

**SOCIAL SECURITY  
DISABILITY INSURANCE PROGRAM  
DISABLED WORKER EXPERIENCE**

ACTUARIAL STUDY NO. 125

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## INTRODUCTION

The Social Security Old-Age, Survivors, and Disability Insurance (OASDI) program makes monthly benefits available to insured workers and their families at retirement, death, or disability. The OASDI program consists of two separate and legally distinct parts. Retired workers, their families, and survivors of deceased workers receive monthly benefits under the Old-Age and Survivors Insurance (OASI) program. Disabled workers and their families receive monthly benefits under the Disability Insurance (DI) program.

The most recent work dedicated to analyzing the experience of disabled worker beneficiaries under the DI program is Actuarial Study #123, *Social Security Disability Insurance Program Worker Experience* (August 2015). That earlier study examined historical data with regard to disability incidence and benefit termination through calendar year 2014. A comprehensive analysis of termination activity of the DI rolls was also presented based on 100 percent worker data collected for the 5-year period 2006-10. The overall content of Actuarial Study #125, and the methods used to prepare those results, are consistent with those of the prior study; namely, disability incidence and benefit termination is examined through calendar year 2019, and a comprehensive analysis of termination activity is presented for the 5-year period 2011-15. Details of the underlying methodology for table construction are outlined in the appendix of this study.

While this study provides extensive information on recent actual DI disabled worker experience, it does not report on the projected future operations of the DI Trust Fund, nor does it provide information on other types of disability benefits administered by the Social Security Administration. Much information on these other topics is available in various publications on our website at [www.ssa.gov/OACT](http://www.ssa.gov/OACT). In particular, projections of the future actuarial status and financial operations of the OASI and DI Trust Funds are presented in the *Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* (see [www.ssa.gov/OACT/TR/2020/index.html](http://www.ssa.gov/OACT/TR/2020/index.html) for the detailed information on the 2020 edition of that report).



# SOCIAL SECURITY DISABILITY INSURANCE PROGRAM

## DISABLED WORKER EXPERIENCE

### I. ENTITLEMENT TO DISABILITY INSURANCE BENEFITS

The Social Security Old-Age, Survivors, and Disability Insurance (OASDI) program provides for monthly disability insurance benefits after the onset of a severe physical or mental impairment. To become entitled to such benefits a worker must:

- Be insured for disability under the Social Security Act;
- File a claim for disability insurance benefits;
- Meet the definition of disability set forth in the Act;
- Complete a five month waiting period; and
- Have not attained *normal retirement age* (see table below).

A worker’s cash benefit is classified as an *award* at the time of initial payment. Additional auxiliary benefits may also be payable to other family members based on the earnings record of the entitled worker. This study analyzes the experience of disabled workers of the Social Security Disability Insurance (DI) program as described under Title II of the Social Security Act.

**Scheduled Changes in Normal Retirement Age<sup>1</sup>**

Year of birth	Normal retirement age	Year attaining normal retirement age
1937 and earlier . . . . .	65	2002 or earlier
1938 . . . . .	65, 2 mos	2003-04
1939 . . . . .	65, 4 mos	2004-05
1940 . . . . .	65, 6 mos	2005-06
1941 . . . . .	65, 8 mos	2006-07
1942 . . . . .	65, 10 mos	2007-08
1943-54 . . . . .	66	2009-2020
1955 . . . . .	66, 2 mos	2021-22
1956 . . . . .	66, 4 mos	2022-23
1957 . . . . .	66, 6 mos	2023-24
1958 . . . . .	66, 8 mos	2024-25
1959 . . . . .	66, 10 mos	2025-26
1960 and later . . . . .	67	2027 or later

<sup>1</sup> Persons born on January 1 of any year should refer to the normal retirement age for the previous year. This table does not apply to widow(er) benefits.

#### A. Disability Insured Status

To qualify for Social Security benefits for themselves and their dependents, individuals must work in employment covered by Social Security or be self-employed for a certain period of time. Credit for this work is based on the amount of wages or self-employment income earned and is measured in quarters of coverage (QCs), or *credits*.<sup>1</sup>

<sup>1</sup> In 2020, a worker receives one credit (up to a maximum of four) for each \$1,410 of annual covered earnings. This amount is indexed each year by the increase in average wages, if any. For determining QCs, different rules apply to earnings before 1978, and a simplified method applies for the 1937-50 period.

Entitlement to any benefit depends on whether the number of credits earned by a worker is sufficient to meet various insured status requirements. To be considered for disability benefits, a worker must be *disability insured*. This requires having obtained a specific number of credits in recent quarters, as well as enough total credits to be *fully insured*—at least 6 and no more than 40 credits are required for this fully insured status.<sup>2</sup> For a worker age 31 or older, the recency-of-work test is satisfied if the worker has earned at least 20 credits during a 40-quarter period that ends with the quarter in which the disability begins.

A special recency-of-work test for younger workers provides an alternative to the 20/40 requirement. A worker who becomes disabled before the quarter in which he or she attains age 31 satisfies the special test requirement if credits have been earned for at least one-half of the quarters during the period beginning with the quarter after the quarter the worker attained age 21, and ending with the quarter in which the disability began. If this period contains 12 or fewer quarters—that is, if the disability begins in the quarter the worker attains age 24 or earlier—then a minimum of six credits must be earned in the 12-quarter period ending with the quarter in which the disability began.

Note that an individual who is disabled because of statutory blindness is not required to satisfy the recency-of-work test. Disability insured status is granted if the worker is fully insured only.

#### B. Filing an Application

An individual must file an application to become entitled to benefits. In general, a claimant may file for DI benefits at any time after onset of disability. A claimant who files after the first month he could have been entitled to benefits may receive retroactive benefits for up to 12 months immediately prior to the month of filing.

Retroactive benefits are also payable for any month of entitlement beginning with the month of filing and leading up to the month of award. The number of months of retroactive benefits paid in these instances ultimately depends on how long it takes to receive a favorable determination of disability. See Appendix L for details on processing time.

<sup>2</sup> A fully insured worker has at least one credit (whenever acquired) for each year starting with the year the worker attains age 22 and ending with the year before the year the worker attains age 62, becomes disabled, or dies (whichever occurs earliest)—credits are not required for years that are partially or fully within a period of disability.

A claimant may also file for benefits no later than 12 months after the month in which the disability ends. In these instances, retroactive benefits are payable only for those months of entitlement within the 12-month period immediately prior to the month of filing. For purposes of establishing a closed period of *disability freeze*<sup>3</sup>, there are exceptions where the claimant is allowed to file no later than 36 months after the month in which disability ends.

### C. Definition of Disability

For purposes of entitlement to DI benefits, *disability* is defined as the inability to engage in any substantial gainful activity (SGA) by reason of any medically determinable physical or mental impairment. The impairment must be expected to result in death or to last for a continuous period of at least 12 months—called the *duration requirement*. Specifically, the disability must be of such severity that the claimant is not only unable to perform previous work, but also unable to do any other kind of substantial gainful work that exists in the national economy, considering the claimant’s age, education, and work experience. It is irrelevant whether such work is available in the claimant’s immediate area, or whether the claimant would be hired upon applying for work.

SSA uses a five-step sequential evaluation process to decide whether the claimant meets the definition of disability. Claim processing for Title II benefits of the Act stops as soon as a determination—favorable or unfavorable—can be reached. See Appendix M for details on basis for decision.

**Step 1—Determine if claimant is engaging in SGA.** If the claimant is working and the work constitutes SGA, then the claimant is not disabled for Social Security purposes. Otherwise, the adjudicator continues with claim processing.

**Step 2—Determine if the impairment is “severe”.** The impairment or combination of impairments must significantly limit the claimant’s physical or mental ability to do basic work activities, and must also be expected to last 12 months or result in death. The adjudicator will rule against a claim of disability if the impairment is not severe. Otherwise claim processing continues.

**Step 3—Determine if the severity of the impairment(s) meets or medically equals a set of criteria in the Listing of Impairments.** The adjudicator will rule in favor of a disability if the impairment is counted among examples of impairments that the agency considers severe enough to prevent the claimant from engaging in SGA, and the duration requirement is met.

<sup>3</sup> Freeze provisions were enacted to preserve the rights of individuals who are under a disability. Under these provisions, a worker’s earnings record can be “frozen” at a time he or she qualifies for a period of disability, thereby preserving insured status and preventing loss of future disability or retirement benefits that would result from using zero or low earnings, during a period of disability, in the computation of benefits.

These examples are found in the listing of impairments<sup>4</sup>. Otherwise claim processing continues with the assessment of the claimant’s residual functional capacity (RFC) - the most the claimant can still do despite any limitations imposed by the impairment(s) - and proceeds to the medical-vocational stage of the determination process.

**Step 4—Determine if the claimant has the RFC to do his or her past relevant work.** If the RFC indicates that the claimant’s past work duties cannot be accomplished, usually as generally performed in the economy, then claim processing continues.

**Step 5—Determine if the impairment prevents the claimant from engaging in any other work that exists in significant numbers in the national economy.** The adjudicator will rule in favor of a disability if the claimant is unable to perform any other work given his or her RFC, age, education, and work experience, and the duration requirement is met. Otherwise the claimant is found to be not disabled for Social Security purposes.

The same definition of disability is applied to each of the following types of adult claimants<sup>5</sup>:

- Disabled worker;
- Disabled child age 18 or over based on a disability which occurred before age 22;
- Disabled widow(er) or surviving divorced spouse, age 50-59, of a person who died fully insured—for benefits payable after December 1990;
- Disabled adults and disabled children who attain age 18 under the Supplemental Security Income (SSI) program as described under Title XVI of the Social Security Act—this means-tested cash benefits program is also administered by the Social Security Administration (SSA).

### D. Waiting Period

The waiting period for DI benefits consists of five consecutive full calendar months beginning with the earliest full calendar month throughout which the worker satisfied both the disability insured requirements and definition of disability. Benefits are not payable during the waiting period. However, the waiting period is waived for individuals who had a prior period of disability which ended within five years of the current period of disability. In contrast, there is no waiting period for disability benefits under the SSI program.

<sup>4</sup> See [www.ssa.gov/disability/professionals/bluebook/AdultListings.htm](http://www.ssa.gov/disability/professionals/bluebook/AdultListings.htm).

<sup>5</sup> SSA uses special provisions for the evaluation of disability in cases of statutory blindness, and disabled widow(er) or disabled surviving divorced spouse benefits payable before January 1991.

## II. EXPERIENCE OF DISABILITY DETERMINATIONS

SSA takes applications for worker disability benefits over the internet, over the phone, or in person at one of more than 1,200 local field offices. State agencies make disability and blindness determinations under regulations containing performance standards and other administrative requirements. A claim may be denied for technical reasons, if the claimant:

- Is not disability insured;
- Is engaging in SGA;
- Dies before being disabled for five full months;
- Is not under normal retirement age (NRA).

Upon satisfying the technical aspects of the determination process, claims are generally forwarded to the state Disability Determination Services for medical determination<sup>6</sup>. The subsections below discuss in greater detail the following items: SGA, the impairment listings, residual functional capacity, the determination and appeals process, and the determination experience of the DI program.

### A. Substantial Gainful Activity (SGA)

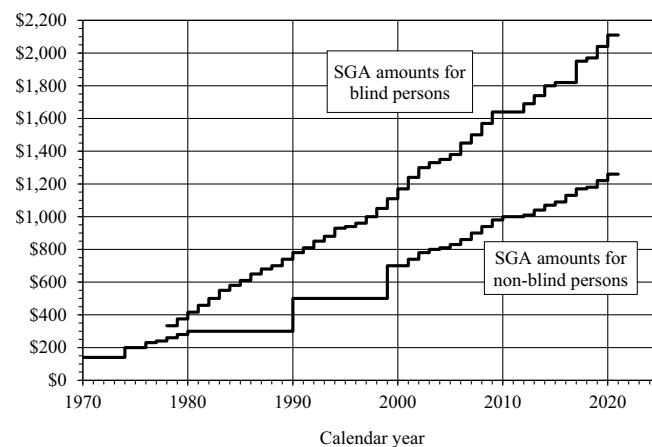
*Substantial work activity* involves doing significant physical or mental activities; *gainful work activity* is done for pay or profit. In determining whether work is SGA, the state agencies consider things such as the nature and quality of the claimant's work, whether special conditions or equipment are needed to do the work, the amount of time spent at work, and earnings. Special evaluation guidelines exist for self-employed persons—SSA must measure the value of the claimant's services to the operation of the business, number of hours worked, skills, efficiency, and responsibilities.

SSA establishes certain earnings criteria to indicate whether an individual is engaging in SGA. The monthly dollar amount associated with defining SGA is specified in Federal regulations, and was originally set at \$100 at the inception of the DI program. This amount was updated on an ad hoc basis until January 2001, at which time the regulations were revised to provide for annual indexing of the SGA level based on the increase in average wages. From 1990 through 2000, the SGA level actually consisted of a primary amount and a lower secondary amount. Earnings above the primary amount ordinarily demonstrated SGA, whereas earnings less than the secondary amount demonstrated lack of SGA; earnings between the two amounts required consideration of all circumstances related to work activity. This tier structure was discontinued beginning in

<sup>6</sup> Exceptions to this process may apply. In particular, the claim may not need to be forwarded to a state agency if the claim recently had a favorable disability decision on a prior claim. This applies in particular to individuals who were disabled SSI recipients prior to filing for OASDI benefits. In these cases, the individual is deemed to be disabled.

2001. Since 1977, blind persons have been subject to a separate SGA amount.<sup>7</sup> Figure 1 shows a history of these SGA amounts.

**Figure 1.—Substantial Gainful Activity Amounts for the Disability Insurance Program 1970-2020**



### B. Listing of Impairments

To establish a disability, claimants must provide sufficient evidence of any medical condition in the form of symptoms, clinical signs, and laboratory findings. As mentioned in the description of Step 3 of the sequential evaluation process outlined in section I, SSA's *Listing of Impairments* is used to determine if the condition satisfies all relevant criteria for a specific listing or is medically equivalent to a specific listing. The listings are a set of medical evaluation criteria in the Federal regulations that describe physical and mental conditions which are so severe that it is presumed that individuals whose medical conditions meet or equal these criteria are unable to do any gainful activity (and are therefore considered disabled), regardless of their age, education, or work experience. The listings are arranged by body system (musculoskeletal, cardiovascular, mental, etc.) and include both diagnostic and severity criteria.

Many individuals are found to be disabled even though their impairments fail to meet the level of severity detailed in the listings. In these cases, an individual's medical condition is evaluated in conjunction with age, education, and job skills. These *vocational factors* are given increasing weight with the advancing age of the worker, and are particularly significant in determining disability among workers age 50 or older.

<sup>7</sup> As of 2020, a blind individual earning over \$2,110 per month (net of impairment-related work expenses) is ordinarily considered to be engaging in SGA. The comparable amount for non-blind individuals is \$1,260 per month.

### C. Residual Functional Capacity (RFC)

Impairments and related symptoms, such as pain, may limit the ability to work. Residual functional capacity measures the most an individual can do given the claimant's physical and mental limitations. Careful assessment of RFC is the foundation of Steps 4 and 5 of the sequential evaluation process. Limited ability to perform certain physical demands such as sitting, standing, walking, lifting, carrying, pushing, pulling, reaching, handling, or stooping may reduce the ability to do work. Similarly, a limited ability to carry out certain mental activities like understanding, remembering, following instructions, or responding appropriately to supervision may reduce the ability to do work.

Along with RFC, age and education play a vital role in Step 5 of the evaluation process. When it comes to age, it is generally considered that younger persons (under 50) will be able to adjust to other work. Greater consideration is given to age and education for those approaching advanced age (50-54); and it is assumed that persons of advanced age (55 or older) are significantly hindered by vocational factors in their ability to adjust to other work.

