

The Impact of Disability

America's Health Insurance Plans and
The Life and Health Insurance Foundation for Education



Prepared by Milliman, Inc.



Daniel D. Skwire, FSA
Consulting Actuary
Milliman, Inc.

Robert W. Beal, FSA
Consulting Actuary
Milliman, Inc.

May 2009

Table of Contents

I. Introduction	1
II. Highlights	2
III. The Financial Impact of Disability.....	3
IV. Sources of Disability Income.....	9
V. The Non-Financial Impact of Disability	18
VI. Conclusions	21
Appendices	
A. Projection Methods and Assumptions.....	A-1

I. Introduction

Research shows that many Americans underestimate their risk of suffering a disability and overestimate the resources available to them in such an eventuality¹. These misconceptions lead to a poor understanding of the full impact a disability can have on an individual's life. The greatest financial contributor to the cost is the income that is lost when an individual is unable to work as the result of an illness or accident. However, the expenses that arise for healthcare and other items related to the disability add significantly to the cost. In addition, there are other costs related to overall well-being, which are more difficult to quantify. As the length of disability increases, expenses can accumulate rapidly, income is lost, and individuals are often forced to make choices about how to cover their expenses. In the absence of private insurance coverage or adequate disability income benefits provided by the government, these choices are harder. Disabled individuals may be forced to make significant lifestyle changes, rely on the generosity of family and friends, incur sizeable amounts of debt, or face bankruptcy.

The Life and Health Insurance Foundation for Education (LIFE) and America's Health Insurance Plans (AHIP) engaged Milliman, Inc. to prepare this report examining the impact of disability on individuals in the United States. The report focuses on four representative scenarios and examines the combined effects of lost income and increased expenses that result from disability. It then examines the choices faced by individuals who need to cover these costs and the potential sources of disability income that are available to help defray them.

Milliman's work is prepared solely for the use and benefit of LIFE and AHIP, to be made available in its entirety by LIFE and AHIP on their Web sites and to the media. The paper may not be published in any other form without written permission from Milliman. Milliman does not intend to benefit any third-party recipient of its work product. The findings presented in this report are based on the assumptions described in Appendix A and the circumstances of the examples presented. The financial impact of a disability for any particular individual may differ from those presented in this report. The information presented is intended for general education purposes only, and persons considering the purchase of any insurance product should consult with their own financial advisors to review their specific situation.

¹ 2009 Life and Health Insurance Foundation for Education online omnibus survey of 1,007 adult Americans.

II. Highlights

The following are key findings from this report:

- The financial impact of a disability can be measured as a combination of lost income and increased expenses.
 - For a disability that lasts to age 65, the financial cost can be many multiples of the household's annual pre-disability earned income, in the absence of disability benefits provided through government or private insurance programs.
 - The costs are also quite significant for short-term disabilities that last one or two years.
- There are many sources of disability income:
 - Most U.S. employers are required to provide workers' compensation insurance to their employees. It covers disabilities arising from work-related injury or illness. However, most disabilities leading to lost income do not involve work-related illness or injury.
 - The federal Social Security Disability Insurance (SSDI) program provides disability coverage to most U.S. workers. However, SSDI is designed to cover only longer-term disabilities and offers relatively modest disability income benefits. A majority of workers who file for SSDI benefits are not approved upon initial application.
 - Many employers provide group short-term and long-term disability benefits to their employees and pay the premiums. Such coverage is also often available through work on a voluntary basis, under which employees pay the premiums through payroll deduction.
 - Many insurance companies offer individual disability income insurance coverage. This coverage provides disability income protection to workers who do not have coverage through an employer—or it supplements employer-sponsored coverage. Individual disability insurance, in combination with the other insurance programs, may reduce the financial cost of disability by 80% to 95%.
- For individuals with disability insurance, there is still a financial impact to disability, and typically major steps must be taken to cover that cost. But this remaining cost may be low enough to be covered through reductions in discretionary spending, and the risk of more significant steps, such as selling one's home, foreclosure, or bankruptcy, can be reduced or avoided.
- The repercussions of a disability extend beyond the financial consequences (lost income and higher expenses). These non-financial costs can have a significant effect on an individual's life and ability to return to work in a fully productive capacity. The availability of benefits from government programs and private insurance during a period of disability helps not only in covering the financial cost of disability, but also in mitigating the severity of these non-financial costs.

III. The Financial Impact of Disability

Much of the recent research related to the risk of disability focuses on the probability of becoming disabled and on the average length of a claim once an individual has become disabled². It is important to realize, however, that the average length of claim is only one measure of the severity of a disability. It is equally important to consider the full impact a disability has on an individual, including both the financial and non-financial aspects. This section discusses the financial impact upon a disabled individual. Section V discusses a number of non-financial consequences associated with a disability.

Financial Impact of Long-term Disability by Demographic Characteristics

Our analysis incorporates a broad definition of the financial impact of disability:

The financial impact of disability equals the income lost when a disabled individual is unable to work, plus the additional expenses incurred by the disabled individual for healthcare and other items related to the disability.

This impact varies significantly in different situations. Important factors in determining the financial effects of disability include an individual's pre-disability earnings, marital status, and length of disability.

In order to examine a range of disability costs, this report considers four representative examples of newly disabled individuals:

1. Single Middle Income: A single male, age 40, who earned \$50,000 per year prior to disability.
2. Married Middle Income: A married male, age 40, who earned \$50,000 per year prior to disability and whose spouse earns \$25,000 per year.
3. Single High Income: A single female, age 50, who earned \$200,000 per year prior to disability.
4. Married High Income: A married female, age 50, who earned \$200,000 per year prior to disability, and whose spouse earns \$100,000 per year.

These four scenarios were selected for the following reasons:

