability and with a physical disability, then the loss would be substantially altered. Considering these increases, pre-injury the attorney would have a lifetime average annual wage of \$187,199 and a fringe benefit rate of 16.8 percent. Post-injury, his lifetime average annual earnings would be \$127,191 with a fringe benefit rate of 19.9 percent. Coupled with the 7.5 year reduction in worklife expectancy his loss-of-earning capacity would be \$3,562,762.

The large difference is driven largely by the client's age. In the first scenario the loss-of-earning capacity resulted solely from a reduction in the number of years worked. The second included a reduced number of years worked, but also a reduction in compensation for the years of post-injury employment, a long time-frame for a 30-year-old worker.

This example gives a clear indication of the importance of the double whammy effect of disability on professional workers, and all workers. On average, a professional worker with a disability will experience a reduction of both earnings and employment levels. These two facts have an impact that is important to recognize on any case involving a professional worker who has sustained a disability.

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Endnotes

¹ Top-coding is a censoring of data that is done to preserve the anonymity of people participating in the survey and is accomplished by using the state-level mean for all cases greater than or equal to the top-code state minimum value.

² Career development theorists and economists have long recognized that workers enhance their human capital, and therefore their value in the competitive labor market, with experience in the workforce. The quantification of this progression through age-earnings cycles has been well documented in economic literature for more than 40 years. For younger workers, it is sometimes preferable to show how the individual's earnings would typically progress throughout his or her lifespan. The quantitative difference between utilizing an age-earnings cycle and an average across the lifespan is minor when utilizing the total offset approach to calculating present value.