### D. Determination and Appeals Process

Regulations describe the process of administrative review performed by the aforementioned state agencies, referred to as the Disability Determination Services (DDS), as well as the Office of Hearings Operations (OHO), and the Office of Appellate Operations (OAO). The DDS develops medical evidence and renders the initial determination of whether the claimant is disabled or blind under the law. If dissatisfied with the initial DDS decision, the claimant may request further administrative review by the DDS, OHO, OAO, and beyond to the federal courts. The review process consists of several steps, which must be requested within specified time intervals, and in the following order:

- *Initial determination.* This is the original determination made by the DDS regarding entitlement to benefits.
- *Reconsideration.* If dissatisfied with an initial determination, the claimant may ask the DDS to reconsider it.
- *Hearing before an administrative law judge (ALJ).* If dissatisfied with the reconsideration determination, the claimant may appeal to OHO and request a hearing before an ALJ.
- *Appeals Council (AC) review.* If dissatisfied with the decision of the ALJ, the claimant may request that the OAO review the decision. This constitutes the administration's final decision.

- *Federal court review.* If dissatisfied with the administration's final decision, the claimant may request judicial review by filing an action in a Federal district court.

In general, appeals must be filed within 60 days after the date the claimant receives notice of the previous determination or decision. The claimant or a representative, such as an attorney, may submit new material evidence supporting the claim during any step of the review process. Failure to appeal a determination or decision within the stated time period will generally result in loss of the right to any further administrative or judicial review. Exceptions are made for the failure to timely file an appeal, in particular if good cause exists for such late filing.

Many factors exist that affect the number of disability claims filed as well as the rate at which these claims are allowed or denied. However, the impact of any one factor is difficult to gauge. In general, economic, demographic, and administrative factors all have a direct effect on the size and scope of the DI program. Below is a list of determinants which can significantly influence the number of claims filed and/or the rate of favorable determinations<sup>8</sup>:

- The level of employment in the U.S. economy;
- The level or "attractiveness" of DI benefits vis-a-vis loss of income;
- Level of the SGA amount;
- Changes in labor force participation or shifts in part-time work which can affect insured status;
- Population growth and demographic shifts such as the aging of the baby-boom generation;
- Technological advances that enhance the ability to work;
- Medical advancements or breakthroughs in the treatment of specific disorders;
- Changes in regulations or methods used to determine medical eligibility;
- Revisions to disability guidelines or impairment listings;
- Amount of administrative funding to process caseloads and backlogs;
- Level of OHO, OAO, and Federal court involvement in the appeals process;
- Results of appeals and class action suits challenging SSA's interpretation of the law;
- Actions by Federal, State, and local governments to increase program awareness or encourage enrollment.

<sup>8</sup> For discussions on these topics, the reader is referred to *Trends in the Social Security and SSI Disability Programs* (Muller et al., August 2006).



## ***E. Determination Experience of DI Program***

**Table 1** presents data on the disposition of DI disabled worker claims across the various adjudicative stages of medical review, for calendar years 2009-2019. The data are tabulated by year of filing and adjudicative level of review, as well as program involvement—showing claims for DI benefits only or concurrent filing for DI and SSI benefits. Although both programs use the same definition of disability for adults, eligibility for SSI benefits is further dependent upon the claimant’s countable assets and income, which may include DI benefits, as well as other factors.

The aging of the baby-boom generation continues to contribute to the large number of DI disabled worker claims. Following the economic recession of 2007-09 and associated high rates of unemployment, the number of claims forwarded to the DDS for DI disabled worker benefits peaked at 1.84 million in 2010. Improving economic conditions appear to have affected applications from 2011 through 2019. As employment levels improved, the annual number of DI disabled worker claims decreased 31% to 1.26 million in 2019. This decrease may have been magnified and prolonged because some of the additional claims during the recession would have occurred in 2011-19 had the recession not pulled them into the earlier period. Disability claims tend to decrease as people re-enter the labor force. However, a persistently low level of labor force participation may indicate that long-term unemployment has caused individuals to stop looking for work and drop out of the labor force. This in turn may adversely affect the recency-of-work test for DI insured status and the ability to qualify for DI benefits. The labor force participation rate is also affected by a higher level of self-employment as well as growth in the number of independent contractors and freelancers. These types of workers may or may not be counted among the labor force.

### ***DDS Initial Determinations***

As shown in Table 1, the number of favorable initial determinations as a percentage of total claims processed steadily decreased from 37.1% in 2009 to 32.9% in 2015 before rising to 33.6% in 2017. Initial and reconsideration determinations for claims filed in 2018-19 are still incomplete. The youngest of the baby-boom generation has reached their mid 50s where high incidence of musculoskeletal, cardiovascular, and cancer disorders is likely. Roughly one-third of the baby-boom generation has reached normal retirement age as of 2019. The appeal rate of initial denials fluctuates around 55%.

Allowance rates tend to be much lower among those concurrently filing for DI and SSI benefits than those filing for DI benefits only. This may be due to differences in the composition and economic status of the filers. Concurrent filers tend to be of lesser means (reflective of the nature of the SSI program) and are thus more likely affected by changes in the economy.

Often the only alternative to unemployment is to seek aid from Federal, State, or local programs. Therefore, concurrent filers may have less severe disabilities, may provide less evidence of impairment, or are less likely to afford legal representation. The result is a lower proportion of allowances.

For years with pending workloads at the initial and reconsideration levels, it is likely that the allowance rates will ultimately be higher than those shown in Table 1. This is due to the fact that denials are processed more quickly than allowances at these stages, leaving a higher percentage of cases that will ultimately be allowed in pending workloads.

### ***DDS Reconsideration***

After a less-than-fully-favorable initial determination, a claimant may appeal for a reconsideration at the DDS. Allowance rates at the reconsideration level have been very consistent. Although reconsideration is *de novo*<sup>9</sup> in concept, it is similar to the initial determination in that it is mostly a “paper review” process where claimants are rarely observed by the decision-maker. Assuming some uniformity among the initial decision-makers, it follows that initial denials are overturned at reconsideration in only a relatively small proportion of cases appealed.

### ***Appeals Beyond DDS***

Claimants wishing to appeal a reconsideration determination may request a hearing before an ALJ. Since the interpretation of evidence in assessing disability can be highly subjective, overturned decisions at OHO or OAO and beyond occur frequently. Factors that contribute to the high reversal rate include:

- A group of decision-makers different from those at the initial and reconsideration stages;
- Changes in the nature and degree of the claimant’s impairment over time;
- The claimant reaching the age thresholds of 50 or 55 where age is considered to seriously affect the claimant’s ability to adjust to other work;
- A much higher use of legal representation and the opportunity to submit new material evidence supporting the claim; and
- Initial face-to-face contact with decision-makers.

### ***Miscellaneous Items***

To lend insight into the data presented in Table 1, this section discusses some changes in the disability process that occurred over time. Beginning in the late 1990s SSA undertook the testing of a variety of alternative approaches to the disability determination process with the goal of streamlining the process

<sup>9</sup> That is, a case is reviewed in its entirety and a new decision is made unrelated to the initial decision.

while still providing accurate decisions as early as possible. One of the largest such tests has been referred to as the *Prototype Model*. Major features of this model included providing additional authority for the DDS examiners in making initial disability determinations, and the elimination of the reconsideration step in the appeals process. This model was run in 10 States through 2018, and represented roughly 25% of the initial disability determination workload<sup>10</sup>. The results shown in Table 1 reflect a mixture of experience combining the standard decision process with the prototype process, as well as other smaller test processes.

In the past, public pressure has surfaced in controversial areas. Changes in regulations, standards, and methods used to determine the severity of a disability—sometimes in response to legislation or legal suits—have shaped DDS determinations, OHO and OAO decisions, and SSA policy in general. Major topics for deliberation have included:

- Mental impairment issues;
- Obesity;
- Drug addiction and alcoholism;
- The amount of leverage given to allegations of pain;
- Evaluation of musculoskeletal and circulatory disorders;
- Statements by treating physicians in the absence of clinical evidence; and
- The use of vocational factors in the absence of a single debilitating impairment.

Other developments in the disability area deserve mention. The *electronic disability (eDIB)* process has substantially streamlined the storage and processing of claim data. As of January 2006, all state DDSs had begun using electronic disability folders. Furthermore, beginning in August 2002, claimants have been able to apply for disability benefits online.

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<sup>10</sup> AL, AK, CA (L.A. North and West branches only), CO, LA, MI, MO, NH, NY, PA. The *Prototype Model* was phased out over the period January 2019 - April 2020.

The electronic environment allowed SSA to develop two fast-track processes to allow expeditious determinations of certain claims. The *quick disability determination (QDD)* process uses a predictive model to identify claims that have a high potential of allowance, and for which medical evidence can be easily obtained. Claims are automatically referred from the field office to the DDS with the aim of completing the determination expeditiously.

Similar to QDD but having slightly less complex “scoring” criteria is the *compassionate allowance (CAL)* initiative, which is designed to quickly identify diseases and conditions that are highly likely to qualify under the Listing of Impairments even with minimal, but sufficient, medical information. If the condition does not strictly meet these criteria, it is not designated as a CAL case. For the rollout of the initiative in the fall of 2008, 50 conditions were selected to meet the CAL guidelines. The list has since been expanded to include over 230 conditions such as early-onset Alzheimer’s disease, spinal cord injuries, and various cancers. A CAL case is identified solely on the claimant’s allegation of a disease or other medical condition that appears on the CAL list<sup>11</sup>.

The fast-track initiatives represent a relatively small proportion of total DI claims filed. SSA identifies roughly 160,000 initial-stage QDD claims (includes claims for Title II disabled auxiliary or survivor benefits and Title XVI claims) each fiscal year. This is approximately 7% of DI claims. A QDD claim may concurrently be a CAL claim. Approximately 60,000 of the above mentioned claims are also CAL claims. Additional claims that are CAL-only totaled 17,100 in FY 2018 and 17,800 in FY 2019. Together, fast-track claims make up roughly 8% of total DI claims.

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<sup>11</sup> A complete list of CAL conditions is available at [www.ssa.gov/compassionateallowances/conditions.htm](http://www.ssa.gov/compassionateallowances/conditions.htm).

### III. EXPERIENCE OF DISABILITY INCIDENCE AND AWARDS

#### A. History

Since the payment of the first disability cash benefits in July 1957, the characteristics of the DI program have been shaped by congressional action, public opinion, and court rulings. Program fundamentals such as the definition of disability, the entitlement process, the level of benefits, and the review process for current beneficiaries ultimately determine program cost.<sup>12</sup> Prior to 1960, the DI program applied only to workers age 50 or older. Prior to 1965, a claimant needed to be permanently disabled to qualify for benefits. The *Social Security Amendments of 1967* (Public Law 90-248) eased the insured status requirements for persons under age 31, allowing a substantial number of young beneficiaries to enter the rolls. Then beginning in 1970, program growth began to accelerate for a number of reasons (see table).

The introduction of the Black Lung program (1970) and the SSI program (1974), and a severe economic recession (1974-75) led to hundreds of thousands of new DI claims. In particular, the SSI program requires applicants to apply for all benefits from other programs to which they may be entitled—including DI—as a condition of eligibility for SSI. Benefits from entitlement to these programs may partially or completely offset SSI benefits. As expediency in processing applications was naturally given high priority, the fraction of pre-effectuation reviews of DDS initial allowances by the central office fell to roughly 5% in 1972 from 70% before 1972. This resulted in far more effectuations of allowances than would have otherwise occurred.

The automatic indexing of benefits by the cost-of-living adjustment (COLA) legislated in 1972 contributed to a dramatic increase in replacement rates. The ratio of annual benefits to past earnings rose from 50% to roughly 70% by the end of the decade. Not only was the agency paying out more in benefits, but it was thought that high replacement rates made benefits more “attractive”, thus providing incentive to file among individuals with a possible qualifying disability. And to those already on the DI rolls, high replacement rates may have created disincentive to leave the program and return to work.

Another trend seen in the early 1970s was the greater tendency of applicants to appeal an unfavorable decision. This significantly increased the number of awards made at the reconsideration and hearings levels, and further contributed to the sharp increase in awards from 1972-76.

<sup>12</sup> For further discussions on the history of the DI program, the reader is referred to the *50th Anniversary of the Social Security Disability Insurance Program* (Social Security Bulletin Vol. 66, No.3 2005/2006) and *Social Security Disability Insurance at Age 60: Does It Still Reflect Congress’ Original Intent?* (Social Security Issue Paper No. 2015-01, September 2015).

**Disabled Worker Benefits Awarded**  
(1957-1995 Social Security DI disability experience)

Year of award	Total
1957	178,802
<sup>1</sup> 1958	131,382
<sup>2</sup> 1959	177,811
1960	207,805
1961	279,758
1962	250,634
1963	223,739
1964	207,592
1965	253,499
1966	278,345
1967	301,359
1968	323,154
1969	344,741
1970	350,384
1971	415,897
1972	455,438
1973	491,616
1974	535,977
1975	592,049
1976	551,460
1977	568,874
1978	490,809
1979	440,519
1980	420,276
1981	381,016
1982	336,055
1983	428,461
1984	409,970
1985	416,103
1986	424,877
1987	420,295
1988	415,331
1989	430,678
1990	472,103
1991	540,794
1992	642,089
1993	637,388
1994	631,873
1995	645,645

<sup>1</sup> January-November.

<sup>2</sup> Includes December 1958.

Source: *Annual Statistical Supplement to the Social Security Bulletin* (1957-74); SSA administration records (1975-95). See Table 3 for awards in 1996 and later.

In an effort to bring the cost of disability benefits under control and stabilize replacement rates, the *Social Security Amendments of 1977* (Public Law 95-216) revised the formula for determining benefits awarded in 1979 and later. Under the new calculation, the replacement rate for the average earner was projected to remain stable at around 40%. The *Social Security Disability Amendments of 1980* (Public Law 96-265) also had a significant impact on the DI program. The 1980 amendments introduced a more restrictive limit on the total monthly amount of Social Security benefits payable on a disabled worker’s account—allowing for higher total family benefits under the old-age program as compared to the disability program. For those eligible, this provided an incentive to apply for or switch to old-age benefits in lieu of disability benefits.

In addition, the amendments mandated DDS performance standards and a pre-effectuation review of 65% of initial DDS allowances. This led the DDSs to give more careful consideration to allowances, and increased the chances of not effectuating an initially favorable determination.

The most controversial provision of the 1980 amendments was the requirement that SSA conduct a medical continuing disability review (CDR) at least every three years for beneficiaries whose disability may not be permanent. The termination of a large number of beneficiaries (particularly among the mentally impaired) was met with intense public outcry. A temporary moratorium was placed on the review of the disability rolls pending a thorough review of the standards for evaluating certain mental impairments. Although many of those terminated were returned to the rolls through the appeals process, awards continued to decline steadily from 1977-82 prompting SSA's disability determination policies to come under fire through court appeals and class action suits.

By 1984, DI program policy had undergone another reversal. In response to the clamor over certain provisions of the 1980 amendments, Congress passed the *Social Security Disability Benefits Reform Act of 1984* (Public Law 98-460). Provisions of the Act include: revised mental impairment standards; increased emphasis on treating physician opinion; emphasis given to the combined effects of multiple impairments in the absence of a single severe impairment; required proof of medical improvement prior to termination of benefits during a medical CDR; and standards to evaluate pain.

One significant pattern that emerged following the 1984 amendments involved beneficiaries with mental impairments. The revised listings reduced the weight given to medical factors and put greater emphasis on functional capabilities. By 1988, the proportion of awards for mental impairments had exceeded 20%, roughly twice the proportion experienced in 1982.

The early 1990s brought a period of rapid growth. The number of awards to disabled workers over 1991-95 were more than 40% higher than the previous 5-year period (1986-90). Amidst a recession during which the unemployment rate rose above 7%, mental disorders continued to grow, comprising more than one-quarter of new awards by 1992. In partial response to this rapid growth, Congress enacted the *Contract with America Advancement Act of 1996* (Public Law 104-121), which provided for dedicated funding to conduct medical CDRs, and a change in policy for drug addiction and alcoholism to exclude from eligibility individuals for whom DA&A is a materially contributing factor in disability.

The *Ticket to Work and Work Incentives Improvement Act of 1999* (Public Law 106-170) established the Ticket-to-Work program, enacted expedited reinstatement provisions for beneficiaries terminated due to returning to work, and increased the

period of extended Medicare coverage for disabled beneficiaries after a work-related termination.