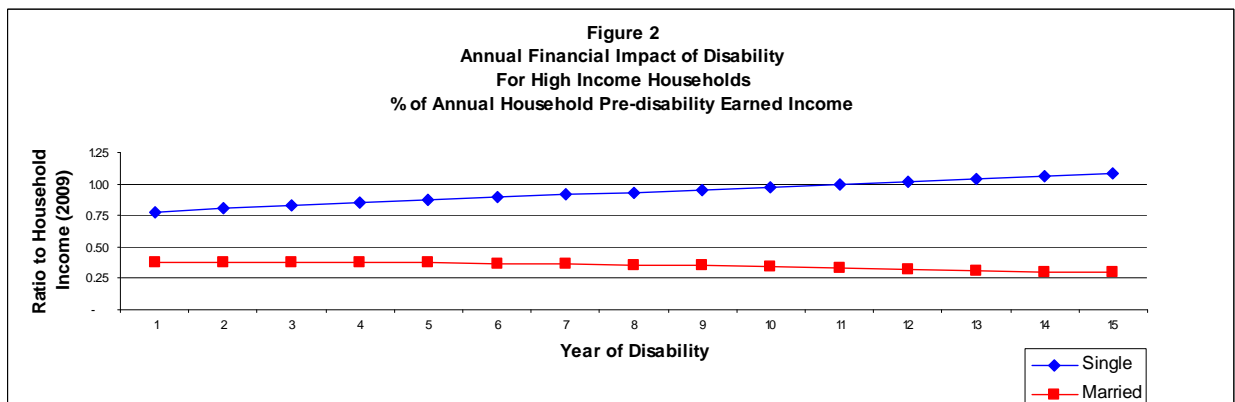
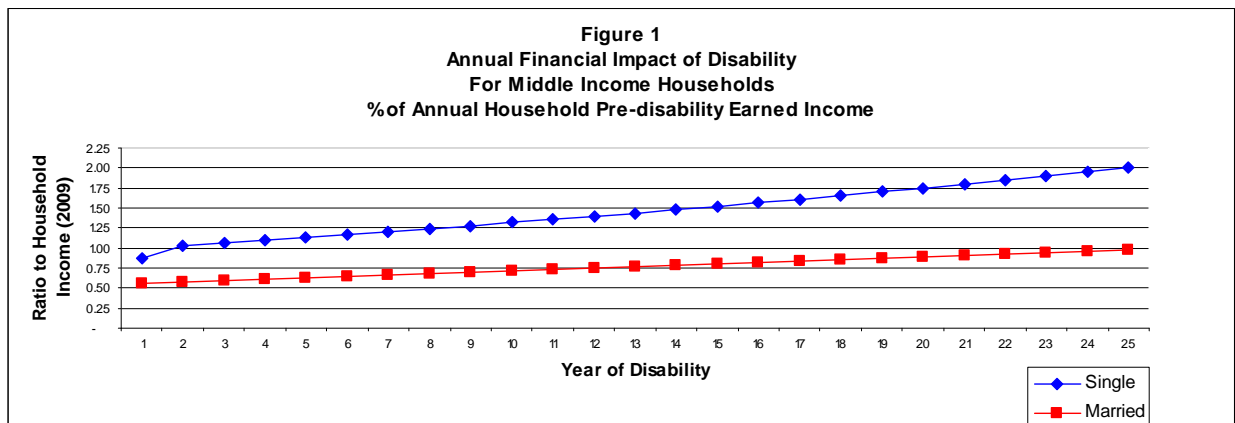
- The average age for disabilities among working people is between 40 and 50.
- The median annual household income in the United States during 2007 was approximately \$50,000. However, high-income individuals can also incur substantial financial costs from a disability, while receiving proportionately lower SSDI benefits, if they qualify at all.
- A person's marital status can affect household income, the level of taxes, and SSDI benefits.

² For more information on the frequency and average duration of disabilities see the 2007 paper by Milliman (Beal), *The Real Risk of Disability in the United States*, Life and Health Insurance Foundation for Education.

- A majority (53%) of U.S. households in 2007 with earned income included more than one wage earner.
- Both sexes were selected to illustrate that the risk of disability is significant regardless of one's sex.

For each scenario, we projected the annual financial impact of disability and then computed the present value of that impact, expressing it both in dollars and as a percentage of the individual's annual household pre-disability income (which includes the spouse's income in scenarios where the individual is married). A summary of the methods and assumptions used to project the financial impact of disabilities is included in Appendix A. Throughout this section of the report, it is assumed that the individuals noted are not receiving any disability benefits while disabled. In the two married scenarios, we assume that the family is able to obtain medical insurance from the working spouse's employer if the disabled individual is unable to continue medical insurance.

The charts in Figures 1 and 2 show the annual costs of disability for the four scenarios. For the purpose of these charts, the disabilities are assumed to last until age 65, which is close to the planned retirement age for many people.



The table in Figure 3 shows the details associated with the financial impact of disability for Year 5 in Figures 1 and 2 (the approximate average length of a long-term disability).

Figure 3 Components of the Projected Annual Financial Impact of Disability for Year 5 Illustrated in Figures 1 and 2 (\$)				
	Single Middle Income	Married Middle Income	Single High Income	Married High Income
Reduction in Income	56,275	56,275	225,102	225,102
+ Increase in Expenses	9,350	(1,001)	9,350	(1,001)
- Disability Benefits	0	0	0	0
+ Tax Impact	(8,634)	(8,234)	(59,779)	(112,823)
= Total Financial Impact of Disability	56,992	47,040	174,673	111,277
Pre-disability Household Income	50,000	75,000	200,000	300,000
Total Financial Impact / Pre-disability Income	1.14	0.63	0.87	0.37

Figures 1, 2, and 3 reveal some important facts about the financial impact of disability:

- In these scenarios, the financial impact of disability is significantly higher for single individuals than for those who are married to a working spouse, because typically only a portion of total household income is lost when a married individual becomes disabled, and because medical insurance may be available through the spouse's employer if the disabled individual is unable to continue coverage.
- The financial impact of disability is much higher at lower incomes than at higher incomes as a percentage of pre-disability income. This is because the added healthcare costs incurred during disability are a greater portion of income at lower income levels, and because the tax savings from reduced income is proportionately greater for individuals earning higher income prior to disability.
- The financial impact of disability generally increases over time, because both incomes and expenses tend to increase with inflation.

When comparing the financial impact of disability in different scenarios, it is also helpful to examine the present value of the total future impact, so that it can be expressed as a single value and related back to the individual's pre-disability earnings. For the four scenarios described above, the table in Figure 4 provides the present value of the financial impact of disability, broken into its various components. It also expresses this impact as a ratio to the annual pre-disability household income. All present values use a 5% annual discount rate.

Figure 4 Present Value of Financial Impact of Disability to Age 65 (\$)				
	Single Middle Income	Married Middle Income	Single High Income	Married High Income
Reduction in Income	977,819	977,819	2,567,794	2,567,794
Increase in Expenses	183,021	(20,247)	108,900	(12,014)
Disability Benefits	0	0	0	0
Tax Impact	(184,392)	(173,683)	(730,122)	(1,427,553)
Total Financial Impact	976,449	783,890	1,946,572	1,128,227
Pre-disability Income	50,000	75,000	200,000	300,000
Total Cost / Income	19.53	10.45	9.73	3.76

The results above show that the financial impact of a long-term disability can be extremely high. For a 40-year-old single male earning \$50,000 per year, the present value of lost income through age 65 and the total financial impact of disability is almost \$1 million—nearly 20 times annual pre-disability earnings.

The lower increase in expenses at higher income levels arises because the individuals in those scenarios are assumed to be 50 years old, and are thus disabled for a shorter period of time before reaching age 65.

