

# INTRODUCTION

Worklife expectancy is the total number of years in aggregate that a person is likely to be alive and employed. A worklife expectancy is either statistical in nature or assumed to exist until a given age (for example, average age of retirement). Statistical worklife expectancy is based on probability data and provides a value that is based on probability statistics most like the individual to whom the value is assigned.

The worklife expectancy values in this publication are statistically derived and specific to gender, age, education, and type of disability. A worklife expectancy stated in years is derived through a summation of a series of joint probabilities of being alive and employed from a given age through age eighty-four (CPS) or age eighty-nine (ACS), the ages at which the Census Bureau ceases to produce employment data by age.<sup>1</sup>

Employment rates serve as the primary variable in constructing the GGWT. A secondary variable is the probability of life. Other researchers have produced worklife expectancies that consider the probability of participation,<sup>2</sup> as opposed to the probability of employment. In addition, worklife expectancies have been constructed that examine the probability of participation from one year to the next. This method of defining worklife expectancy is referred to as the Increment-Decrement model,

or the Markov model. All of these worklife expectancies consider the probability of life.

When age, gender, and level of education are held constant, the various worklife expectancy models produce similar values for “all people” (that is, a combination of people with and without disabilities). The “all people” or “all persons” grouping is of greater value to the researcher interested in comparing present worklife expectancy data to historical data produced by the Department of Labor. It is of lesser value to the forensic expert. The various models used to compute worklife expectancy are examined in more detail in chapter 1.

Worklife expectancy estimates derived from historical data are understated. Historically, a majority of workers in the United States have retired at age sixty-five. However, at present the majority of the workforce will not be eligible for maximum Social Security retirement benefits until age sixty-seven because of a change in the law. Because worklife expectancy is derived primarily from the percentage of people employed at various ages, the precipitous decline that presently occurs at sixty-five will in the future occur at sixty-seven or later, depending upon

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1. See appendix A for details.

2. A *participation rate* is a term used to describe people who are either employed or unemployed, but actively seeking employment.

whether or not the retirement age is increased again. Therefore, all available data understate worklife estimates because of the change in retirement age.

A widely accepted belief is that people with disabilities, regardless of how the disability is defined, experience reduced earnings when employed, compared to their counterparts without disabilities. Similarly, people with disabilities experience lower levels of employment and therefore a reduction in worklife expectancy. Numerous surveys document this reality. (See “Broad Support” in chapter 7 for a fuller discussion of this issue.) The effect of disability is such that several pieces of legislation have been passed to help improve both earning levels and employment levels for those with disabilities. For example, the Americans with Disabilities Act (ADA) was designed to assist those with disabilities both economically and socially.

Research specific to disability and employment permits assessment of probable worklife for people who have disabilities but still continue to be employed. Research tells us that an employed person with a disability will probably experience a reduction in worklife expectancy over the life span. Returning to work with a disability does not negate that probable reduction. Employed people with disabilities are more likely to be unemployed one year later than those without disabilities. People with disabilities who are unemployed are more likely to remain unemployed one year later than those without disabilities who are unemployed (Gibson 2001) (Yelin October 31–November 1, 1996).

An individual’s capacity to perform work and earn money over a lifetime is in part a function of the individual’s worklife expectancy. The existence of a disability is the most important event or condition affecting the worklife of a person surviving an injury. Therefore, when assessing capacity to work and earn money for a person with a disability, projecting earnings in a manner that considers the appropriate probability of employment is essential. Failure to utilize disability statistics ignores the numerous studies on disability. The worklife expectancy tables published by the Bureau of Labor Statistics in the 1980s, for instance, failed to consider the effect of disability on worklife. Using these tables for a person who is disabled is inappropriate.

While disability status reduces worklife expectancy at all levels of educational attainment, people with lower levels of education are more significantly affected than those with higher levels of education. In addition, severe disability profoundly reduces worklife expectancy. People with a nonsevere work disability experience a worklife more like a person without a work disability than like one who has a severe disability.

After age forty, the process of aging begins to reduce the probability of employment. However, when the aging process interacts with a disability, the employment level decline is more precipitous. Retirement or exit from the labor force occurs earlier for a person with a disability than for a person without a disability.

The tables that follow use two approaches in assessing worklife expectancy for those with permanent impairment resulting in a disability. The first approach makes use of work disability data from the CPS,<sup>3</sup> the official source of U.S. government statistics on employment and unemployment. The survey is conducted monthly, as it has been for over sixty years. Each March, data are collected pertaining to people meeting the definition of having a work disability. A scientifically selected sample of more than seventy thousand households forms the basis of the survey. Earning data for people with and without a work disability, as well as participation and employment rates by gender and level of educational attainment, are derived from the survey.<sup>4</sup>

The second approach is functional in that it examines worklife reduction from a physical and cognitive disability perspective. This approach uses the American Community Survey (ACS). The ACS sample size from 2005 to 2007 was approximately three million people per year. The ACS replaced the long form of the Decennial Census as of 2010.

Both the CPS and the ACS are appropriate for estimating worklife reduction in a forensic setting. The results associated with each of the two criteria for assessing worklife are comparable. Used

3. <http://www.bls.census.gov/cps/>.

4. <http://www.census.gov/hhes/www/disability/disabcps.html>.

together, they serve as an excellent source for probable worklife of an individual with a disability.

Because a worklife expectancy is not a linear statistic, a correct present-value calculation can be performed only through each future year's probability of the person's being alive and employed. (See chapter 6 for details.) After growing and discounting by year, the resulting cash flow is discounted each year

by the probability of being alive and employed. Experts must understand the data supporting the use of the worklife expectancy tables in order to calculate and present such a calculation. We strongly encourage experts using the data contained in this publication to present the annual probabilities as part of their opinion.