There were other notable events that shaped the experience of disability incidence. In 1999, obesity disorders were eliminated from the listings. In 2001, SSA discovered several hundred thousand SSI recipients who were eligible for DI benefits. Some of these SSI beneficiaries had become disability insured because of earnings while receiving SSI, for others, insured status was not determined or was determined incorrectly. SSA completed processing of this *special disability workload (SDW)* in 2011, which on average added roughly 20,000 disabled worker awards per year over the 2003-10 period. In 2002, SSA issued a new musculoskeletal listing. In 2003, the legislated increase in the normal retirement age began with those attaining age 65 in that year. DI worker awards at ages greater than 64 increased accordingly. The large spike in awards in 2008-10 followed by the decline in 2011-16 reflects the severe economic recession which began in 2007 and the gradual recovery that followed.

## **B. Diagnostic Group Experience**

**Table 2A** shows the distribution by impairment for awards to DI disabled workers. The leading diagnostic categories for disability entitlement vary by gender and year of award. The share of musculoskeletal disorders has increased steadily since the mid 1990s and has been the largest single category of impairment since 2003. For 2004-2008, musculoskeletal disorders accounted for 28.4% of awards. Over the 5-year period 2009-13, 33.7% of awards were attributable to this category. For 2014-18, musculoskeletal disorders accounted for 36.6% of all awards. In 2018, the musculoskeletal category exceeded 40% of female disabled worker awards.

Mental impairments rank second in overall percentage of awards to disabled workers, but were on a slight downtrend proportionally from 2002-16. Mental disorders were the leading cause of disability among each sex until 1996 when they were surpassed by musculoskeletal impairments. A slight jump in mental disorders occurred over 2001-05 due, in part, to the processing of the SDW. Many of the resulting awards from this misplaced cohort were for individuals diagnosed with a mental disorder. For 1996-2008, mental disorders accounted for 23.4% of awards. For 2009-13, this category accounted for 19.6% of awards. Over the 5-year period 2014-18, mental disorders had declined to 15.0% of awards.

An increase in the proportion of musculoskeletal awards accompanied by a decrease in the proportion of mental awards is reflective of the prevailing demographic and economic conditions of the past decade. The aging baby-boom generation and 2007-09 recession led to a predictable increase in the overall number of disability claims. This resulted in a higher number of arthritic, back, and bone disorders as claimants progressed through the most disability-prone years of age 50

and older. In subsequent years, improving economic conditions resulted in an overall drop of disability awards, however, the proportion of musculoskeletal awards continued to increase as the baby-boom generation continued to age.<sup>13</sup> Additionally, more sustainable working conditions for individuals with mental or other impairments may reduce the overall number of disability awards outside of musculoskeletal disorders—as evident in the falling number of mental disorders. It may be that the current work environment is more accommodative to people with certain types of impairments, reducing the overall number of total awards and thus increasing the proportion of musculoskeletal awards.

Among males, cardiovascular disorders remain the third leading cause of disability, accounting for over 13% of awards over the last 10 years. Cancers are the third leading cause for females and fourth for males accounting for roughly 11% of total awards. There are nearly five times as many cardiovascular impairments among those age 50 or older as among those age 35-49; and almost four times as many cancers for the same age comparison.<sup>14</sup> This concentration at the older ages is expected to continue but is currently magnified by the fact that the baby-boom generation is now in their mid-50s or older.

Cancer, nervous system, and respiratory disorders rank higher among females, whereas cardiovascular disorders and injuries rank higher among males. The impairment listings were changed in 1999 to eliminate awards based solely on obesity, accounting for the large decline in the percentage of nutritional and metabolic impairments beginning in 2000.

**Table 2B** shows the distribution by impairment for DI disabled workers in current-payment status. Similar to Table 2A, categories are rank-ordered by average percentage of impairments on the DI rolls over the 5-year period 2014-18. Due to differences in mortality and recovery rates, as well as age distribution, among the different types of impairments, the current pay ranking can be quite different than the award ranking. Notably, musculoskeletal impairments became highest ranking among current pay beginning in 2014, more than a decade after they became the highest ranking category of awards. As of 2018, mental disorders are still roughly 30% of current pay but are only 14% of awards. Impairments of the nervous system which are ranked fifth in awards are third in current pay; and cancers which are third in awards drop to sixth in current pay.

<sup>13</sup> Annual Statistical Report on the Social Security Disability Insurance Program, Table 40.

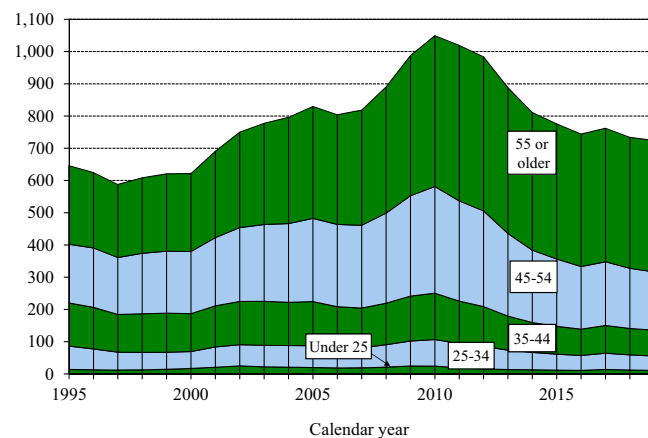
<sup>14</sup> Annual Statistical Report on the Social Security Disability Insurance Program, Table 44.

### C. Award and Incidence Experience

**Table 3** shows the number of DI disabled workers awarded benefits by sex and *calendar age* for calendar years 1996-2019. Calendar age is the age attained on the birthday in the year the individual is awarded benefits. This historical series is also illustrated in **Figure 2**.

**Table 4** shows the associated disabled worker incidence rates, which are expressed as annual awards per thousand disability insured not already receiving benefits. Adjusted figures are based on the age and sex distributions of the exposed population as of 2000.

**Figure 2.—Disabled Worker Awards by Age Group (1995-2019)**  
(In thousands)



Tables 3 and 4 are tabulated as of the year the beneficiary is awarded. However, the year of award is often different from the year of disability onset or entitlement. Disability onset must precede entitlement because of the required 5-month waiting period. Award can coincide with entitlement but factors, such as the claims process and the disability determination and appeals process, can delay award and the resulting payments for months or possibly years past entitlement. Therefore, the incidence rates shown are not exactly representative of true morbidity rates for the stated calendar years.

The chance of suffering a disability impairment naturally increases with advancing age. If the impairment does not meet or equal a listing in the disability determination decision, SSA must consider the ability to perform past work, education, and the ability to adjust to other work, given the claimant's age and work experience. For claimants under age 50, SSA generally does not consider age to seriously affect the ability to adjust to other work. For claimants ages 50 to 54, SSA will generally consider that age will somewhat affect the ability to adjust, while claimants age 55 or older are considered to be significantly affected in their ability to adjust to other work.

Rates shown in Table 4 for ages 60 and older are likely to understate the true incidence of impairment in the insured population because beginning at age 62, a disabled worker may elect to receive old-age benefits instead of disability benefits. This decision is influenced by a number of factors: the chance for higher maximum family benefits under old-age as compared to disability; avoidance of disability benefit reduction because of Federal or State workers' compensation offset<sup>15</sup>; or desire to avoid the potentially arduous application process and possibility of benefit denial.

Age-specific disability incidence has historically been lower among female workers than among male workers. Over the 10-year period ending in 1996, female labor force participation among ages 35-54 increased greatly. This contributed to a significant number of females attaining disability insured status in that period. Beginning in the late 1990s, female incidence began to exceed that for males at ages 30-54. Although both genders were experiencing a general decline in incidence beginning in the mid-90s, the decline is more pronounced among males, likely due to the elimination of DA&A as a disabling impairment and a sharp decline in HIV impairments, both of which are predominantly male incidence categories.

Some of the same factors that affect the number of DI applicants can also affect incidence rates. In general, the decline in incidence between 1975-82 (not shown) is attributable, in part, to stricter program administration. Following a generally declining period in incidence from 1983-89, the program experienced a surge in claims beginning in 1990, and incidence rates rose significantly and remained relatively high through 1995. The economic and political environment of the late 1990s featured robust economic expansion, low unemployment, and restrictions on DA&A and obesity impairments. In addition, continuing advancements in medical treatment, employer-sponsored healthcare, and an opportunity to build wealth in booming investment markets provided incentives to remain in the labor force and contributed to the decline in applications and awards during this period.

A sharp increase in incidence rates over 2001-05 represents a departure from the experience of the late 1990s, which generally showed modest annual declines in the age-sex-adjusted incidence rate. While the aging of the baby-boom generation is always recognized as a factor in program growth, the increase in incidence in 2001 is likely due in large part to the severe economic contraction experienced in that year. It is also likely that the special administrative activity previously mentioned also had an impact—namely, the disability redesign initiatives

(late 1990s) and the identification and processing of the special disability workload (beginning in 2001). Incidence rates dipped in 2006-07.

The legislated increase in NRA beginning with those born in 1938 had an obvious and significant effect on the number of disability awards to individuals age 65 or older starting in 2003. The increase in NRA may have become an incentive to seek disability benefits for older workers facing higher actuarial reductions for early retirement.

A substantial increase in disability incidence rates from 2008-10 is thought to be attributable to the recession. A significant drop in disability applications and incidence rates followed over 2011-16 as the economy recovered. The decrease in incidence rates during this period is due to the combination of fewer awards and a slight uptick in the insured population which put downward pressure on disability incidence rates. The decline, however, may have been slightly constrained since many did not return to work and eventually dropped out of the labor force. This left the insured population slightly lower than it otherwise would have been. From 2017 to the present, total age-adjusted female rates have been slightly higher than male rates.

**Table 5** presents historical conversion and termination data for disabled workers. Termination experience is discussed in detail in the next section.

**Table 6** shows the number of disabled workers in the *current-payment* population, at the end of calendar years 1996-2019. Other DI beneficiaries may have their benefits suspended for reasons such as engagement in SGA following completion of a trial work period, refusal of vocational rehabilitation services, and imprisonment. Because of the increase in NRA beginning with individuals born in 1938, DI beneficiaries at age 65 appear for the first time in 2003.

As shown in the following table, the number of beneficiaries in current-payment status and *in force* (current-pay plus *suspensions*) began to grow rapidly beginning in the latter half of the 1980s. The expansion continued throughout the 1990s as the current-pay population increased 68.5% from the beginning of 1990 to the beginning of 2000. The 2000s saw a slightly smaller increase of 59.9% from the beginning of 2000 to the beginning of 2010. There was an increase of 15.0% from the beginning of 2010 to the beginning of 2015 followed by a decrease of 6.4% from the beginning of 2015 to the beginning of 2020. The growth in the in-force population is the difference between awards and terminations, as shown in the table.

<sup>15</sup> Offset is applied when total DI benefits payable to the worker and any auxiliaries, plus workers' compensation and/or public disability payments exceed 80% of the worker's average current earnings.

**Growth in the DI Disabled Worker Rolls, by Calendar Period**  
(Numbers in Thousands)

Calendar period	In force beginning of period	Awards	Conversions/ Terminations	In force end of period	Suspensions end of period	Current-payment	
						Number end of period	Growth rate <sup>1</sup>
1980-84	2,882.6	1,975.9	2,241.3	2,617.1	24.9	2,592.2	-9.6%
1985-89	2,617.1	2,107.3	1,787.9	2,936.4	45.9	2,890.6	11.5%
1990-94	2,936.4	2,924.2	1,841.5	4,019.2	61.0	3,958.2	36.9%
1995-99	4,019.2	3,086.5	2,132.0	4,973.8	103.6	4,870.2	23.0%
2000-04	4,973.8	3,635.1	2,304.9	6,303.9	105.7	6,198.2	27.3%
2005-09	6,303.9	4,329.9	2,704.9	7,928.9	140.9	7,788.0	25.6%
2010-14	7,928.9	4,751.1	3,587.7	9,092.3	137.8	8,954.5	15.0%
2015-19	9,092.3	3,739.9	4,287.9	8,544.2	165.9	8,378.4	-6.4%

<sup>1</sup> Percentage increase from the beginning of the period to the end of the period.

## IV. EXPERIENCE OF DISABILITY BENEFIT TERMINATION

### A. Background

DI disabled worker beneficiaries stop receiving worker benefits when they die, recover from their disabling condition, or return to work (disabled worker beneficiaries who remain on the DI rolls until NRA—currently age 66—are converted to retired worker status):

- *Death.* The last month of disability entitlement would be the month prior to the month of death. Beneficiary death accounted for nearly 68% of total disabled worker non-conversion terminations in 2019.
- *Recovery.* Beneficiaries who have had a medical recovery or successful, sustained re-entry to the workforce are removed from the DI rolls. Typically the last month of disability entitlement would be the second month after the month of recovery.<sup>16</sup> Recoveries accounted for 32% of total disabled worker non-conversion terminations in 2019.

Under the Old-Age and Survivors Insurance program (OASI), a disabled worker benefit is automatically converted to a retired worker benefit in the month the beneficiary attains NRA.<sup>17</sup> Since *conversions* are simply a transfer of beneficiaries from the DI Trust Fund, the “conversion” rate is 100% for disabled workers reaching NRA. After conversion, recovery from disability is no longer relevant, and the last month of DI entitlement is the month prior to attainment of NRA.

Beginning at age 62, a disabled worker may elect to receive old-age benefits in lieu of disability benefits. Although most disabled beneficiaries stay in the DI program until NRA, some choose to switch. One of the most common reasons is the receipt of workers’ compensation (WC) benefits. WC benefits may partially or totally offset a DI benefit. Under current rules, WC receipt does not affect an OASI worker benefit. Another factor is the difference between the less-generous maximum family benefit payable under the DI program and the maximum payable under the OASI program.

Recovery from disability occurs when the beneficiary is determined to no longer meet the definition of disability either because there is medical improvement affecting the ability to work, or the individual demonstrates the ability to engage in SGA. The DDS or the central office will conduct a *continuing disability review (CDR)* upon, for example:

- Coming due of a scheduled CDR;

<sup>16</sup> Benefits may continue if the individual is currently enrolled in a vocational rehabilitation program, or has entered an extended period of eligibility.

<sup>17</sup> Switching to old-age benefits prior to normal retirement age is not considered a *conversion*. This type of benefit termination would fall in the miscellaneous category.

- Posting of substantial earnings;<sup>18</sup> or
- Receipt of vocational rehabilitation reports of medical improvement.

We mention an important caveat with regard to interpreting termination rates: *Absent any changes in the underlying rate of medical improvement, certain outside factors can impact the level of CDR activity and, in turn, the disability recovery rates.* These factors include the size of disability backlogs, budget restrictions, legislation, and regulations. Clearly, CDRs can be pursued vigorously only with adequate funding. Less obviously, these factors can affect the composition of the disabled worker population by influencing the nature of allowances and the likelihood of recovery.

Exogenous variables can also impact the overall mortality of the DI rolls. For instance, changes in the way medical impairments are adjudicated, the elimination of DA&A and obesity from the listings, and a greater number of allowances based on vocational factors may lower overall disability mortality.

The Social Security Act contains several provisions to encourage beneficiaries to return to work despite their impairment:

- Trial work period;
- Extended period of eligibility;
- Extension of Medicare coverage after a work-related termination;
- Expedited reinstatement to the rolls after a work related termination; and
- Waiver of the waiting period for an expedited reinstatement.

### ***Trial Work Period (TWP)***

The *trial work period* provision allows the disabled beneficiary to do substantial work for nine, not necessarily consecutive, months out of a rolling 60-month period without losing any benefits. A month is not counted as a trial work month (“service month”) unless the beneficiary earns above a specified amount, or for self-employment, works a specified number of hours.<sup>19</sup> Earnings during the service months are not counted toward SGA, and benefits will continue as long as the beneficiary has not medically recovered as evaluated during a medical CDR. Note that work performed during a TWP cannot be used as the basis for determining that disability has ceased.

<sup>18</sup> The Ticket to Work Act of 1999 prohibits initiation of a medical CDR during the period that a beneficiary is using a ticket; and under certain circumstances, prohibits the use of work activity as a reason for review. These provisions became effective January 1, 2002.

<sup>19</sup> In 2020, a service month is counted towards the TWP if earnings for that month exceed \$910. A self-employed worker can also be charged with a service month if work activity exceeds 80 hours.