Financial Costs of Short-term Disability by Demographic Characteristics

Of course, not all disabilities last until age 65. Many are shorter-term in nature and thus have lower financial costs. The tables in Figures 5 and 6 show the present-value financial impact of disability for the four scenarios in a range of different lengths of disability. Figure 5 shows absolute terms and Figure 6 shows the percentage of pre-disability income.

Figure 5 Present Value of Financial Impact of Disability (\$)				
Length of Disability (yrs.)	Single Middle Income	Married Middle Income	Single High Income	Married High Income
1	42,567	41,395	151,404	110,883
2	90,539	81,803	302,478	216,176
5	230,372	197,703	734,270	499,947
10	446,311	374,180	1,382,201	871,679

Figure 6 Present Value of Financial Impact of Disability (% Total Financial Impact / Pre-disability Household Income)				
Length of Disability (yrs.)	Single Middle Income	Married Middle Income	Single High Income	Married High Income
1	0.85	0.55	0.76	0.37
2	1.81	1.09	1.51	0.72
5	4.61	2.64	3.67	1.67
10	8.93	4.99	6.91	2.91

Importantly, as noted by these tables, the costs are quite significant even for disabilities that last one or two years. The cost of a two-year disability, for example, can equal one to two times an individual's or family's annual household income, assuming disability benefits are not being received from any source.

Types of Disability Expenditures

To provide greater clarity on what can make up the additional costs incurred as a result of a disability, for the purpose of this study we have grouped expenditures into the following broad categories:

- Healthcare: Medical insurance premiums and out-of-pocket costs for health services, as well as non-insured expenses, such as medical supplies, rehabilitation programs, vocational retraining, etc.
- Pension: Employee contributions to retirement savings accounts.
- Home costs: Mortgage payments, rent, property taxes, utilities, maintenance, and furnishings.
- Discretionary expenses: Dining out, entertainment, alcohol and tobacco, gifts, charitable contributions, etc.
- Other expenses: Expenses not classified elsewhere and that cannot be easily reduced, such as food and clothing.

The assumed healthcare expenditures are based on the 2008 Milliman Medical Index.³ The assumed non-healthcare expenses are based on results from the Consumer Expenditure Survey (CES) of 2007.⁴

Healthcare expenditures can jump significantly during a disability. Medical insurance may not be available to the disabled individual or may only be available at substantially higher premiums. If protection under the Family Medical Leave Act applies, an employer is responsible for continuing the medical insurance to the disabled worker for up to 12 weeks. Following this 12-week period, the same medical coverage may be purchased under COBRA for the next 18 months. After the COBRA insurance ceases, the individual may seek coverage through high-risk medical pools sponsored by some states or pay the healthcare expenses out of pocket. We anticipate the healthcare expenditures for a person disabled for five years could be 175% to 200% higher than the healthcare expenditures for a healthy worker over the same period. If a person's disability is severe enough to qualify for Social Security disability benefits, he or she becomes eligible for Medicare 24 months after qualifying for disability benefits. In this case, a large majority of medical expenditures is covered.

In our married scenarios, we have assumed that if the disabled individual is unable to continue medical coverage through his or her employer during the period of disability, then that person will be able to obtain medical insurance through the working spouse's policy. As a result, the illustrated healthcare costs are reduced in the married scenarios.

The table in Figure 7 compares the present value of the financial impact of disability to the present value of expenses that disabled individuals from our scenarios would be likely to incur during a period of disability lasting five years (the approximate average length of a long-term disability). In this table, as in the others in this section, it is assumed that the individuals noted have not changed their level of non-healthcare expenditures and are not receiving any disability benefits while disabled.

³ Milliman Research Report (May 2008). *2008 Milliman Medical Index*, Available at <http://www.milliman.com>.

⁴ Consumer Expenditure Survey (2007). U.S. Census Bureau. Available at <http://www.bls.gov/cex/#tables>

Figure 7 Present Value of Financial Impact of Disability and Typical Expenses (\$) Disability Period of Five Years				
	Single Middle Income	Married Middle Income	Single High Income	Married High Income
Healthcare Expense	46,272	38,070	49,021	38,070
Pension Expense	9,394	14,091	37,577	56,365
Home Expense	68,266	93,605	189,430	189,430
Discretionary Expense	105,049	142,483	273,091	273,091
Other Expense	35,693	49,113	71,742	107,675
Total Expenses	264,674	337,363	620,861	664,631
Financial Cost of Disability	230,372	197,703	734,270	499,947

The values in Figure 7 illustrate the extremely difficult financial choices faced by an individual who has no form of disability income benefits available while disabled. For example, a single individual earning \$50,000 per year would face a financial cost of about \$230,000 (on a present-value basis) for a disability of five years, and would have discretionary expenses (again on a present-value basis) of about \$105,000 during the period of disability. This also assumes that the person has not had to incur additional expenses, such as those needed to cover modifications to a car or home, which are often necessary as a result of a disability. Even if that individual were to eliminate all discretionary expenses, the present value of the remaining financial cost of disability would be \$125,000. Without disability coverage to replace a significant portion of the lost income, the disabled person would have to pull from existing savings or investments, rely on family or friends, incur sizeable debt, or consider other means to provide for his or her needs.

In fact, recent survey data⁵ shows that over a quarter (27%) of Americans admit that they would have difficulty supporting themselves financially "immediately" following a disability. Three out of four (74%) say they would face financial trouble within six months.

⁵ 2009 Life and Health Insurance Foundation for Education online omnibus survey of 1,007 adult Americans.

IV. Sources of Disability Income

As highlighted in the preceding section of this report, the financial impact of disability is often several times greater than a disabled worker's annual pre-disability income or annual household income. Few individuals are fortunate enough to be able to cover these costs through personal savings alone, even for a short period of time. Therefore, the question of how to cover the cost of disability is a very important one, and there are several ways in which it can be done. This section of the report examines the various sources of disability benefits—from government-sponsored programs to private disability insurance plans—and their effect on the financial cost of disability. In the absence of such disability benefits, the choices faced by disabled individuals are difficult.

Major Sources of Disability Benefits

Working people in the United States may qualify for government programs that pay disability income benefits, such as Social Security or workers' compensation. However, the rules for qualifying for benefits under these programs can be restrictive, and the benefits provided through them often only cover a small portion of the income lost during a disability. Employer-sponsored and individual disability insurance provided through private insurers is available to fill much of the gap left by government programs.

The following describes the major sources of disability benefits provided through government-sponsored insurance programs:

Workers' Compensation

Benefits from workers' compensation can replace a portion of one's pre-disability earnings and help cover medical expenses, but they are limited to only those disabilities that occur while on the job. Workers' compensation coverage is provided through private insurers under state laws requiring that employers provide it to their employees. However, because most disabilities are not work-related, most long-term disabilities are not covered by workers' compensation programs. According to a recent Milliman research study,⁶ sponsored by the Society of Actuaries, only about 4% of long-term disability claimants also receive workers' compensation benefits. While workers' compensation programs provide very important coverage to those who become sick or injured while performing the duties of their job, it does not apply in most cases of disability. Therefore, we have not modeled them explicitly in this report.

Social Security Disability

The federal Social Security Disability Insurance (SSDI) program provides benefits for Americans who become disabled, whether the disability occurs on or off the job. However, SSDI benefits are often limited. The average monthly benefit awarded in 2007 to disabled workers was \$1,054.⁷ This amount reflects the average earned-income history of the general population of newly disabled workers, which is substantially lower than the average earned-income of the subset of the population that typically purchases private disability insurance. The monthly SSDI benefits in our four scenarios range from \$1,700 to \$3,800, which reflect the higher assumed earned incomes. Although the SSDI benefit increases as earned income

⁶ Milliman (May 2009). *Group long-term disability offset study*. Society of Actuaries.

⁷ Annual Statistical Report on the Social Security Disability Insurance Program, Table 43 (2007). Available at http://www.ssa.gov/policy/docs/statcomps/di_asr/2007/index.html.

increases, the ratio of the SSDI benefit to earned income decreases, meaning that the relative protective value of the SSDI benefit is greater at lower incomes.

Qualification requirements for SSDI benefits are difficult. Individuals must be unable to engage in “any substantial gainful activity” as the result of the disability, and the disability must be expected to last 12 months or longer—or end in death. In addition, individuals must wait at least five months after the date of disability onset to become eligible to receive benefits. In recent years, only about 45% of initial applications from disabled workers for Social Security benefits have been approved.⁸

The following describes the major sources of disability benefits provided through private insurance programs:

Sick Pay and Short-term Disability

Most employees receive some form of sick leave from their employers, often totaling a few weeks per year at full pay. When the sick leave expires, employees may be covered by a group short-term disability (STD) program that would typically replace about 60% of pre-disability earnings for a period of three to six months. STD benefits are typically paid when the insured is unable to perform the duties of his or her occupation (a more liberal definition of disability than for the Social Security program). STD benefits are taxable to the employee when the premium is paid by the employer, which is generally the case. Some employers offer voluntary STD, where employees may choose to participate and pay their own premiums through payroll deduction.

California, Hawaii, New Jersey, New York, and Rhode Island require employers to provide STD coverage, with waiting periods of seven days and a maximum benefit duration of 26 to 52 weeks, depending on the state. The maximum disability benefit amounts under these programs are typically low. The percentage of earned income covered and the maximum benefit also vary by state. Employers in these states can opt out of the state plan, obtain coverage through private insurers, or self-insure. The STD coverage that they provide typically exceeds the statutory required minimum benefits.

Group Long-term Disability

Many employers, especially larger ones, provide group long-term disability (LTD) benefits to their employees. These plans typically replace about 60% of pre-disability earnings in the event of a disability that lasts longer than three to six months. Most often, benefits are paid when the insured is unable to perform the duties of his or her occupation during the first two years of disability. After two years of disability, however, most plans continue to pay benefits only if the insured is unable to perform the duties of any occupation for which the employee is suited by training, education, and experience, a definition more closely resembling that in the Social Security program. LTD benefits are taxable to the employee when the premium is paid by the employer, which is generally the case, and the amount of the benefit is offset (i.e., reduced) by the amount of benefits that the insured receives from Social Security or workers’ compensation. Some employers offer voluntary LTD, where employees may choose to participate and pay their own premiums through payroll deduction. In some cases, the voluntary LTD coverage is in lieu of coverage purchased by the employer. More frequently, voluntary LTD coverage allows the employee to supplement the LTD coverage provided by the employer.

⁸ Annual Statistical Report on the Social Security Disability Insurance Program, Table 60 (2007). Available at http://www.ssa.gov/policy/docs/statcomps/di_asr/2007/index.html.

Individual Disability

Some people elect to purchase an individual disability income (IDI) insurance policy, either because they are not covered by group LTD, or because they desire additional coverage in excess of that provided by a group LTD plan. The latter situation often arises when group LTD benefits for high-income workers are capped at an amount that does not provide sufficient income replacement. Definitions of disability vary for individual policies, but under many policies benefits are paid when an individual is unable to perform the duties of his or her occupation throughout the entire duration of a disability. This is a more liberal form of coverage than group LTD. The total pre-tax income replacement varies by the earned income level (lower incomes have higher pre-tax replacement ratios). The benefits are generally tax-free because the premium is often paid by the insured, meaning that the after-tax income replacement is even higher. When the individual also has group LTD, the combined LTD and IDI benefit often replaces 80% or more of earned income on an after-tax basis.

Impact of Various Disability Income Benefits

Social Security

For individuals who do not have disability insurance available through work or haven't purchased it on their own, the Social Security program provides the primary means of income replacement during a period of long-term disability. The tables in Figures 8 and 9 show how Social Security disability benefits can reduce the financial impact of disability for a period of disability lasting five years for each of the four scenarios. In these and subsequent tables, we assume that Social Security benefits begin 13 months after the individual cannot work, to allow for a typical SSDI application process and waiting period. However, in many situations the approval process may take substantially longer.

Figure 8 Present Value of Financial Impact of Disability (\$) Disability Period of Five Years				
Benefits During Disability	Single Middle Income	Married Middle Income	Single High Income	Married High Income
None	230,372	197,703	734,270	499,947
Social Security Only	135,209	86,584	602,443	367,702

Figure 9 Present Value of Financial Impact of Disability Disability Period of Five Years (Total Financial Impact / Pre-disability Household Income)				
Benefits During Disability	Single Middle Income	Married Middle Income	Single High Income	Married High Income
None	4.61	2.64	3.67	1.67
Social Security Only	2.70	1.15	3.01	1.23

The presence of Social Security benefits reduces the financial cost of disability 18% to 56% in these scenarios, depending on the individual's income level and marital status. The reality, however, is that a majority of individuals may not qualify for Social Security benefits because of the restrictive nature of the program's definition of disability. This is particularly true for shorter periods of disability and for conditions that are less medically severe. Even if

someone qualifies for Social Security benefits, the tables in Figures 8 and 9 illustrate that the remaining portion of the financial cost of disability is still substantial and can cause extreme financial hardship.