### ***Extended Period of Eligibility (EPE)***

Following the TWP and a three month grace period applied at the first instance of SGA after the TWP, beneficiaries who perform SGA in any month lose their benefit for that month. For continued incentive to work, the *extended period of eligibility* provision allows the disabled beneficiary to have benefits reinstated for any month in the EPE re-entitlement period in which work activity falls below the SGA level. The EPE begins with the month immediately following the completion of the TWP and ends with the end of the entitlement; the EPE re-entitlement period is generally the first 36 months of the EPE. If the beneficiary is not engaging in SGA when the re-entitlement period ends, the provision allows benefits to continue until the first month in which SGA is performed. Of course, at any time during the TWP or EPE, if the beneficiary is found to have medically recovered then all benefits are terminated.

### ***Medicare Coverage***

After 24 months of disability entitlement (or attainment of age 65 if earlier), a beneficiary becomes eligible for Medicare coverage—regardless of age—and receives services as long as DI entitlement continues. In the case of an individual engaging in SGA, coverage is provided throughout the TWP and EPE. Medicare benefits were further extended through a provision of the Ticket to Work Act of 1999: effective October 1, 2000, coverage for beneficiaries who return to work will generally continue for an additional 57 months beyond the EPE re-entitlement period.

### ***Expedited Reinstatement (EXR)***

The Ticket to Work Act also allows certain previously terminated beneficiaries to request *expedited reinstatement* of disability benefits in the event of impairment-related cessation of SGA. The provision provides a safety net for those who successfully return to work and, consequently, lose entitlement to disability benefits, but then find themselves unable to sustain the work effort. EXR allows an individual to request reinstatement without filing a new application, and provides up to six months of provisional (temporary) cash benefits while SSA conducts a medical review to determine whether the individual can be reinstated.<sup>20</sup> The request for reinstatement must be filed within five years of the termination of disability benefits. EXR became effective January 1, 2001.

### ***Waiting Period Provisions***

Special provisions apply to persons disabled more than once. Individuals who become disabled within five years of the end of a previous period of disability are not required to satisfy the five month waiting period. In addition, the 24-month waiting period for Medicare coverage need not be consecutive months and may be satisfied by combining multiple periods of disability.

<sup>20</sup> The claimant must be under a disability using the medical improvement review standards (MIRS) normally used in a medical CDR. The MIRS requires a sequence of evaluation different from that used in initial claims.

### ***B. History***

Many variables can affect the rate at which beneficiaries are terminated from the disability rolls, including:

- Changes in normal retirement age;
- Overall disability mortality;
- CDR activity;
- Technology to enhance the ability to work;
- Advancements in medical treatment;
- Changes in legislation and in regulations.

The *Social Security Amendments of 1965* (Public Law 89-97) modified the definition of disability by replacing the requirement of permanent disability with the requirement that the disability be expected to last at least 12 months or result in death. This led to the entitlement of less seriously impaired claimants and, therefore, lower mortality rates among the disabled. The 1967 amendments eased the insured status requirements for claimants under age 31. A growing presence of younger and relatively healthier beneficiaries on the DI rolls further contributed to the decline in DI mortality rates.

While mortality rates fell in the early years of the program, the rates of termination due to recovery generally increased, largely for the same reasons. With the introduction of government-funded rehabilitation programs, the elimination of the “permanently disabled” requirement, and the extension of benefits to younger claimants, the recovery rate among beneficiaries rose substantially through the late 1960s and remained high through the early 1970s. The recovery rate then decreased rapidly through 1975, due in large part to changes in the administration of the program. With the introduction of the Black Lung and SSI programs in the early 1970s, workload pressures resulted in the suspension or curtailment of some administrative review procedures. For example, by 1972 the central office reviewed only 10% of the cases in which expected medical recovery had not been found. By 1976, the recovery rate started to rise again due, in part, to the return to pre-1972 levels of 100% review of expected medical recoveries.

The substantial DI program growth in the 1970s created pressure for a more thorough review of the rolls. Under then-current policy, reviews were performed only when the beneficiary’s condition was expected to improve, or voluntary reports or posted earnings indicated work activity. As previously discussed, a significant provision of the 1980 amendments required that beneficiaries with non-permanent impairments be reviewed at least once every three years, and permanently disabled beneficiaries be reviewed at intervals determined by the Commissioner. Using that legislative mandate, the Administration initiated a major review of the disability rolls that resulted in many terminations because it was determined that recovery had occurred.

After much public clamor over the new rules, a temporary moratorium was placed on the review of the rolls.<sup>21</sup> This caused the pendulum to swing the other way. Many persons were reinstated upon appeal, and legislation in 1984 imposed a medical improvement standard on the CDR process. The result was a sharp drop in recoveries through the rest of the decade.

In the latter part of the 1980s, the agency experienced reductions in both its work force and in administrative funding. By the early 1990s, without enough staff to handle both new claims and continuing disability reviews, the agency reduced the resources it committed to CDRs. Beginning in 1994, the number of initial claims began to level off and Congress enacted the *Contract With America Advancement Act of 1996* (Public Law 104-121) which included a provision authorizing the appropriation of funds to be used exclusively to conduct additional medical CDRs. The special funding helped the agency complete large numbers of backlogged periodic CDRs and become current with DI reviews by the end of 2000 and SSI reviews by the end of 2002. Beginning in 2002, yearly funding constraints hampered the timely review of all CDRs coming due based on matured medical diaries. The number of DI worker reviews fell dramatically as a result, dropping from 346,000 in fiscal year 2000 to 64,000 in 2007, and then rising slowly to 126,000 in 2011 and about 175,000 reviews in each of 2012 and 2013. Since FY 2014, funding for medical CDRs increased significantly, providing necessary resources to work down the backlog. With this increased funding, the agency was able to eliminate the backlog of all CDRs by the end of FY 2018. As of the beginning of 2020, the agency expects to continue to receive funding sufficient to process all medical CDRs on a timely basis as their diaries mature.

### C. Recent Experience

**Table 5** shows a historical series of the number of disabled worker conversions and terminations, as well as conversion and termination ratios. Ratios are defined as the number of conversions or terminations to the average number of beneficiaries during the year. Most terminations occur as a result of death. With regard to conversions, there is a sharp decrease in 2003, which is the result of the increase in NRA.<sup>22</sup> The number of recoveries can vary considerably. This is sometimes the result of special circumstances, such as, the spike in recoveries in 1997, which is the result of a provision eliminating drug or alcohol addiction as a basis for disability entitlement. Although

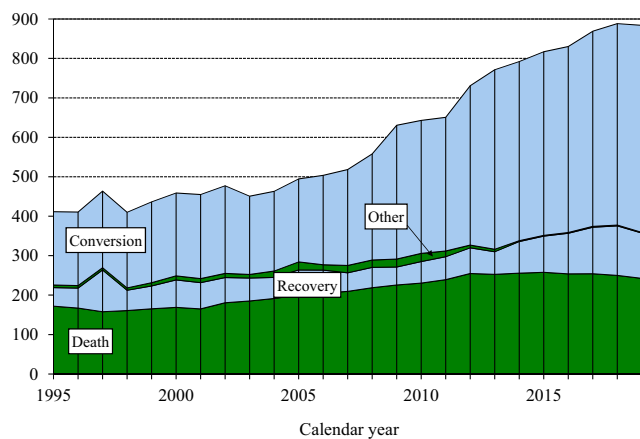
<sup>21</sup> The moratorium applied to all cases on which an administrative or judicial appeal was pending on or after June 7, 1983. All persons claiming benefits based on mental impairment disability who received an unfavorable decision after March 1, 1981 were permitted to reapply within time constraints, as mandated in 1984 by Public Law 98-460.

<sup>22</sup> This decrease is attributable to the increase in normal retirement age for the cohort born in 1938, resulting in the deferral of a portion of old-age conversions from 2003 to 2004. This pattern of deferral continues until NRA is 66 beginning with those born in 1943 resulting in a sharp increase in conversions in 2009.

categorized in administrative records as “recoveries”, this group of beneficiaries was terminated from the rolls due to a change in law.

*Other* is a relatively small category comprised of beneficiaries terminated for various other reasons such as switching to old-age benefits prior to NRA.<sup>23</sup> Reasons for the switch are to avoid DI benefits that offset workers’ compensation benefits, or to become entitled to an OASI family benefit. Notably, the size of this category was elevated from 2001 through 2011 due to the “termination” of a number of past-due-only awards which came out of the SDW workload. In many instances, only past due DI benefits were payable because the beneficiary had either died, recovered, or switched to old-age benefits by the time the case was processed. This type of SDW award was simultaneously counted as an “other” termination.

**Figure 3.—Disabled Worker Terminations and Conversions, (1995-2019)**  
(In thousands)

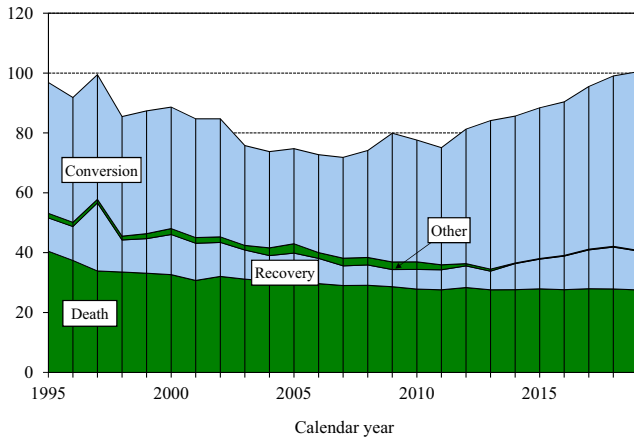


**Figure 3** shows the distribution of DI disabled worker terminations and conversions, while **Figure 4** shows these categories as rates, defined as the number of terminations divided by the average number of disabled worker beneficiaries. Footnote 22 explains the sharp increase in conversions in 2009; and the leading edge of the baby-boom (1946-47 birth cohorts) began attaining NRA (66) causing an uptick in conversions beginning in 2012. Conversion rates have increased noticeably in the past several years as the first portion of the baby-boom generation (birth years 1946-1953) has reached normal retirement age. Recovery rates increased each year from 2014 through 2018 as the backlog of medical CDRs was worked down and then declined in 2019 as the processing of medical CDRs reached a steady state. Recovery rates may have also been influenced by the changing composition of the DI rolls. Those with musculo-skeletal or mental impairments may be able to train for and

<sup>23</sup> Although technically counted as a disability termination, in these situations the beneficiary remains entitled to the larger, but unpaid, disability benefit while becoming concurrently entitled to a reduced old-age benefit.

find jobs that they are capable of doing and thus return to work. They may also be more likely to survive until normal retirement age when their benefit converts to an old-age benefit.

**Figure 4.—Ratio of Disabled Worker Terminations and Conversions to Average Number of Beneficiaries (1995-2019)**  
(Per thousand exposed)



As shown in the table below, the average age of male disabled workers in current-payment status dipped below 50 in 1995 before climbing steadily to 54.9 in 2019; over the same period, the proportion of the DI worker rolls made up of beneficiaries aged 50-65 grew from 55% to 77%, while the proportion of

those aged 35-49 fell from 34% to under 19%. This change is chiefly attributable to the aging of the post-war baby-boom generation. Similar trends were experienced among females. Just as progress in medicine has significantly contributed to longer life expectancy among the general population, it likely has also had a considerable impact on some segments of the disability population, leading to an increase in the average age of those on the DI worker rolls.

Gross death termination rates declined in the 1990s. Contributing to the decline were the diminishing impact of HIV-related impairments and the change in policy regarding DA&A. After a gradual decline during the decade 2000-2009, death rates have remained relatively level. Currently, death rates are 32 deaths per thousand males and 23 deaths per thousand females. Significant factors behind the decrease from 1990-2009 include: (1) a shift in the impairment mix to more musculoskeletal and mental disorders, which tend to be less life-threatening than circulatory disorders or cancers; (2) advancements in medical treatments; and (3) a shift in the age mix to older disabled workers, whose determinations are often based on vocational factors rather than having an impairment severe enough to meet a listing. Conversion ratios reached a low of 32 conversions per thousand disabled workers in 2005 but have increased to nearly 60 per thousand as the baby-boom generation achieves normal retirement age and converts to an old-age benefit.

**DI Disabled Workers in Current-Payment Status**  
(Grouped by age at end of selected year)

Calendar year	Under 35		35-49		50-65		Total	
	Percentage of DI rolls	Average age	Percentage of DI rolls	Average age	Percentage of DI rolls	Average age	Percentage of DI rolls	Average age
<b>Male</b>								
1985	9.9%	29.4	22.9%	42.5	67.2%	58.6	100.0%	52.0
1990	10.9	29.7	29.6	42.4	59.4	58.4	100.0	50.5
1995	10.2	29.9	34.4	42.7	55.4	57.8	100.0	49.8
2000	6.9	29.7	33.0	43.1	60.0	57.5	100.0	50.8
2005	6.5	29.1	28.4	43.5	65.1	57.8	100.0	51.9
2010	6.5	29.2	23.6	43.7	69.8	58.2	100.0	52.9
2015	5.4	30.0	20.0	43.4	74.5	58.5	100.0	53.9
2016	5.1	30.0	19.5	43.3	75.4	58.7	100.0	54.2
2017	4.8	30.0	19.2	43.3	76.0	58.8	100.0	54.4
2018	4.6	29.9	18.8	43.3	76.6	58.9	100.0	54.7
2019	4.4	29.9	18.5	43.2	77.1	59.1	100.0	54.9
<b>Female</b>								
1985	8.7%	29.5	21.5%	42.6	69.8%	58.7	100.0%	52.7
1990	9.8	29.8	29.1	42.6	61.1	58.3	100.0	50.9
1995	9.5	29.8	34.0	42.8	56.5	57.6	100.0	49.9
2000	6.8	29.8	33.2	43.1	60.1	57.3	100.0	50.8
2005	6.5	29.4	29.2	43.5	64.3	57.7	100.0	51.7
2010	6.0	29.6	25.1	43.6	68.9	58.0	100.0	52.7
2015	4.6	30.2	21.2	43.4	74.2	58.4	100.0	53.9
2016	4.2	30.3	20.6	43.4	75.2	58.5	100.0	54.2
2017	3.9	30.2	20.1	43.4	76.0	58.7	100.0	54.5
2018	3.7	30.2	19.6	43.4	76.7	58.8	100.0	54.7
2019	3.5	30.2	19.2	43.5	77.3	58.9	100.0	55.0

#### D. Actuarial Analysis—Death (2011-15)

**Tables 7A-7C** show the probability of death termination for male and female DI disabled workers by age at entitlement to disability benefits, and *duration*—measured in completed years of disability entitlement. Data reflect the actual experience of the DI worker rolls from January 1, 2011 through December 31, 2015. The methods used in table construction and graduation are detailed in the appendix.

Mortality among disabled workers generally increases with entitlement age, albeit this trend can be heavily influenced by the severity-mix of disorders at different ages. Also, for any given entitlement age, the probability of death termination is greatest during the first year of entitlement, then decreases dramatically during the second and third years of entitlement. Death probabilities tend to level off sometime around the third or fourth duration. For older entitlement ages, mortality trends upward in the later durations because of the effect of age. The sex differential in mortality in the disabled worker population is similar to that of the general population: mortality rates among male disabled workers are higher than female disabled workers for most attained ages. In the appendix we discuss how certain provisions in the law—such as the waiting period and the conversion to old-age benefits—affect the tabulation of mortality.

An analysis of broad age categories may explain some of the trends and characteristics of disability mortality. As of 2018, the top disorders for male awards under age 35 are mental (52%), nervous (11%), and musculoskeletal (9%). Following the predominant musculoskeletal (28%) and mental (19%) categories, ages 35-49 show a mix of nervous (11%), cardiovascular (10%), and cancer (9%) impairments. Ages 50 or older show the highest concentration of musculoskeletal (40%), along with considerable increases in cardiovascular (16%) and cancer (12%) disorders; though still an important category, the prevalence of mental impairments (6%) is considerably lower than younger age groups.

Disabled female trends are comparable to those of males except for several differences in leading impairment categories. As of 2018, disabled females under age 35 show the highest concentration of mental (43%), nervous (14%), and musculoskeletal (14%) disorders. Ages 35-49 continue to show high incidence of mental (20%) and nervous (12%) impairments, along with large increases in musculoskeletal (32%) and cancer (12%) disorders. Ages 50 or older show the highest prevalence of musculoskeletal (47%), cancer (13%), and mental (9%) awards.

Disability mortality in the 5-year period covered by this study (2011-15) is lower than the previous 5-year period for 74% of all attained ages.<sup>24</sup> Among males, mortality in the more recent

period is, on average, 7% lower with improvement in mortality for all age groups. The greatest improvement occurred for age group 60-65, followed by under 35, with the least improvement for age group 50-54. Among females, mortality in the more recent period is, on average, 0.5% lower with improvement for age groups 40-45 and over and higher mortality than the previous 5-year period at younger ages. The greatest improvement for females occurred for age group 60-65, followed by 55-59.

The improvements are likely due to medical progress as well as the changing impairment mix of the rolls. The proportion of musculoskeletal disorders continues to increase while mental disorders are down slightly; together they make up 62% of total beneficiaries in current pay status over 2011-15 versus 60% for the prior 5-year period. Current pay beneficiaries with cardiovascular disorders fell from 9.0% in 2011 to 8.4% in 2015. On average, musculoskeletal and mental disorders exhibit lower mortality than most other diagnostic groups, whereas cardiovascular disorders rank among the highest.

**Tables 8A-8C** show an assumed number of beneficiaries with benefit continuance over time for cohorts becoming entitled at various ages. These tables are based on the probabilities of death shown in Tables 7A-7C. *Continuance tables* provide a simplified method for calculating the probability of continuing on the rolls for a given number of years. See the appendix for details on table construction and usage. In this context, *continuance* refers to beneficiaries who have not died and remain on the DI rolls.

**Tables 9A-9C** show the *expected future time* on the combined DI and OASI rolls—excluding the possibility of recovery—for disabled workers who have not yet died. Similar to the retired worker population, disabled female workers have a longer experience of continuance than males. Expected time on the rolls has a tendency to be higher in the second year of entitlement than in the first year of entitlement for older entitlement ages because of higher mortality during the first year on the rolls.

**Tables 10A-10C** show the *absolute rate of death* per thousand entitled disabled workers. These rates are derived from the probabilities of death shown in Tables 7A-7C. In general, absolute rates consider only the effect of a single decrement in a multiple-decrement environment. For example, the absolute rate of death is disaggregated from the rate of recovery and reflects the rate of survival and ultimate termination under death only. The appendix gives further details.

<sup>24</sup> Findings are based on comparisons with disability mortality tabulated for the period 2006-10 in Actuarial Study No. 123 *Social Security Disability Insurance Program Worker Experience* (Zayatz, August 2015).

**Tables 11 and 12** show the aggregate probability of death and expected future time on the combined DI and OASI rolls (excluding the possibility of recovery), by *entitlement* and *attained* age. Probabilities are based on aggregate counts of exposure and deaths across all durations. They represent the average probability of death within the next year for disability beneficiaries who became entitled at a particular age (Table 11), or who have attained a particular age (Table 12). Similarly, *expected future time* represents the average number of years a beneficiary will remain alive and on the rolls, as of a particular entitlement age or attained age. Values are exposure-weighted averages of the select-and-ultimate future times shown in Tables 9A-9C and may be used as a general indication of the overall average lifetime of groups of disabled beneficiaries who share a particular entitlement or attained age.

**Table 13** shows the aggregate probability of death and expected future time on the combined DI and OASI rolls (excluding the possibility of recovery), as of a particular *duration*. Probabilities are based on aggregate counts of exposure and deaths across all entitlement ages, and represent the average probability of death within the next year. Similarly, *expected future time* represents the average number of years a beneficiary will remain alive and on the rolls, given the completed number of years of disability entitlement.

#### ***E. Actuarial Analysis—Recovery (2011-15)***

**Tables 14A-14B** show the probability of recovery for male and female DI disabled workers by age at entitlement to disability benefits, and duration. In general, annual probabilities of recovery decline with advancing entitlement age. For any particular entitlement age, the probability of recovery exhibits a bimodal distribution that tends to peak during the second year of entitlement and then peaks again—frequently at a higher level—in the fifth year of entitlement. This pattern likely reflects the scheduling of Continuing Disability Reviews. Where *medical improvement is expected (MIE)*, the review is scheduled for 6 to 18 months following the most recent favorable disability decision. Where *medical improvement is possible (MIP)* but less likely to occur within the first 18 months, the review is scheduled for three years later. Where *medical improvement is not expected (MINE)*, the review is scheduled at least five but generally seven years later.

According to data for Title II disabled workers over the period 2011-15:

- Roughly 29% of full medical reviews fall in the MIE category and roughly 7% of these reviews ultimately result in cessation of benefits. This helps explain the first peak in recoveries.

- Roughly 66% of full medical reviews fall in the MIP category and roughly 7.6% of these reviews ultimately result in cessation of benefits. This helps explain the second peak in recoveries.
- The remaining 5% of full medical reviews fall in the MINE category and roughly 2.6% of these reviews ultimately result in cessation of benefits.

The probability of recovery for females is lower than males for 60% of age-duration categories. However, the probability of recovery tends to be higher for females at longer durations for most ages and at the early durations for those up to their mid 20's and those past their mid 50's. This is due, in part, to differences in the mix of impairments among men and women. Over the period 2011-15, awards to females over age 50 included 44% musculoskeletal and 21% cardiovascular and cancer. By comparison, awards to males over age 50 included 39% musculoskeletal and 28% cardiovascular and cancer. We think that those with musculoskeletal impairments are more likely to stay on the DI rolls until they recover or convert to an old-age benefit. Those with cardiovascular impairments or cancer are less likely to recover and more likely to die while still on the DI rolls.

The probability of recovery in the 5-year period covered by this study (2011-15) is higher than the previous 5-year period for over 65% of all age-sex categories.<sup>25</sup> Among males, the chance of recovery in the more recent period is, on average, 5% higher, among females, 9% higher. Improvement in recovery rates took place at most durations with a notable exception in the third year of disability—*duration 2* in the tables. The largest increases in the rate of recovery occurred at age 60-65 followed by the under 35 age group. This pattern may suggest a higher rate of recovery in the first two years of disability due to medical advances. Recovery in the fourth to seventh years of disability may be indicative of a return to work. Advances in medicine and technology create accommodative and sustainable working conditions which may facilitate a return to work, even at older ages.

In addition, another important reason for the increase in recovery rates is the increase in the number of medical CDRs from the previous observation period to the current observation period. There were 567,000 initial DDS decisions of medical CDRs conducted in the 2006-10 period, but over 971,000 in the 2011-15 period.<sup>26</sup>

<sup>25</sup> Based on comparisons with disability recovery probabilities in Actuarial Study No. 123 *Social Security Disability Insurance Program Worker Experience* (Zayatz, August 2015).

<sup>26</sup> Does not include decisions on appeals. Data from the *Annual Report on Continuing Disability Reviews* (2015).

**Tables 15A-15B** show an assumed number of beneficiaries with benefit continuance over time for cohorts becoming entitled at various ages. These tables are based on the probabilities of recovery shown in Tables 14A-14B. In this context, *continuance* refers to beneficiaries who have not recovered and remain on the DI rolls.

**Tables 16A-16B** show the *expected future time* on the DI rolls—excluding the possibility of death—for disabled workers who have not yet recovered. The tables are discontinued at NRA since recovery is no longer tracked.

**Tables 17A-17B** show the *absolute rate of recovery* per thousand entitled disabled workers. These rates are derived from the probabilities of recovery shown in Tables 14A-14B. The appendix gives details on the derivation of these rates.

**Tables 18** and **19** show the aggregate probability of recovery and expected future time on the DI rolls (excluding the possibility of death), by *entitlement* and *attained* age. Probabilities are based on aggregate counts of exposure and recoveries across all durations. They represent the average probability of recovery within the next year for disability beneficiaries who became entitled at a particular age (Table 18), or who have attained a particular age (Table 19). Similarly, *expected future time* represents the average number of years a beneficiary will remain on the DI rolls—up to NRA—for a particular entitlement age or attained age. These values are exposure-weighted averages of the values shown in Tables 16A-16B.

**Table 20** shows the aggregate probability of recovery and expected future time on the DI rolls (excluding the possibility of death), as of a particular *duration*. Probabilities are based on aggregate counts of exposure and recoveries across all entitlement ages, and represent the average probability of recovery within the next year. Similarly, *expected future time* represents the average number of years a beneficiary will remain on the DI rolls—up to NRA—given the completed number of years of disability entitlement.

#### ***F. Actuarial Analysis—Death or Recovery (2011-15)***

**Tables 21A-21B** show the probability of termination due to death or recovery for male and female disabled workers, by entitlement age and duration. Values are the sum of the death probabilities shown in Tables 7A-7B and recovery probabilities shown in Tables 14A-14B.

**Tables 22A-22C** show an assumed number of beneficiaries with benefit continuance over time for cohorts becoming entitled at various ages. In this context, *continuance* refers to beneficiaries who have neither died nor recovered and remain on the DI or OASI rolls. Beneficiaries continue to be followed until death, even after their disability benefits are converted to retirement benefits.

**Tables 23A-23B** show the *expected future time* on the combined DI and OASI rolls for disabled workers who have neither died nor recovered. Values are based on the continuance experience shown in Tables 22A-22C.

**Tables 24A-24B** show the *expected future time* on the DI rolls for disabled workers who have neither died nor recovered. Values are based on the continuance experience shown in Tables 22A-22B and do not reflect entitlement beyond conversion to retirement benefits.

**Tables 25** and **26** show the aggregate probability of death or recovery and the expected future time on the beneficiary rolls, by *entitlement* and *attained* age. The values represent the average probability of benefit termination due to death or recovery within the next year for beneficiaries who became entitled at a particular age (Table 25), or who have attained a particular age (Table 26). Expected future time on the OASDI rolls represents the average number of years of combined entitlement for those originally entitled to disability benefits, and are exposure-weighted averages of expected time on the rolls shown in Tables 23A-23B. Expected future time on the DI rolls represents the average number of years of disability entitlement, and are exposure-weighted averages of expected time on the DI rolls shown in Tables 24A-24B.

**Table 27** shows the aggregate probability of death or recovery and the expected future time on the beneficiary rolls, as of a particular *duration*. The values represent the average probability of benefit termination due to death or recovery within the next year for beneficiaries who have neither died nor recovered as of the stated number of years of entitlement. As in Table 26, aggregate expected times are shown for both OASDI combined entitlement and DI entitlement only.

#### ***G. Annuity Tables***

**Tables 28A-31B** show the present value of a stream of payments of \$1 to a disabled worker, by entitlement age. The various scenarios are based on combinations of several parameters: (a) the frequency of payments—made at the end of each year or month; and (b) the duration of payments—for life or up to age 66. Payments are discounted at various annual effective interest rates. Tables 28A-29B recognize only the risk of death termination and payments may continue beyond NRA, thus they use continuance experience shown in Tables 8A-8C. Tables 30A-31B recognize the possibility of both death and recovery and payments are made up until age 66, thus they use continuance experience shown in Tables 22A-22B. NRA ranges from 65 to 67 (based on birth cohort). Age 66 was chosen as the ending age for these tables because it was the NRA attained during the observation period (2011-15). The appendix gives details of the table construction and usage.

**Table 1.—Disposition of Worker Applications for Disability Benefits, by Calendar Year of Filing<sup>1</sup> and Level of Review**  
(2009–2019 Social Security DI disability experience)

Year of filing	Initial determinations										Reconsiderations										Appeals beyond reconsideration <sup>2</sup>										
	Total claims filed					Denials					Denials					Denials					Allowances					Allowances					
	Pending		Number		Percent <sup>3</sup>		To recon		To OHO <sup>4</sup>		Appealed		Total		No appeal		Total		To OHO <sup>6</sup>		Appealed		Pending <sup>7</sup>		Number		Percent <sup>8</sup>		Denials <sup>9</sup>		
2009	830,753	—	411,991	49.6	418,762	165,971	198,037	54,754	60.4	—	30,935	15.6	167,102	30,356	136,746	81.8	—	143,874	75.1	—	143,874	75.1	—	143,874	75.1	—	143,874	75.1	47,626		
2010	894,481	—	423,530	47.3	470,951	183,566	226,104	61,281	61.0	—	31,742	14.0	194,362	34,888	159,474	82.0	—	156,107	70.7	—	156,107	70.7	—	156,107	70.7	—	156,107	70.7	64,648		
2011	890,682	—	405,720	45.6	484,962	183,710	237,906	63,346	62.1	—	33,781	14.2	204,125	36,798	167,327	82.0	—	153,337	66.5	—	153,337	66.5	—	153,337	66.5	—	153,337	66.5	77,336		
2012	887,247	—	397,170	44.8	490,077	185,877	239,278	64,922	62.1	—	32,980	13.8	206,298	34,019	172,279	83.5	—	146,943	62.6	—	146,943	62.6	—	146,943	62.6	—	146,943	62.6	87,736		
2013	867,148	—	374,374	43.2	492,774	188,488	237,384	66,902	61.7	—	30,231	12.7	207,153	32,567	174,586	84.3	—	140,359	59.0	—	140,359	59.0	—	140,359	59.0	—	140,359	59.0	97,718		
2014	882,839	—	366,073	41.5	516,766	211,551	237,104	68,111	59.1	—	31,458	13.3	205,646	34,794	170,852	83.1	—	133,774	57.1	—	133,774	57.1	—	133,774	57.1	—	133,774	57.1	100,460		
2015	838,558	—	342,873	40.9	495,685	215,009	218,331	62,345	56.6	—	30,874	14.1	187,457	34,298	153,159	81.7	—	119,087	57.7	—	119,087	57.7	—	119,087	57.7	—	119,087	57.7	87,243		
2016	806,292	—	331,079	41.1	475,213	210,405	209,101	55,707	55.7	—	29,836	14.3	179,265	34,666	144,599	80.7	—	105,756	61.0	—	105,756	61.0	—	105,756	61.0	—	105,756	61.0	67,550		
2017	753,834	—	313,289	41.6	440,545	202,126	190,485	47,934	54.1	—	27,441	14.4	163,044	33,271	129,773	79.6	—	60,593	60.9	—	60,593	60.9	—	60,593	60.9	—	60,593	60.9	38,933		
2018	721,856	—	290,664	40.1	431,192	184,463	173,791	37,282	50.8	—	29,089	13.8	124,747	33,155	91,592	73.4	—	8,213	55.2	—	8,213	55.2	—	8,213	55.2	—	8,213	55.2	6,661		
2019	713,602	—	237,102	33.2	476,500	175,577	124,037	14,683	44.1	—	41,492	15.3	69,910	31,759	38,151	54.6	—	1,033	45.4	—	1,033	45.4	—	1,033	45.4	—	1,033	45.4	1,242		
DI claims involving concurrent SSI (Title XVI) claims																															
2009	925,073	—	240,225	26.0	684,848	326,083	283,412	75,353	52.4	—	27,658	9.8	255,754	63,603	192,151	75.1	—	151,520	56.6	—	151,520	56.6	—	151,520	56.6	—	151,520	56.6	115,984		
2010	946,844	—	229,564	24.2	717,280	333,898	303,970	79,412	53.4	—	25,759	8.5	278,211	66,501	211,710	76.1	—	149,715	51.4	—	149,715	51.4	—	149,715	51.4	—	149,715	51.4	141,407		
2011	919,223	—	212,239	23.1	706,984	319,553	306,842	80,589	54.8	—	25,690	8.4	281,152	56,740	215,781	79.2	—	140,510	47.3	—	140,510	47.3	—	140,510	47.3	—	140,510	47.3	156,321		
2012	879,875	—	201,361	22.9	678,514	302,716	297,479	78,319	55.4	—	24,958	8.4	272,521	56,740	215,781	79.2	—	126,934	43.6	—	126,934	43.6	—	126,934	43.6	—	126,934	43.6	164,073		
2013	794,902	—	180,905	22.8	613,997	268,288	273,430	72,279	56.3	—	21,984	8.0	251,446	49,297	202,149	80.4	—	111,927	41.3	—	111,927	41.3	—	111,927	41.3	—	111,927	41.3	158,999		
2014	716,044	—	162,100	22.6	553,944	244,397	244,906	64,641	55.9	—	20,176	9.1	190,441	46,204	178,364	79.5	—	97,615	41.0	—	97,615	41.0	—	97,615	41.0	—	97,615	41.0	140,751		
2015	652,078	—	147,213	22.6	504,865	240,100	209,617	55,148	52.4	—	19,176	9.1	190,441	46,204	178,364	77.7	—	79,841	41.2	—	79,841	41.2	—	79,841	41.2	—	79,841	41.2	113,996		
2016	604,203	—	138,577	22.9	465,626	224,799	192,807	48,020	51.7	—	17,575	9.1	175,232	40,246	134,986	77.0	—	67,060	43.4	—	67,060	43.4	—	67,060	43.4	—	67,060	43.4	87,282		
2017	572,182	—	132,888	23.2	439,294	220,051	177,737	41,506	49.9	—	15,982	9.0	161,755	38,647	123,108	76.1	—	36,591	43.2	—	36,591	43.2	—	36,591	43.2	—	36,591	43.2	48,113		
2018	535,714	—	123,145	23.6	398,426	211,344	155,652	31,430	47.0	—	25,978	8.5	118,661	35,587	83,074	70.0	—	8,213	36.7	—	8,213	36.7	—	8,213	36.7	—	8,213	36.7	6,257		
2019	548,699	—	141,272	25.2	304,755	189,992	102,372	12,391	37.7	—	38,253	9.1	58,254	26,394	31,860	54.7	—	409	28.5	—	409	28.5	—	409	28.5	—	409	28.5	1,026		
Total claims																															
2009	1,755,826	—	652,216	37.1	1,103,610	492,054	481,449	130,107	55.4	—	58,593	12.2	422,856	93,959	328,897	77.8	—	295,394	64.4	—	295,394	64.4	—	295,394	64.4	—	295,394	64.4	163,610		
2010	1,841,325	—	633,094	35.5	1,188,231	517,464	530,074	140,693	56.5	—	57,501	10.8	472,573	101,389	371,184	78.5	—	305,822	59.7	—	305,822	59.7	—	305,822	59.7	—	305,822	59.7	206,055		
2011	1,809,905	—	617,959	34.1	1,191,946	503,263	544,748	143,935	57.8	—	59,471	10.9	485,277	101,708	383,569	79.0	—	293,847	55.7	—	293,847	55.7	—	293,847	55.7	—	293,847	55.7	233,657		
2012	1,767,122	—	598,531	33.9	1,168,591	488,593	536,757	143,241	58.2	—	57,938	10.8	478,819	90,759	388,060	81.0	—	273,877	52.1	—	273,877	52.1	—	273,877	52.1	—	273,877	52.1	251,809		
2013	1,662,050	—	555,279	33.4	1,106,771	456,776	510,814	139,181	58.7	—	52,215	10.2	458,599	81,864	376,735	82.1	—	252,286	49.6	—	252,286	49.6	—	252,286	49.6	—	252,286	49.6	256,717		
2014	1,598,883	—	528,173	33.0	1,070,710	455,948	482,010	132,752	57.4	—	51,976	10.8	430,034	80,818	349,216	81.2	—	231,389	49.0	—	231,389	49.0	—	231,389	49.0	—	231,389	49.0	241,211		
2015	1,490,636	—	490,086	32.9	1,000,550	455,109	427,948	117,493	54.5	—	50,050	11.7	377,898	76,815	301,083	79.7	—	198,928	49.7	—	198,928	49.7	—	198,928	49.7	—	198,928	49.7	201,239		
2016	1,410,495	—	469,656	33.3	940,839	435,204	401,908	103,727	53.7	—	47,411	11.8	354,499	74,912	279,585	78.9	—	172,816	52.7	—	172,816	52.7	—	172,816	52.7	—	172,816	52.7	154,832		
2017	1,326,016	—	446,177	33.6	879,839	422,177	368,222	89,440	52.0	—	43,423	11.8	324,799	71,918	252,881	77.9	—	97,184	52.8	—	97,184	52.8	—	97,184	52.8	—	97,184	52.8	87,046		
2018	1,257,570	—	297,999	23.7	813,962	415,807	329,443	68,712	48.9	—	55,067	11.3	243,408	68,742	174,666	71.8	—	11,837	47.8	—	11,837	47.8	—	11,837	47.8	—	11,837	47.8	12,918		
2019	1,262,301	—	303,475	23.9	619,052	365,569	226,409	27,074	40.9	—	79,745	12.6	128,164	58,153	70,011	54.6	—	1,442	38.9	—	1,442	38.9	—	1,442	38.9	—	1,442	38.9	2,268		