The table in Figure 10, derived from research by the Society of Actuaries, shows the proportion of group LTD insurance claimants who also qualify for Social Security benefits, based on the length of time their disability has lasted:

Duration of Disability	Percentage
1-6 Months	4.3%
7-12 Months	20.2%
13-18 Months	37.9%
19-24 Months	50.3%
Year 3	62.9%
Year 4	77.1%
Year 5	83.5%
Years 6+	86.8% to 90.7%

Because this data represents a population of individuals receiving benefits from group LTD programs, the absolute numbers do not necessarily reflect the American population as a whole. Nonetheless, the pattern is informative. A person's likelihood of qualifying for Social Security benefits increases with the length of his or her disability. The likelihood of qualifying for Social Security benefits also increases with age. Based on our analysis of industry group LTD experience, less than 45% of LTD claimants disabled between 40 and 50 with disabilities lasting more than 90 days will qualify for SSDI benefits. This proportion is somewhat higher than the U.S. population in general (38%-39%), because it applies to a group of people who are sufficiently disabled to qualify for LTD benefits.

Private Group Disability Insurance

The tables in Figures 11 and 12 show the financial impact of disability over a five-year period by sequentially adding group STD and group LTD. The STD and LTD benefits are assumed to be 60% of pre-disability income but are reduced by any Social Security disability benefit.

Benefits During Disability	Single Middle Income	Married Middle Income	Single High Income	Married High Income
None	230,372	197,703	734,270	499,947
Social Security Only	135,209	86,584	602,443	367,702
Add STD	127,890	79,996	575,558	345,743
Add LTD	75,575	57,375	252,794	98,837

Figure 12 Present Value of Financial Impact of Disability (% Total Financial Impact / Pre-disability Household Income) Disability Period of Five Years				
Benefits During Disability	Single Middle Income	Married Middle Income	Single High Income	Married High Income
None	4.61	2.64	3.67	1.67
Social Security Only	2.70	1.15	3.01	1.23
Add STD	2.56	1.07	2.88	1.15
Add LTD	1.51	0.77	1.26	0.31

The tables in Figures 11 and 12 assume that the disabled individuals in these scenarios are eligible for Social Security benefits, and that their LTD benefits are reduced by the amount of the Social Security benefit. However, as discussed above, many individuals may not qualify for Social Security benefits. In those cases, the value of the LTD benefit would increase to replace the absent Social Security benefit. In other words, the presence of LTD coverage, with a definition of disability that is somewhat broader than the definition used in the Social Security program, protects the insured from the result of being declined for Social Security benefits.

The tables in Figures 13 and 14 compare the financial impact of disability when the disabled individuals are assumed to be receiving group STD and LTD benefits in situations where the individuals do and do not qualify for Social Security benefits.

Figure 13 Present Value of Financial Impact of Disability (\$) Disability Period of Five Years				
Benefits During Disability	Single Middle Income	Married Middle Income	Single High Income	Married High Income
None	230,372	197,703	734,270	499,947
STD & LTD – No Soc Sec	110,005	82,037	309,033	109,366
STD & LTD – With Soc Sec	75,575	57,375	252,794	98,837

Figure 14 Present Value of Financial Impact of Disability (% Total Financial Impact / Pre-disability Household Income) Disability Period of Five Years				
Benefits During Disability	Single Middle Income	Married Middle Income	Single High Income	Married High Income
None	4.61	2.64	3.67	1.67
STD & LTD – No Soc Sec	2.20	1.09	1.55	0.36
STD & LTD – With Soc Sec	1.51	0.77	1.26	0.31

As seen in Figures 13 and 14, the reduction in the financial impact of disability for persons with group STD and LTD benefits is larger when they qualify for Social Security benefits than when they do not, in spite of the reduction in the group LTD benefit, for the following reasons:

- Group STD and LTD benefits are fully taxable (because typically the employer has paid the premium) while the Social Security benefits are not taxable at lower income levels and only partially taxable at higher income levels.

- The disabled individual becomes eligible for Medicare 24 months after qualifying for Social Security benefits, which reduces the health expenditures significantly.
- Group LTD benefits are not reduced by cost-of-living increases in the Social Security benefit.

Although Social Security has a more restrictive definition of disability than private group disability plans and group LTD benefits are reduced by Social Security benefits, it is financially advantageous for a disabled individual with group LTD coverage to seek Social Security disability benefits.

The value of STD coverage is greater than it may first appear in the tables shown. The present value of STD benefits is small, because benefits are paid for only a few months. But these benefits are paid at a time when no other form of disability coverage (sick pay, Social Security, group LTD, or individual disability) is available. Thus, they fill an important gap in the coverages otherwise available, and may prevent a disabled person from having to rely solely on savings in the early months of a disability.

Private Individual Disability Insurance

Many people, including full-time workers, business owners, and the self-employed, do not have any group LTD coverage and rely solely on individual disability income (IDI) coverage for their long-term disability income protection. In fact, data shows that 70% of all U.S. workers and 63% of full-time U.S. workers do not have long-term disability coverage through their employers.⁹

The tables in Figures 15 and 16 illustrate the financial impact of disability over a five-year time period if a disabled person has only an IDI policy. The IDI benefits illustrated in these tables represent the mid-range of benefits currently offered by individual disability insurers.¹⁰ However, some carriers offer higher benefits while others offer lower benefits. For the middle-income scenarios where the insured person has an annual earned income of \$50,000, the IDI benefit is \$33,600; for the high-income scenarios where the insured person has an annual earned income of \$200,000, the IDI benefit is \$96,900. These IDI benefits reflect the insured's earned income and the tax status of the benefits. Disability benefits are not taxable when premiums are paid by the insured (rather than by his or her employer), which is the more typical case for individual disability insurance.

Benefits During Disability	Single Middle Income	Married Middle Income	Single High Income	Married High Income
None	230,372	197,703	734,270	499,947
IDI – No Soc Sec	89,507	56,842	328,024	93,721
IDI – With Soc Sec	58,709	10,080	279,249	44,492

⁹ U.S. Bureau of Labor Statistics (March 2007). *National compensation survey: Employee benefits in the United States*. Available at <http://stats.bls.gov/ncs/ebs/sp/ebsm0006.pdf>.

¹⁰ Milliman (Beal, 2008). *Individual disability income insurance: 2008 survey of the U.S. market*. Available at <http://www.milliman.com>.

Figure 16 Present Value of Financial Impact of Disability (Total Cost / Pre-disability Household Income) Disability Period of Five Years				
Benefits During Disability	Single Middle Income	Married Middle Income	Single High Income	Married High Income
None	4.61	2.64	3.67	1.67
IDI – No Soc Sec	1.79	0.76	1.64	0.31
IDI – With Soc Sec	1.17	0.13	1.40	0.15

The tables in Figures 15 and 16 show the financial impact of disability when a disabled individual is receiving IDI benefits both with and without SSDI benefits. The latter case assumes that the IDI benefit consists of a base benefit and a typical Social Insurance Supplement Rider benefit, the latter of which pays only if the disabled individual does not qualify for Social Security benefits.

Combination Private Group and Individual Disability Insurance

Many employers with group LTD plans also sponsor voluntary IDI coverage, which allows employees to purchase individual disability coverage that supplements their group LTD benefits. Under these supplemental or “buy-up” plans, the employee typically pays the premiums for the individual disability coverage through payroll deduction. When group LTD plans are present, insurance carriers may offer voluntary supplemental IDI policies with benefits that, in combination with the group LTD benefits, provide 80%-85% of annual pre-disability earned income. In these situations, the group LTD benefit is taxable while the individual disability benefit is non-taxable. The tables in Figures 17 and 18 illustrate the financial impact of disability when the individuals in the four scenarios are covered through a combination of group STD, LTD, and supplemental IDI benefits.

Figure 17 Present Value of Financial Impact of Disability (\$) Disability Period of Five Years				
Benefits During Disability	Single Middle Income	Married Middle Income	Single High Income	Married High Income
None	230,372	197,703	734,270	499,947
STD, LTD & supp IDI – No Soc Sec	65,985	38,015	229,746	30,076
STD, LTD & supp IDI – With Soc Sec	31,555	13,353	173,507	14,547

Figure 18 Present Value of Financial Impact of Disability (% Total Cost / Pre-disability Household Income) Disability Period of Five Years				
Benefits During Disability	Single Middle Income	Married Middle Income	Single High Income	Married High Income
None	4.61	2.64	3.67	1.67
STD, LTD & supp IDI – No Soc Sec	1.32	0.51	1.15	0.10
STD, LTD & supp IDI – With Soc Sec	0.63	0.18	0.87	0.05

Through the combination of group STD, LTD, and supplemental IDI, the financial impact of disability in these four scenarios is reduced by 68%-94% when individuals do not qualify for Social Security disability benefits and 81%-97% when they do. Taking advantage of the full range of private disability insurance provides the individual with the greatest protection against the dramatic financial impact of disability.

The table in Figure 19 compares the financial impact of disability for the combinations of disability coverage that are illustrated in the above tables.

Figure 19 Present Value of Financial Impact of Disability (\$) (% Total Financial Impact / Pre-disability Household Income) Disability Period of Five Years				
Benefits During Disability	Single Middle Income	Married Middle Income	Single High Income	Married High Income
None	230,372 (4.61)	197,703 (2.64)	734,270 (3.67)	499,947 (1.67)
SSDI Only	135,209 (2.70)	86,584 (1.15)	602,443 (3.01)	367,702 (1.23)
STD & LTD Only	110,005 (2.20)	82,037 (1.09)	309,033 (1.55)	109,366 (0.36)
IDI Only	89,507 (1.79)	56,842 (0.76)	328,024 (1.64)	93,721 (0.31)
STD & SSDI	127,890 (2.56)	79,996 (1.07)	575,558 (2.88)	345,743 (1.15)
STD, LTD & SSDI	75,575 (1.51)	57,375 (0.77)	252,794 (1.26)	98,837 (0.31)
STD, LTD & supp IDI	65,985 (1.32)	38,015 (0.51)	229,746 (1.15)	30,076 (0.10)
IDI & SSDI	58,709 (1.17)	10,080 (0.13)	279,249 (1.40)	44,492 (0.15)
STD, LTD, supp IDI & SSDI	31,555 (0.63)	13,353 (0.18)	173,507 (0.87)	14,547 (0.05)

The table in Figure 19 illustrates the potential impact that combinations of government and private disability insurance plans can have in reducing the financial impact of disability. Our assumptions and the tax status of the various disability benefits produce numerical results that make general conclusions about the relative protective value of the various combinations of disability benefits difficult. For example, the combination of IDI and SSDI benefits in Figure 19 provides a greater financial benefit of disability than the combination of STD, LTD, supplemental IDI, and SSDI benefits for all scenarios, except the married/middle-income scenario. The reader should be cautious in concluding that one specific combination of disability benefits will generally provide more or less protective value than another. The following considerations should also be taken into account when comparing the various combinations of disability benefits:

- Although the four scenarios were chosen to represent a reasonable range of demographic characteristics, the insured population is much more complex with respect to income, expenses, taxes, and demographics than can be adequately represented by four scenarios.
- The level of STD and LTD coverage in these scenarios was set at 60% of earned income, which is common among group disability plans, but many plans provide other levels of coverage, e.g., 55%, 67%.
- The level of IDI coverage in these scenarios was selected from the mid-range of available amounts offered by IDI disability carriers today, but many IDI carriers offer other levels of coverage, both higher and lower.
- Our discussion did not address the relative cost or value of the specific contractual provisions found in the various private disability insurance plans. These factors should be taken into consideration by any individual looking to obtain private disability insurance.

These caveats underscore the need for individuals to closely evaluate their specific disability income coverage options in order to ensure adequate financial protection.

Disability Benefits vs. Expenditures

Regardless of whether a person qualifies for Social Security benefits or chooses to allocate coverage among group and individual benefits, private disability insurance in its various forms provides crucial protection against the financial impact of disability. Using the financial impacts shown in the table in Figure 17, in which the individuals do not qualify for Social Security benefits, and the projected expenditures from the table in Figure 7, the table in Figure 20 illustrates how much easier it would be for an individual who has both individual and group coverage to cover the cost of a disability lasting five years than for a person with no insurance coverage.

Figure 20 Present Value of Financial Impact of Disability and Typical Expenses (\$) Disability Period of Five Years				
	Single Middle Income	Married Middle Income	Single High Income	Married High Income
Healthcare Expense	46,272	38,070	49,021	38,070
Pension Expense	9,394	14,091	37,577	56,365
Home Expense	68,266	93,605	189,430	189,430
Discretionary Expense	105,049	142,483	273,091	273,091
Other Expense	35,693	49,113	71,742	107,675
Total Expenses	264,674	337,363	620,861	664,631
Financial Impact of Disability*	65,985	38,015	229,746	30,076
* Assuming the individual qualifies for STD, LTD, and supplementary IDI benefits, but not Social Security.				

With that said, even with the presence of disability insurance, a material financial cost of disability typically remains, and various steps may need to be taken to cover that cost. However, the total financial impact of disability is now well below the present value of total expenses during the disability. It is also well below the category of discretionary expenses, meaning that the financial decisions faced by a disabled person, while perhaps unpleasant, will be more bearable than for someone who is unable to afford basic necessities such as healthcare, food and housing. Additionally, the likelihood of bankruptcy is significantly reduced.

V. The Non-financial Impact of Disability

A disability has many repercussions beyond the financial consequences of lost income and higher expenses. The items discussed in this section are only a few examples of the non-financial impacts of disability. While these can be difficult to articulate and quantify, they are often tied to an individual's overall happiness and sense of self-worth, and can be exacerbated by the financial strain that occurs when a disabled person is overwhelmed with expenses in the absence of sufficient income. The availability of benefits from government programs and private insurance during a period of disability can thus help, not only to cover the financial cost of disability, but also to mitigate the severity of the non-financial costs discussed in this section.