<sup>1</sup> Claim data for 2009–2018 reflect results as of June 2019 (DDS) and July 2019 (OHO/OAO). Claim data for 2019 are as of January 2020. Total claims are subject to change. The number of allowances and denials are subject to change until all initial decisions have been completed and all appeals are final. Results do not include claims denied at Field Offices for technical reasons such as SGA or lack of insured status.

<sup>2</sup> Includes cases appealed to the Office of Hearings Operations or Office of Appellate Operations as well as beyond OHO/OAO to the Federal courts.

<sup>3</sup> Number of allowances as a percentage of determinations (allowances plus denials) at this level.

<sup>4</sup> Cases appealed directly to OHO under prototype model skip the reconsideration step in disability determination process. This model was originally conducted in 10 states through 2018 and was phased out over the period January 2019–April 2020.

<sup>5</sup> Number of appeals as a percentage of denials at this level. For years where decisions are still pending, the preliminary percentage shown could change substantially as all claims are processed.

<sup>6</sup> Number of persons appealing beyond reconsideration level.

<sup>7</sup> Includes cases remanded to OHO/OAO from the Federal courts.

<sup>8</sup> Number of allowances as a percentage of decisions at this level. For years where decisions are still pending, the preliminary allowance percentage shown will generally decline as all cases are processed. This is due to long average processing times for denials as compared to allowances.

<sup>9</sup> Number of denials in which there was no further appeal. Includes claims where the final administrative action was a dismissal of an appeal request not filed in a timely fashion, or failing to appear at a scheduled hearing.

**Table 2A.—Disabled Worker Benefits Awarded: Percentage Distribution, by Impairment Category**  
(1997–2018, Social Security DI disability experience)

Impairment category <sup>1</sup>	Year of Award																						
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	
	Male																						
Musculoskeletal <sup>2</sup>	34.7%	34.3%	34.3%	34.2%	34.1%	34.0%	33.6%	32.2%	30.7%	29.2%	28.0%	27.1%	26.2%	25.8%	25.5%	24.7%	23.8%	22.9%	22.6%	22.4%	22.2%		
Mental disorders <sup>3</sup>	13.3	14.4	13.7	14.2	14.8	15.6	16.7	17.7	19.8	20.8	21.0	20.8	21.1	22.2	22.6	22.9	23.0	23.0	21.4	20.5	19.8	18.8	
Cardiovascular <sup>4</sup>	13.5	13.1	14.0	14.0	13.9	13.8	13.4	13.4	13.0	13.1	13.4	13.8	13.7	13.9	14.1	14.4	14.6	15.4	15.4	15.3	15.9	16.4	
Cancer <sup>5</sup>	10.8	10.6	10.8	10.7	10.2	9.5	9.1	8.7	8.6	8.9	9.4	9.7	10.0	9.9	9.2	9.1	9.5	9.6	10.5	10.3	10.1	10.1	
Nervous system <sup>6</sup>	8.6	8.6	8.2	8.1	7.9	7.8	7.6	7.8	7.8	7.8	7.8	7.8	7.8	7.7	7.9	8.2	8.1	8.1	7.8	7.5	7.3	7.1	
Injuries	4.2	4.1	3.9	3.8	3.9	4.1	4.3	4.5	4.7	4.8	4.9	4.9	4.9	4.6	4.7	4.6	4.9	5.0	5.1	5.2	5.2	5.4	
Respiratory <sup>7</sup>	3.8	3.8	3.9	3.8	3.9	3.8	3.7	3.9	3.8	3.8	3.8	3.9	3.9	4.0	4.0	4.1	4.0	4.1	4.3	4.3	4.4	4.4	
Genitourinary <sup>8</sup>	3.5	3.4	3.3	3.2	2.9	2.6	2.4	2.4	2.4	2.4	2.4	2.6	2.7	2.5	2.5	2.6	2.5	2.6	2.6	2.5	2.4	2.3	
Nutritional/metabolic <sup>9</sup>	2.4	2.5	2.5	2.8	3.0	3.2	3.3	3.4	3.5	3.5	3.4	3.4	3.4	3.3	3.1	3.1	3.3	3.0	2.9	4.6	4.6	4.4	
Other <sup>10</sup>	5.2	5.2	5.2	5.2	5.4	5.7	5.9	6.0	5.8	5.5	5.8	6.0	6.3	6.2	6.4	6.2	6.2	6.3	7.1	7.2	7.9	8.9	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
	Female																						
Musculoskeletal <sup>2</sup>	40.7	39.3	39.2	38.6	38.4	38.1	37.4	35.8	34.5	33.5	32.3	31.3	30.5	29.8	29.0	28.2	27.2	26.7	26.8	25.0	24.6	24.3	
Mental disorders <sup>3</sup>	14.6	16.0	15.5	16.1	17.1	18.2	19.5	21.0	23.0	24.0	24.7	25.1	25.5	26.5	27.5	28.2	28.3	28.0	26.0	24.8	23.9	23.6	
Cancer <sup>5</sup>	11.8	11.8	12.0	11.8	11.3	10.6	10.0	9.7	9.5	9.8	10.0	10.5	10.6	10.4	9.8	9.7	10.1	10.4	11.5	11.0	11.0	11.2	
Nervous system <sup>6</sup>	9.3	9.2	9.0	9.0	8.8	8.6	8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.8	8.8	8.9	9.0	9.0	8.7	8.5	8.5	
Cardiovascular <sup>4</sup>	7.4	7.2	7.8	7.8	7.7	7.5	7.3	7.0	7.1	7.2	7.3	7.3	7.3	7.4	7.5	7.8	7.9	8.1	8.3	8.2	8.7	8.8	
Respiratory <sup>7</sup>	4.1	4.2	4.4	4.5	4.4	4.3	4.2	4.3	4.2	4.1	4.1	4.2	4.2	4.3	4.4	4.4	4.2	4.3	4.5	4.4	4.6	4.6	
Nutritional/metabolic <sup>9</sup>	2.4	2.5	2.7	2.8	3.1	3.3	3.4	3.4	3.5	3.5	3.5	3.5	3.4	3.3	3.2	3.1	3.9	3.3	3.2	7.6	7.7	7.5	
Injuries	2.5	2.5	2.4	2.3	2.4	2.4	2.6	2.7	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8	3.1	3.1	3.0	3.0	3.1	3.2	
Genitourinary <sup>8</sup>	2.3	2.3	2.3	2.2	2.0	1.9	1.8	1.8	1.8	1.7	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	2.0	1.9	1.9	1.8	
Other <sup>10</sup>	4.9	4.9	4.8	4.8	4.9	5.1	5.3	5.4	5.1	4.8	4.8	4.8	4.9	5.1	5.0	4.6	5.2	5.7	5.4	6.0	6.5	6.5	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
	Total																						
Musculoskeletal <sup>2</sup>	37.6	36.7	36.6	36.3	36.1	35.9	35.4	33.8	32.5	31.2	30.0	29.0	28.2	27.6	27.1	26.3	25.4	24.7	24.7	23.7	23.4	23.1	
Mental disorders <sup>3</sup>	13.9	15.2	14.6	15.1	15.9	16.8	18.0	19.2	21.3	22.3	22.8	22.8	23.2	24.2	24.9	25.4	25.4	25.5	23.5	22.5	21.7	21.0	
Cancer <sup>5</sup>	11.3	11.2	11.4	11.2	10.7	10.0	9.5	9.2	9.0	9.3	9.6	10.1	10.3	10.1	9.5	9.4	9.8	10.0	10.9	10.6	10.5	10.6	
Cardiovascular <sup>4</sup>	10.6	10.3	11.1	11.1	10.9	10.8	10.6	10.6	10.2	10.3	10.5	10.8	10.7	10.9	11.0	11.4	11.5	11.9	12.2	12.1	12.6	13.1	
Nervous system <sup>6</sup>	8.9	8.9	8.6	8.5	8.3	8.2	8.0	8.2	8.2	8.2	8.1	8.1	8.2	8.1	8.3	8.5	8.4	8.5	8.4	8.0	7.8	7.8	
Respiratory <sup>7</sup>	4.0	4.0	4.1	4.1	4.1	4.0	4.0	4.1	4.0	3.9	3.9	4.0	4.1	4.1	4.2	4.2	4.1	4.2	4.4	4.3	4.5	4.5	
Injuries	3.4	3.4	3.2	3.1	3.2	3.3	3.5	3.7	3.8	4.0	4.0	4.0	3.9	3.9	3.8	3.8	4.1	4.1	4.2	4.2	4.3	4.4	
Genitourinary <sup>8</sup>	2.9	2.9	2.9	2.9	2.7	2.5	2.3	2.1	2.1	2.1	2.2	2.4	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	
Nutritional/metabolic <sup>9</sup>	2.4	2.5	2.6	2.8	3.0	3.2	3.3	3.4	3.5	3.5	3.4	3.4	3.4	3.3	3.1	3.1	3.6	3.1	3.0	6.0	6.0	5.8	
Other <sup>10</sup>	5.1	5.1	5.0	5.0	5.2	5.4	5.6	5.7	5.4	5.2	5.3	5.5	5.7	5.6	5.8	5.7	5.5	5.7	6.4	6.4	7.0	7.6	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

<sup>1</sup> Ranked by average percentage over the 5-year period 2014–18.

<sup>2</sup> Includes back disorders, arthritis, and muscle/ligament/fascia disorders.

<sup>3</sup> Includes depression, bipolar, schizophrenia, psychotic, intellectual, neurocognitive, anxiety, and obsessive-compulsive disorders.

<sup>4</sup> Includes heart disease or failure, cardiomyopathy, peripheral vascular disease, and hypertension.

<sup>5</sup> Includes malignant neoplasms, lymphoma, and leukemia.

<sup>6</sup> Includes stroke, multiple sclerosis, blindness, peripheral neuropathy, and epilepsy.

<sup>7</sup> Includes chronic respiratory disorders, asthma, and chronic pulmonary hypertension.

<sup>8</sup> Includes chronic kidney disease with or without dialysis, urinary tract disorders, and nephrotic syndrome.

<sup>9</sup> Includes diabetes and disorders of the thyroid, pituitary, and adrenal glands. (Effective October 1999, the Listing of Impairments was changed to eliminate awards based solely on obesity.)

<sup>10</sup> Includes congenital anomalies, blood, digestive, immune (including HIV/AIDS), and skin disorders, "other" and unknown categories.

Note: Totals may not equal sum of rounded components.

Source: *Annual Statistical Supplement to the Social Security Bulletin (1997–2002)*; *Annual Statistical Report on the Social Security Disability Insurance Program (2003–18)*.