Obstacles to Returning to Work

Because the financial costs of a disability are staggering in the absence of disability benefits, and may still be significant even with disability benefits, it is critical for an individual to return to work as soon as it is physically possible. Returning to work becomes less likely the longer a person remains disabled. Advances in medical treatments have facilitated the return to work before the individual has fully recovered from the disabling condition. Regardless, returning to one's occupation may be a difficult road for a number of reasons.

A study by Unum Group¹¹ explores the needs and difficulties faced by cancer survivors returning to work after a period of disability. Unum's study describes the challenges faced by cancer survivors, which are similar to the types of challenges facing many employees returning to work while recovering from a serious illness and still undergoing extended treatments, as follows:

The return to the workforce is integral to cancer patients and survivors, creating a sense of normalcy and control in the midst of an uncontrollable event. Many of these employees have an essential need to work not only for the emotional benefit but for financial reasons. The high cost of cancer treatment comes with significant out of pocket expenses sending individuals with cancer or those who have survived cancer back to the workplace out of economic necessity.

In returning to work while undergoing treatments, both the employee and employer must be aware that the employee may suffer symptoms of the illness and treatment for some period of time. These include fatigue, "chemo brain" (an impaired ability to concentrate), pain, and post-traumatic stress symptoms. As a result, the returning worker's productivity may be temporarily affected. In most cases, these effects are temporary and resolve in less than six to eight weeks following the end of treatment.

Ideally, a previously disabled person is able to return to his or her prior position with the same employer with the same income and benefits as before. However, that position may no longer be available even though the individual may be medically able to perform the duties. An employer that is large enough to fall under the Family Medical Leave Act is obligated to keep disabled individuals' prior positions (or comparable ones) available to them for the first 12 weeks of absence. After 12 weeks, their prior position may have already been filled by other people, and they may need to apply for other jobs within the same firms, or seek employment with other companies, possibly in other geographic locations.

It is not uncommon for an individual who has medically recovered from a disability to face the prospect of lower wages upon return to work, and/or the financial and emotional costs of relocating to another city or state to find

¹¹ Unum Group (2008). *Moving beyond: Cancer survivors at work*.

employment. Although new employment may provide medical insurance, any disruption in medical insurance can possibly invoke the pre-existing condition clause in the new coverage that will exclude any medical expenses associated with the earlier disability. The projections of the financial impact of disability discussed in the first two sections of this report do not include the additional financial costs associated with these possible situations.

Impact on Mental Health

Mental illness, such as depression, is one of the more prevalent causes of disabilities. It is also one of the most common consequences associated with becoming disabled. Symptoms of depression (e.g., feelings of sadness, loss of energy, sleep problems, increased irritability, difficulties in concentration, lack of interest in socializing) may be two to 10 times more likely to occur among people with disabilities.¹² People with disabilities are more likely to develop symptoms of depression for a variety of reasons:

- Their mobility within the home or community may be restricted, requiring them to rely on others to assist them in normal activities of daily living. As a result, they may become frustrated, angry, or feel helpless.
- They may find that many buildings and businesses are not accessible because they do not meet the guidelines of the Americans with Disabilities Act (ADA).
- Social barriers may be created because many people may be uncomfortable around those who are disabled.
- It may be more difficult to find employment because of physical limitations that are due to their disability.
- Dealing with medical symptoms associated with the disability as well as the excess healthcare costs may contribute to depression.

The presence of depression, even if being treated successfully, can impair or delay a disabled person's return to fully productive work.

Stress on Family Caregivers

Disabilities often require family members, particularly spouses, to provide special care and assistance to the disabled person. Many of the family caregivers have jobs and must seek some accommodation in order to care for the disabled family member. The FMLA obligates employers who fall under this act to allow employees to be absent from work up to 12 weeks per year to care for family members. However, in most cases such absences are unpaid, and the employee must use vacation time or forgo wages while absent. The financial projections in the earlier sections indicate that the cost of disability may be reduced if the spouse of the disabled individual is able to work, but do not take into account the financial strain associated with the spouse also acting as a caregiver.

The Web site of the Family Caregivers Alliance¹³ cites a number of studies on the financial and emotional stresses facing family caregivers:

¹² Thompson, K, Ph.D, *Depression and disability, a practical guide*. North Carolina Office on Health and Disability.

¹³ At <http://www.caregiver.org/caregiver/jsp/home.jsp>.

- Working caregivers often suffer many work-related difficulties because of their dual caregiving roles such as rearranging work schedules, decreasing hours at work, or taking unpaid leave.
- Studies report higher levels of depression and other mental health problems among caregivers than non-caregivers.
- Stress appears inversely correlated to income—lower incomes lead to greater stress.

A survey of working caregivers¹⁴ showed:

- 56% said they were less productive at work
- 51% said they had to take off during the work day
- 30% reported being absent for a full day
- 6% had to give up work entirely

There are a number of caregiving health services that may be available such as visiting home nurses. However, such services are expensive and add to the financial costs associated with the disability. To help covers such costs, many group LTD and IDI companies offer riders on their disability policies to provide additional benefits if the covered person is unable to perform two of six activities of daily living (ADL): bathing, dressing, eating, transferring, toileting, and continence. Such ADL riders have many features in common with long-term care policies but are designed to address very specific financial needs facing people with severe disabilities.

Risk of Divorce

There is a greater likelihood of a failed marriage when a spouse is disabled.¹⁵ Financial stress is one of the primary causes of divorce among all adults, which is compounded when a spouse becomes disabled. The lost income and higher expenses associated with a disability aggravate the normal financial stresses that face most families. The emotional stress and the risk of depression from a spouse becoming the primary caregiver for his or her disabled mate create additional pressures on a marriage.

According to a Louis Harris & Associates survey of disabilities for the National Organization on Disability, the rate of divorce among disabled adults has been increasing since 1984. The U.S. government's National Health Interview Survey of almost 50,000 households in 1994 showed that the proportion of disabled adults who were divorced or separated was almost 60% higher than the proportion for non-disabled adults.

¹⁴ AARP, "How employers can support working caregivers". Available at http://www.aarp.org/money/careers/employerresourcecenter/retention/how_employers_can_support_working_caregivers.html.

¹⁵ Kielborn, P.T. (May 31, 1999). "Divorce rate is higher among disabled, experts say." Available at <http://www.multiple-sclerosis.org/news/May1999/DivorceRateAmongDisabled.html>.

VI. Conclusions

The American public underestimates the risk associated with suffering a disability that eliminates the ability to work. As a consequence, most American workers have a poor understanding of the full impact a disability can have on an individual's life.