**Table 2B.—Disabled Worker Benefits In Current-Payment Status: Percentage Distribution, by Impairment Category**  
(1997-2018 Social Security DI disability experience)

Impairment category <sup>1</sup>	End of Year																						
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	
	Male																						
Musculoskeletal <sup>2</sup>	31.6%	31.3%	30.9%	30.4%	29.8%	29.2%	28.4%	27.6%	26.8%	26.1%	25.6%	25.0%	24.6%	24.1%	23.6%	23.1%	22.7%	22.2%	21.8%	21.3%	20.9%	21.2%	
Mental disorders <sup>3</sup>	29.0	29.2	29.3	29.6	30.0	30.4	30.8	31.3	31.9	32.2	32.4	32.5	32.6	32.7	32.8	32.8	32.8	32.4	31.6	30.8	30.5	30.0	
Cardiovascular <sup>4</sup>	10.0	10.1	10.3	10.4	10.4	10.5	10.6	10.7	10.8	11.0	11.3	11.5	11.7	11.8	12.0	12.2	12.4	12.6	12.8	13.1	13.4	14.1	
Nervous system <sup>5</sup>	8.9	8.8	8.7	8.7	8.7	8.6	8.7	8.7	8.7	8.7	8.8	8.8	8.8	8.8	8.9	8.9	8.9	8.8	8.7	8.7	8.6	8.9	
Injuries	4.9	5.0	5.0	5.1	5.2	5.2	5.3	5.4	5.4	5.5	5.5	5.5	5.6	5.6	5.7	5.7	5.8	5.9	5.8	5.9	6.0	6.9	
Cancer <sup>6</sup>	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.5	
Nutritional/metabolic <sup>7</sup>	2.6	2.7	2.8	2.9	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.3	3.5	3.6	3.5	3.6	
Respiratory <sup>8</sup>	2.2	2.2	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.8	2.8	2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.2	3.3	
Genitourinary <sup>9</sup>	1.9	1.9	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.6	
Other <sup>10</sup>	6.1	6.1	5.5	5.6	5.7	5.7	5.8	5.8	5.8	5.9	6.1	6.2	6.4	6.6	6.8	6.9	7.1	7.6	8.5	9.3	9.9	7.9	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
	Female																						
Musculoskeletal <sup>2</sup>	34.8	34.2	33.7	33.2	32.6	32.0	31.4	30.6	29.8	29.2	28.6	28.0	27.5	26.9	26.4	25.9	25.4	24.8	24.2	23.5	23.1	23.3	
Mental disorders <sup>3</sup>	30.4	30.9	31.2	31.6	32.0	32.4	32.8	33.3	33.8	34.1	34.2	34.4	34.4	34.4	34.4	34.2	34.0	33.5	32.8	32.1	31.8	31.2	
Nervous system <sup>5</sup>	10.3	10.2	10.2	10.1	10.1	10.1	10.1	10.1	10.1	10.2	10.3	10.3	10.4	10.4	10.5	10.6	10.6	10.6	10.5	10.4	10.4	10.7	
Cardiovascular <sup>4</sup>	5.8	5.8	5.9	5.9	5.9	6.0	6.1	6.1	6.2	6.3	6.4	6.6	6.7	6.8	6.9	7.1	7.3	7.4	7.6	7.8	8.1	8.8	
Cancer <sup>6</sup>	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.6	
Nutritional/metabolic <sup>7</sup>	3.1	3.2	3.3	3.4	3.5	3.6	3.8	3.9	4.0	4.1	4.3	4.4	4.6	4.8	5.0	5.3	5.6	6.1	6.6	7.2	7.0	6.7	
Respiratory <sup>8</sup>	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.3	3.3	3.4	3.4	3.4	3.5	3.5	3.5	3.6	3.6	3.7	3.8	
Injuries	2.6	2.6	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.9	2.8	2.8	2.8	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.5	
Genitourinary <sup>9</sup>	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Other <sup>10</sup>	4.9	4.9	5.0	5.0	5.1	5.1	5.1	5.2	5.2	5.2	5.3	5.5	5.6	5.7	5.9	6.0	6.2	6.4	7.1	7.6	8.0	6.9	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
	Total																						
Musculoskeletal <sup>2</sup>	33.2	32.7	32.3	31.7	31.2	30.5	29.8	29.0	28.2	27.6	27.0	26.4	25.9	25.4	24.9	24.4	23.9	23.4	22.9	22.3	21.8	22.1	
Mental disorders <sup>3</sup>	29.7	30.0	30.3	30.6	31.0	31.4	31.8	32.3	32.8	33.1	33.3	33.4	33.4	33.5	33.5	33.4	33.3	32.9	32.1	31.4	31.1	30.5	
Nervous system <sup>5</sup>	9.6	9.5	9.4	9.4	9.3	9.3	9.3	9.4	9.4	9.4	9.5	9.5	9.5	9.5	9.6	9.6	9.6	9.6	9.5	9.4	9.4	9.6	
Cardiovascular <sup>4</sup>	7.9	8.0	8.1	8.2	8.3	8.3	8.4	8.5	8.6	8.8	9.0	9.2	9.3	9.5	9.7	9.9	10.1	10.3	10.6	10.8	11.2	11.9	
Injuries	3.8	3.8	3.8	3.9	4.0	4.0	4.1	4.2	4.2	4.2	4.2	4.3	4.3	4.3	4.4	4.4	4.5	4.6	4.6	4.7	4.8	5.5	
Cancer <sup>6</sup>	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.9	
Nutritional/metabolic <sup>7</sup>	2.9	3.0	3.1	3.1	3.2	3.3	3.4	3.5	3.5	3.6	3.6	3.7	3.8	3.9	4.0	4.1	4.3	4.5	4.8	5.2	5.0	4.8	
Respiratory <sup>8</sup>	2.8	2.8	2.8	2.8	2.8	2.9	2.9	2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.2	3.2	3.2	3.3	3.3	3.4	3.5	
Genitourinary <sup>9</sup>	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	
Other <sup>10</sup>	5.1	5.2	5.2	5.3	5.4	5.4	5.5	5.5	5.5	5.6	5.7	5.9	6.0	6.2	6.4	6.5	6.7	7.1	7.9	8.6	9.1	7.5	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

<sup>1</sup> Ranked by average percentage over the 5-year period 2014-18.

<sup>2</sup> Includes back disorders, arthritis, and muscle/ligament/fascia disorders.

<sup>3</sup> Includes depression, bipolar, schizophrenia, psychotic, intellectual, neurocognitive, anxiety, and obsessive-compulsive disorders.

<sup>4</sup> Includes heart disease or failure, cardiomyopathy, peripheral vascular disease, and hypertension.

<sup>5</sup> Includes stroke, multiple sclerosis, blindness, peripheral neuropathy, and epilepsy.

<sup>6</sup> Includes malignant neoplasms, lymphoma, and leukemia.

<sup>7</sup> Includes diabetes and disorders of the thyroid, pituitary, and adrenal glands. (Effective October 1999, the Listing of Impairments was changed to eliminate awards based solely on obesity.)

<sup>8</sup> Includes chronic respiratory disorders, asthma, and chronic pulmonary hypertension.

<sup>9</sup> Includes chronic kidney disease with or without dialysis, urinary tract disorders, and nephrotic syndrome.

<sup>10</sup> Includes congenital anomalies, blood, digestive, immune (including HIV/AIDS), and skin disorders, "other" and unknown categories.

Note: Totals may not equal sum of rounded components.

Source: *Annual Statistical Supplement to the Social Security Bulletin (1997-2002)*; *Annual Statistical Report on the Social Security Disability Insurance Program (2003-18)*.

**Table 3.—Disabled Worker Benefits Awarded**  
(By age and year of award, 1996-2019 Social Security DI disability experience)

Year	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 or older	Total
Male												
1996	642	7,200	14,402	23,957	33,524	38,832	44,427	54,546	69,722	64,870	3,349	355,471
1997	605	6,890	12,164	19,115	27,867	34,676	39,802	52,742	68,569	61,255	3,143	326,828
1998	628	7,110	11,876	17,965	27,304	35,774	41,745	55,569	70,654	61,333	3,074	333,032
1999	684	7,833	11,901	16,884	27,159	36,235	42,842	57,155	71,341	62,267	3,232	337,533
2000	733	9,065	12,136	16,198	25,966	35,509	42,335	58,396	72,226	63,034	3,186	338,784
2001	941	11,770	14,653	18,472	27,587	38,340	46,185	63,976	80,621	68,680	3,130	374,355
2002	1,003	13,991	15,276	18,926	28,272	40,624	50,522	68,588	90,078	75,908	3,148	406,336
2003	869	11,974	15,176	19,438	28,411	41,869	52,936	72,030	95,297	79,744	3,854	421,598
2004	697	11,390	15,391	19,335	27,236	41,334	53,692	73,375	99,501	81,882	4,839	428,672
2005	581	11,210	15,714	18,995	27,549	42,122	56,479	77,337	104,099	83,573	6,650	444,309
2006	505	10,399	14,952	17,334	25,818	38,673	54,660	76,301	99,277	82,129	7,199	427,247
2007	539	10,954	15,217	16,913	24,751	37,198	53,729	78,030	100,632	88,531	9,440	435,934
2008	607	12,217	17,791	18,629	25,916	38,101	57,037	85,868	109,212	96,866	11,652	473,896
2009	655	13,952	19,751	21,272	28,627	41,666	62,911	97,503	123,736	108,320	12,070	530,463
2010	528	13,880	20,699	22,936	29,274	43,603	65,937	106,870	135,864	115,767	13,051	568,409
2011	322	11,005	18,468	21,502	26,211	39,572	58,877	102,661	138,505	118,643	14,382	550,148
2012	210	9,030	16,475	20,565	24,422	36,704	54,641	97,518	134,601	114,069	15,288	523,523
2013	162	7,998	14,001	17,846	21,017	30,595	45,016	84,915	125,083	108,208	14,447	469,288
2014	181	7,568	12,853	15,979	18,991	26,139	37,896	74,782	117,416	103,602	13,395	428,802
2015	188	7,078	11,742	14,645	18,175	23,587	35,176	68,651	111,240	103,233	13,357	407,072
2016	175	6,607	11,162	13,827	17,755	22,090	33,195	63,602	107,619	103,135	13,565	392,732
2017	275	8,154	12,881	14,421	18,629	22,772	34,167	62,997	105,885	103,632	13,898	397,711
2018	251	7,238	11,650	13,308	18,006	21,746	32,334	58,997	101,092	102,062	14,186	380,870
2019	256	6,430	10,807	12,922	17,313	21,608	30,958	57,006	99,352	103,946	14,843	375,441
Female												
1996	381	4,449	9,802	16,688	25,087	31,620	38,310	47,032	53,027	40,317	2,070	268,783
1997	391	4,364	8,980	14,957	23,429	30,874	36,740	47,343	52,852	38,939	2,003	260,872
1998	366	4,816	9,315	14,930	24,175	32,453	39,440	50,954	56,550	40,434	1,917	275,350
1999	396	5,468	9,842	14,291	24,177	33,416	40,730	51,732	58,681	42,261	2,032	283,026
2000	482	6,353	10,097	14,372	23,460	32,625	39,366	52,554	58,487	42,868	1,868	282,532
2001	621	8,104	12,454	16,735	25,578	35,794	43,769	57,677	65,956	47,438	2,022	316,148
2002	605	9,554	13,511	17,684	26,551	38,800	48,249	61,624	72,010	52,899	2,180	343,667
2003	555	8,659	13,431	18,668	26,591	39,524	49,768	63,708	76,329	56,053	2,576	355,862
2004	481	8,315	13,766	18,835	25,906	39,476	50,831	66,473	80,498	59,221	3,301	367,103
2005	389	7,771	14,081	18,718	26,714	40,416	53,320	71,368	86,081	62,096	4,420	385,374
2006	360	7,094	13,186	17,118	25,254	37,855	52,709	71,497	83,915	62,529	5,042	376,559
2007	370	7,306	12,933	16,612	24,894	36,511	52,299	72,838	84,871	67,502	6,394	382,530
2008	390	8,200	14,534	18,199	26,576	37,976	55,880	80,885	92,289	73,617	7,948	416,494
2009	445	9,429	16,035	20,698	28,757	39,982	61,211	89,715	102,619	80,341	7,868	457,100
2010	371	9,447	16,732	21,982	29,527	41,430	62,128	95,974	109,755	84,844	8,667	480,857
2011	204	7,514	15,216	20,592	26,342	38,780	55,961	93,187	113,817	87,792	9,588	468,993
2012	160	6,134	13,445	19,727	25,109	37,183	53,090	91,315	115,154	88,118	10,688	460,123
2013	129	5,331	11,313	17,059	21,982	31,657	44,848	81,800	109,421	85,437	9,805	418,782
2014	111	5,001	10,174	15,070	19,889	27,604	38,582	73,070	102,488	80,769	9,413	382,171
2015	139	4,473	9,439	13,734	18,958	25,550	35,850	68,707	100,213	82,011	9,593	368,667
2016	135	4,253	8,733	12,419	18,306	23,363	34,344	63,209	95,793	81,284	9,697	351,536
2017	207	5,312	10,020	13,178	19,508	24,904	36,132	64,350	96,582	83,846	10,391	364,430
2018	187	4,613	9,147	12,597	18,646	23,825	34,709	60,373	94,443	83,834	10,635	353,009
2019	190	4,201	8,601	12,204	17,787	23,373	33,412	59,234	93,413	84,686	11,316	348,417
Total												
1996	1,023	11,649	24,204	40,645	58,611	70,452	82,737	101,578	122,749	105,187	5,419	624,254
1997	996	11,254	21,144	34,072	51,296	65,550	76,542	100,085	121,421	100,194	5,146	587,700
1998	994	11,926	21,191	32,895	51,479	68,227	81,185	106,523	127,204	101,767	4,991	608,382
1999	1,080	13,301	21,743	31,175	51,336	69,651	83,572	108,887	130,022	104,528	5,264	620,559
2000	1,215	15,418	22,233	30,570	49,426	68,134	81,701	110,950	130,713	105,902	5,054	621,316
2001	1,562	19,874	27,107	35,207	53,165	74,134	89,954	121,653	146,577	116,118	5,152	690,503
2002	1,608	23,545	28,787	36,610	54,823	79,424	98,771	130,212	162,088	128,807	5,328	750,003
2003	1,424	20,633	28,607	38,106	55,002	81,393	102,704	135,738	171,626	135,797	6,430	777,460
2004	1,178	19,705	29,157	38,170	53,142	80,810	104,523	139,848	179,999	141,103	8,140	795,775
2005	970	18,981	29,795	37,713	54,263	82,538	109,799	148,705	190,180	145,669	11,070	829,683
2006	865	17,493	28,138	34,452	51,072	76,528	107,369	147,798	183,192	144,658	12,241	803,806
2007	909	18,260	28,150	33,525	49,645	73,709	106,028	150,868	185,503	156,033	15,834	818,464
2008	997	20,417	32,325	36,828	52,492	76,077	112,917	166,753	201,501	170,483	19,600	890,390
2009	1,100	23,381	35,786	41,970	57,384	81,648	124,122	187,218	226,355	188,661	19,938	987,563
2010	899	23,327	37,431	44,918	58,801	85,033	128,065	202,844	245,619	200,611	21,718	1,049,266
2011	526	18,519	33,684	42,094	52,553	78,352	114,838	195,848	252,322	206,435	23,970	1,019,141
2012	370	15,164	29,920	40,292	49,531	73,887	107,731	188,833	249,755	202,187	25,976	983,646
2013	291	13,329	25,314	34,905	42,999	62,252	89,864	166,715	234,504	193,645	24,252	888,070
2014	292	12,569	23,027	31,049	38,880	53,743	76,478	147,852	219,904	184,371	22,808	810,973
2015	327	11,551	21,181	28,379	37,133	49,137	71,026	137,358	211,453	185,244	22,950	775,739
2016	310	10,860	19,895	26,246	36,061	45,453	67,539	126,811	203,412	184,419	23,262	744,268
2017	482	13,466	22,901	27,599	38,137	47,676	70,299	127,347	202,467	187,478	24,289	762,141
2018	438	11,851	20,797	25,905	36,652	45,571	67,043	119,370	195,535	185,896	24,821	733,879
2019	446	10,631	19,408	25,126	35,100	44,981	64,370	116,240	192,765	188,632	26,159	723,858

Source: SSA administrative records

**Table 4.—Disabled Worker Incidence Rates Per Thousand Exposed**  
(Awards per thousand by age and year of award, 1996-2019 Social Security DI disability experience)