The financial cost a person faces as the result of a disability—equal to lost income and increased expenses—is extremely high, often many multiples of a disabled worker's annual pre-disability income or annual household income. For example, a 40-year-old single male earning \$50,000 per year who suffers a long-term disability lasting until age 65 faces a total cost of disability of nearly \$1 million, or about 20 times pre-disability earnings.

While the greatest contributor to this cost is the income that is lost when an individual is unable to work because of an illness or accident, the expenses that can arise for healthcare and other items related to the disability can add significantly to the cost.

The costs are also quite significant for short-term disabilities. The financial impact of a disability lasting two years is, on average, one to two times annual household income.

The costs associated with disability affect some more than others. The hardest hit include single individuals, who do not have a second household income they can rely on; lower-income individuals, because added expenses are greater relative to pre-disability income; and those who suffer longer-term disabilities, because both income and expenses tend to increase with inflation, raising the cost of disability over time.

Few individuals are fortunate enough to be able to cover these costs through personal savings alone, even for a short period of time. In the absence of any disability insurance, the financial costs associated with disability can quickly accumulate, forcing the disabled and their families to make difficult financial decisions, or even drastic lifestyle changes.

A disability not only affects finances, but also quality of life, posing obstacles to returning to work and raising the risk of mental health issues and divorce. While difficult to quantify, these circumstances can be exacerbated by the financial strain that occurs when a disabled person is overwhelmed by expenses in the absence of sufficient income.

Disability insurance provides valuable income replacement to help cover these costs and keep life on track for people who have become ill or injured and are unable to work. Private disability insurance plans (group or individual provided by an insurance company) can reduce the cost of a disability by 70%-80%. Supplemental individual disability coverage, in combination with the other employer-sponsored or government-provided insurance programs, can reduce the financial cost of disability by 80%-95%.

Financial help from the government is a possibility, but by no means a guarantee. State workers' compensation insurance covers disabilities that are work-related, but a vast majority of disabilities leading to lost income occur outside of work. The Social Security Disability Insurance program (SSDI) uses a strict definition of disability, which makes it more difficult to qualify for benefits. The average monthly payment award to disabled workers in 2007 was \$1,054. Although the segment of the population that purchases private disability insurance can expect to receive higher SSDI benefits based on their earnings history, the portion of lost income covered by the SSDI program is typically lower because of the progressive nature of the SSDI benefit formula. Thus, the relative value of the SSDI benefit is greater at lower income levels. The most effective way that working Americans can ensure they are

adequately protected is to take full advantage of coverage options offered by their employers or consider purchasing disability insurance on their own.

The risks and consequences of suffering a disability are real. It is important that working Americans take the time to investigate their disability insurance options and ensure they are protected from the financial and non-financial impact of a disability.

Appendix A: Projection Methods and Assumptions

The following points describe the projection methods and key assumptions used to project the financial cost of disability:

- An individual remains employed for 90 days after becoming disabled. Following 90 days, employment is terminated.
- In the scenarios where a married individual becomes disabled, we assume the spouse also earns an income and the spouse's income continues throughout the disability with annual increases for cost of living.
- Prior to disability, an individual has employer-provided medical insurance. Following a period of disability, this coverage is continued for 90 days during medical leave and for the following 18 months through COBRA. When COBRA benefits expire, an insured who received Social Security disability benefits is assumed to be eligible for Medicare coverage 24 months after qualifying for Social Security benefits. Other insureds are assumed not to have medical insurance after COBRA benefits expire. We assume that a working spouse of the disabled individual is able to obtain medical insurance through his or her employer.
- All increased expenses during a period of disability are shown in the healthcare category (where the most data was available). These expenses, which are largely based on Milliman's 2008 Health Cost Index™ (and increased by 10% to reflect an expected annual increase in medical expenses from 2008 to 2009), include not only medical care and health insurance premiums, but also home modifications, rehabilitation, in-home care, etc. They are based on average factors for disabled individuals and may not fully reflect the cost for an individual with an extremely severe type of disability. The following table shows the expected average annual employee and employer premiums for medical insurance in 2009, the average annual deductible and copay, and the average annual medical expense per family before medical insurance. These figures are based on a family with a husband, wife, and two children.

Estimated Average Annual Health Costs in 2009 Based on 2008 Milliman Medical Index™ Increased by 10% for Inflation	
Health Cost Category	Annual Average In 2009
Employee Premium	\$4,557
Employer Premium	\$12,321
Deductible & Copay	\$2,943
Medical Expense before Insurance	\$17,171

- The assumed medical inflation rate applicable to medical expenses and premiums in later years is 10%.

- The annual premium for medical insurance under COBRA paid by a disabled individual is assumed to be 35% of 102% of the combined annual average employee and employer premiums. This premium reflects the limits on COBRA premiums under the American Recovery and Reinvestment Act of 2009, which requires employers to pay 65% of the cost of COBRA insurance during the first nine months of COBRA. This subsidy phases out for individuals whose modified adjusted gross income is greater than \$125,000, or \$250,000 if married and filing joint returns. Individuals do not qualify for the COBRA subsidy if their adjusted gross income exceeds \$145,000, or \$290,000 if married and filing joint returns.
- During the first year of an individual's disability, medical expenses (before reimbursements under medical insurance) are assumed to increase by 200% over standard medical expenses and then grade down to a 50% increase in the third and later years of disability. Medicare is assumed to cover 75% of medical expenses beginning 24 months after qualifying for Social Security disability benefits.
- Federal and state income taxes during periods of disability are based on the individual's then-current income, meaning that they are typically much lower than taxes paid prior to disability, when income was much higher. The same deductions to taxable income are assumed to continue after disability, including deductible expenses (e.g., mortgage interest and real estate taxes). Federal taxes were based on the 2009 tax tables, and for simplification, federal income taxes were not adjusted for the alternative minimum tax. A portion of SSDI benefits are assumed to be taxable based on the 2008 instructions to IRS Form 1040.
- The primary Social Security disability benefits are based on the assumed average indexed monthly earnings history of the disabled individual relative to the historical average wage base earnings (\$106,400 in 2009). The following table shows the SSDI primary and dependent benefits (in 2009) for the four scenarios illustrated in this report.

Scenario	Pre-disability Annual Earned Income		SSDI Benefit (2009)			Total SSDI Benefit - % Pre-disability Annual Earned Income	
	Disabled Individual	Household	PIA	Dependent	Total	Disabled Individual	Household
Single Middle Income	\$50,000	\$50,000	\$20,241	\$0	\$20,241	40%	40%
Married Middle Income	\$50,000	\$75,000	\$20,241	\$10,121	\$30,362	61%	40%
Single High Income	\$200,000	\$200,000	\$30,093	\$0	\$30,093	15%	15%
Married High Income	\$200,000	\$300,000	\$30,093	\$15,047	\$45,140	23%	15%