Year	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 or older	Total		
												Gross	Adjusted	
Male														
1996	0.42	1.07	1.64	2.50	3.36	4.27	5.74	9.20	16.13	19.49	11.61	5.28	5.55	
1997	0.38	1.02	1.40	2.05	2.78	3.72	5.10	8.37	15.00	18.21	11.07	4.80	5.00	
1998	0.37	1.03	1.39	1.97	2.72	3.77	5.21	8.48	14.60	17.85	10.73	4.83	4.97	
1999	0.38	1.11	1.42	1.89	2.71	3.76	5.17	8.34	14.23	17.63	11.46	4.84	4.90	
2000	0.40	1.24	1.50	1.81	2.63	3.63	4.92	8.13	14.03	17.40	10.50	4.79	4.79	
2001	0.52	1.58	1.84	2.07	2.84	3.88	5.21	8.64	14.74	18.41	10.49	5.23	5.15	
2002	0.60	1.86	1.92	2.14	2.99	4.08	5.55	9.16	15.46	19.14	10.60	5.64	5.44	
2003	0.59	1.62	1.90	2.24	3.07	4.20	5.72	9.39	15.70	18.97	9.92	5.83	5.50	
2004	0.53	1.57	1.91	2.27	2.99	4.16	5.72	9.27	15.65	18.80	8.74	5.89	5.45	
2005	0.47	1.56	1.91	2.31	3.02	4.30	5.94	9.42	15.70	18.72	9.62	6.07	5.52	
2006	0.40	1.45	1.78	2.15	2.84	4.03	5.72	9.05	14.59	17.36	9.62	5.79	5.20	
2007	0.43	1.51	1.78	2.11	2.76	3.98	5.60	9.04	14.65	17.53	9.32	5.86	5.19	
2008	0.49	1.68	2.05	2.32	2.95	4.18	5.95	9.82	15.55	18.45	10.07	6.33	5.54	
2009	0.61	1.95	2.27	2.62	3.34	4.66	6.60	11.03	17.10	19.79	10.02	7.10	6.14	
2010	0.63	2.05	2.41	2.77	3.55	4.90	7.07	12.00	18.20	20.33	10.60	7.67	6.53	
2011	0.47	1.70	2.18	2.56	3.27	4.49	6.48	11.51	18.15	20.36	10.84	7.48	6.21	
2012	0.32	1.41	1.96	2.42	3.07	4.22	6.19	10.95	17.32	19.46	10.03	7.13	5.86	
2013	0.24	1.22	1.66	2.08	2.64	3.60	5.23	9.57	15.91	18.10	9.44	6.39	5.18	
2014	0.26	1.13	1.50	1.86	2.36	3.16	4.49	8.49	14.82	16.78	9.03	5.82	4.68	
2015	0.25	1.04	1.34	1.71	2.21	2.95	4.18	7.94	13.91	16.16	9.07	5.50	4.39	
2016	0.21	0.96	1.24	1.61	2.12	2.82	3.96	7.50	13.38	15.72	8.72	5.27	4.19	
2017	0.31	1.16	1.40	1.67	2.19	2.93	4.11	7.62	13.12	15.42	8.50	5.30	4.26	
2018	0.29	1.02	1.25	1.51	2.08	2.76	3.95	7.25	12.42	14.95	8.34	5.04	4.04	
2019	0.32	0.90	1.16	1.44	1.97	2.70	3.84	7.05	12.10	14.97	8.44	4.93	3.93	
Female														
1996	0.26	0.74	1.29	2.11	3.11	4.23	5.73	9.41	14.81	15.52	9.11	4.75	5.02	
1997	0.26	0.71	1.18	1.94	2.87	4.02	5.40	8.80	13.82	14.69	8.85	4.52	4.72	
1998	0.23	0.76	1.23	1.97	2.95	4.12	5.64	8.99	13.99	14.66	8.61	4.68	4.81	
1999	0.23	0.83	1.31	1.90	2.94	4.16	5.63	8.61	13.87	14.88	9.11	4.71	4.78	
2000	0.28	0.93	1.37	1.89	2.88	3.98	5.27	8.22	13.37	14.49	8.13	4.61	4.61	
2001	0.36	1.15	1.71	2.18	3.19	4.30	5.69	8.68	14.09	15.29	8.61	5.06	4.99	
2002	0.38	1.35	1.83	2.30	3.38	4.60	6.11	9.11	14.23	15.93	8.93	5.43	5.25	
2003	0.39	1.24	1.80	2.44	3.45	4.68	6.15	9.16	14.29	15.92	7.60	5.56	5.27	
2004	0.36	1.21	1.82	2.50	3.38	4.68	6.18	9.25	14.21	16.08	7.26	5.69	5.29	
2005	0.31	1.15	1.82	2.55	3.47	4.87	6.39	9.64	14.33	16.31	7.80	5.91	5.41	
2006	0.28	1.04	1.66	2.38	3.27	4.68	6.27	9.42	13.50	15.38	8.02	5.71	5.16	
2007	0.29	1.06	1.60	2.29	3.26	4.65	6.20	9.41	13.43	15.34	7.54	5.73	5.12	
2008	0.31	1.18	1.77	2.48	3.52	4.97	6.66	10.23	14.24	15.84	8.21	6.19	5.47	
2009	0.39	1.38	1.95	2.78	3.89	5.30	7.36	11.22	15.34	16.32	7.66	6.77	5.94	
2010	0.41	1.44	2.04	2.90	4.10	5.50	7.62	11.89	16.00	16.27	8.00	7.15	6.18	
2011	0.27	1.19	1.87	2.66	3.75	5.14	7.05	11.52	16.21	16.27	8.11	6.99	5.91	
2012	0.23	0.98	1.66	2.52	3.55	4.99	6.88	11.27	16.11	16.09	7.79	6.85	5.73	
2013	0.18	0.85	1.39	2.15	3.09	4.29	5.99	10.15	15.01	15.23	7.08	6.22	5.13	
2014	0.15	0.78	1.23	1.90	2.76	3.82	5.22	9.15	13.93	13.96	6.88	5.65	4.63	
2015	0.18	0.69	1.11	1.72	2.57	3.62	4.85	8.76	13.47	13.78	6.82	5.41	4.41	
2016	0.16	0.64	1.01	1.54	2.43	3.38	4.62	8.24	12.79	13.29	6.54	5.11	4.16	
2017	0.22	0.79	1.13	1.62	2.54	3.57	4.90	8.62	12.82	13.39	6.77	5.25	4.33	
2018	0.20	0.68	1.02	1.52	2.38	3.36	4.73	8.22	12.47	13.01	6.71	5.03	4.13	
2019	0.22	0.61	0.96	1.43	2.23	3.21	4.58	8.11	12.22	12.84	6.71	4.91	4.01	
Total														
1996	0.34	0.91	1.48	2.32	3.24	4.25	5.73	9.30	15.53	17.75	10.50	5.04	5.30	
1997	0.32	0.87	1.30	2.00	2.82	3.86	5.24	8.57	14.47	16.66	10.08	4.67	4.87	
1998	0.30	0.90	1.32	1.97	2.82	3.93	5.41	8.72	14.32	16.43	9.79	4.76	4.89	
1999	0.31	0.98	1.37	1.89	2.81	3.94	5.39	8.46	14.07	16.40	10.42	4.78	4.84	
2000	0.34	1.09	1.43	1.85	2.74	3.79	5.09	8.17	13.73	16.09	9.48	4.71	4.71	
2001	0.44	1.37	1.78	2.12	3.00	4.07	5.43	8.66	14.44	16.99	9.66	5.15	5.08	
2002	0.49	1.61	1.88	2.21	3.16	4.32	5.81	9.14	14.89	17.68	9.85	5.54	5.36	
2003	0.49	1.43	1.85	2.33	3.24	4.42	5.92	9.28	15.04	17.58	8.84	5.70	5.40	
2004	0.45	1.40	1.86	2.38	3.17	4.40	5.94	9.26	14.97	17.55	8.07	5.80	5.38	
2005	0.38	1.36	1.86	2.42	3.23	4.56	6.15	9.53	15.05	17.61	8.80	5.99	5.47	
2006	0.34	1.25	1.72	2.26	3.04	4.33	5.98	9.23	14.07	16.44	8.89	5.75	5.19	
2007	0.36	1.29	1.69	2.20	2.99	4.29	5.88	9.22	14.07	16.51	8.51	5.80	5.16	
2008	0.40	1.44	1.92	2.40	3.21	4.54	6.28	10.01	14.92	17.23	9.22	6.26	5.51	
2009	0.50	1.67	2.12	2.69	3.60	4.95	6.96	11.12	16.26	18.14	8.94	6.94	6.04	
2010	0.51	1.75	2.23	2.83	3.81	5.18	7.33	11.95	17.15	18.39	9.38	7.42	6.37	
2011	0.37	1.45	2.03	2.61	3.49	4.79	6.74	11.52	17.22	18.39	9.55	7.24	6.07	
2012	0.28	1.20	1.81	2.47	3.30	4.57	6.51	11.10	16.74	17.83	8.97	6.99	5.80	
2013	0.21	1.04	1.53	2.12	2.85	3.92	5.58	9.85	15.48	16.71	8.32	6.31	5.16	
2014	0.20	0.96	1.37	1.88	2.55	3.47	4.83	8.80	14.40	15.42	7.99	5.74	4.65	
2015	0.21	0.87	1.23	1.71	2.38	3.27	4.49	8.33	13.70	15.01	7.97	5.46	4.40	
2016	0.18	0.80	1.12	1.58	2.26	3.08	4.27	7.85	13.10	14.54	7.66	5.19	4.18	
2017	0.26	0.98	1.27	1.64	2.35	3.23	4.48	8.09	12.97	14.44	7.66	5.28	4.29	
2018	0.24	0.86	1.14	1.51	2.22	3.05	4.32	7.71	12.44	14.01	7.55	5.04	4.08	
2019	0.27	0.76	1.06	1.43	2.09	2.94	4.19	7.55	12.16	13.93	7.59	4.92	3.97	

Source: SSA administrative records

- (1) Age-specific and gross rates computed as the ratio of annual awards, to the exposure of the disability insured population not receiving benefits.
- (2) Adjusted rate (by sex) computed using the age distribution and exposure of the disability insured population not receiving benefits as of calendar year 2000.
- (3) Adjusted rate (total) computed using the combined age-sex distribution and exposure of the disability insured population not receiving benefits as of calendar year 2000.

**Table 5.—Disabled Worker Benefit Terminations, Conversions, and Ratios to In-force**  
(By reason for termination and year, 1996-2019 Social Security DI disability experience)

Year	Number of terminations			Conv	Total	Terminations per thousand beneficiaries								Conv ratio	Gross Total
	Death	Recov	Other			Death		Recovery		Other		Subtotal			
						Gross	Adj	Gross	Adj	Gross	Adj	Gross	Adj		
Male															
1996	114,672	32,608	4,337	116,756	268,373	41.93	42.38	11.92	10.94	1.59	1.55	55.44	54.88	42.69	98.13
1997	104,632	76,591	3,861	120,359	305,443	37.30	37.90	27.30	26.00	1.38	1.36	65.97	65.26	42.90	108.87
1998	105,417	30,167	3,935	117,540	257,059	37.23	37.59	10.65	10.22	1.39	1.39	49.27	49.20	41.51	90.78
1999	107,252	34,908	5,439	124,049	271,648	36.90	37.08	12.01	11.79	1.87	1.87	50.78	50.73	42.68	93.46
2000	108,226	41,826	6,966	125,583	282,601	36.42	36.42	14.07	14.07	2.34	2.34	52.83	52.83	42.26	95.09
2001	104,516	39,933	6,878	125,567	276,894	34.31	34.12	13.11	13.33	2.26	2.29	49.68	49.73	41.22	90.89
2002	113,756	36,918	6,794	129,017	286,485	36.02	35.66	11.69	12.13	2.15	2.19	49.86	49.98	40.85	90.72
2003	115,760	33,066	6,073	113,850	268,749	35.05	34.37	10.01	10.61	1.84	1.75	46.89	46.72	34.47	81.36
2004	119,344	30,002	10,418	114,495	274,259	34.53	33.57	8.68	9.46	3.01	2.78	46.23	45.81	33.13	79.36
2005	124,344	35,138	13,051	118,369	290,902	34.42	33.18	9.73	10.80	3.61	3.29	47.76	47.28	32.77	80.53
2006	126,730	31,856	8,133	126,382	293,101	33.80	32.35	8.50	9.61	2.17	2.17	44.47	44.13	33.71	78.17
2007	128,819	25,512	11,076	134,800	300,207	33.21	31.49	6.58	7.54	2.86	3.00	42.64	42.02	34.75	77.40
2008	134,036	27,528	11,144	147,657	320,365	33.33	31.21	6.85	7.94	2.77	2.92	42.95	42.07	36.72	79.67
2009	137,108	24,373	11,703	184,807	357,991	32.67	30.52	5.81	6.85	2.79	2.91	41.27	40.28	44.04	85.31
2010	139,716	28,946	12,942	182,931	364,535	31.83	29.47	6.60	7.83	2.95	3.27	41.38	40.56	41.68	83.06
2011	145,003	30,345	8,736	183,963	368,047	31.64	29.21	6.62	8.07	1.91	2.04	40.16	39.32	40.14	80.30
2012	153,740	33,969	3,781	218,083	409,573	32.47	29.73	7.17	9.01	0.80	0.76	40.44	39.50	46.06	86.50
2013	152,030	29,761	3,605	246,232	431,628	31.62	28.90	6.19	7.87	0.75	0.72	38.56	37.49	51.22	89.78
2014	153,143	41,207	1,336	244,381	440,067	31.74	28.75	8.54	11.06	0.28	0.21	40.55	40.01	50.64	91.19
2015	153,899	47,288	1,170	249,485	451,842	32.06	28.74	9.85	13.20	0.24	0.18	42.15	42.11	51.97	94.12
2016	151,280	53,285	1,135	250,428	456,128	31.86	28.36	11.22	15.28	0.24	0.17	43.32	43.82	52.74	96.06
2017	150,809	60,973	1,329	260,157	473,268	32.21	28.50	13.02	18.04	0.28	0.18	45.51	46.72	55.56	101.07
2018	148,761	65,171	1,250	266,069	481,251	32.37	28.40	14.18	20.13	0.27	0.17	46.83	48.70	57.90	104.73
2019	143,541	59,738	1,047	271,297	475,623	31.97	27.87	13.31	18.92	0.23	0.13	45.51	46.92	60.43	105.94
Female															
1996	52,473	17,964	1,990	69,671	142,098	30.24	30.69	10.35	9.70	1.15	1.11	41.73	41.49	40.15	81.88
1997	53,322	29,365	1,735	73,800	158,222	28.73	29.13	15.82	15.05	0.93	0.91	45.49	45.09	39.76	85.25
1998	55,398	21,364	2,032	74,190	152,984	28.18	28.44	10.87	10.56	1.03	1.04	40.09	40.04	37.74	77.83
1999	58,175	22,894	2,682	81,030	164,781	27.86	27.99	10.96	10.81	1.28	1.28	40.10	40.07	38.80	78.90
2000	60,770	27,657	3,215	84,484	176,126	27.57	27.57	12.55	12.55	1.46	1.46	41.57	41.57	38.32	79.90
2001	60,452	26,832	3,378	87,553	178,215	25.99	25.86	11.53	11.68	1.45	1.47	38.97	39.01	37.64	76.61
2002	66,846	27,139	3,506	93,336	190,827	27.01	26.79	10.97	11.23	1.42	1.44	39.39	39.47	37.71	77.10
2003	69,449	24,957	3,145	84,484	182,035	26.25	25.86	9.43	9.81	1.19	1.12	36.87	36.78	31.93	68.81
2004	71,990	23,675	5,770	87,243	188,678	25.52	24.98	8.39	8.90	2.05	1.88	35.95	35.75	30.92	66.87
2005	75,843	28,384	7,530	91,928	203,685	25.25	24.53	9.45	10.17	2.51	2.30	37.20	37.00	30.60	67.81
2006	78,651	26,378	5,339	100,178	210,546	24.78	23.95	8.31	9.08	1.68	1.71	34.77	34.75	31.56	66.34
2007	80,594	21,693	7,633	108,094	218,014	24.17	23.14	6.50	7.21	2.29	2.42	32.96	32.77	32.41	65.37
2008	84,836	23,841	7,614	121,112	237,403	24.20	23.00	6.80	7.64	2.17	2.31	33.18	32.94	34.56	67.73
2009	88,655	21,118	8,332	154,591	272,696	23.98	22.72	5.71	6.49	2.25	2.38	31.94	31.59	41.81	73.75
2010	90,695	25,636	7,876	154,031	278,238	23.29	21.98	6.58	7.59	2.02	2.21	31.90	31.77	39.56	71.45
2011	94,180	27,748	5,718	155,096	282,742	23.03	21.58	6.78	8.03	1.40	1.49	31.21	31.10	37.92	69.13
2012	101,119	31,167	2,932	185,995	321,213	23.76	22.19	7.32	8.96	0.69	0.70	31.77	31.85	43.70	75.46
2013	100,776	27,337	2,841	208,764	339,718	23.10	21.45	6.27	7.82	0.65	0.66	30.01	29.93	47.85	77.86
2014	102,464	39,087	743	209,679	351,973	23.16	21.48	8.84	11.32	0.17	0.13	32.17	32.93	47.40	79.57
2015	103,910	44,478	661	216,175	365,224	23.38	21.50	10.01	13.38	0.15	0.11	33.54	34.99	48.65	82.19
2016	102,463	49,914	677	220,878	373,932	23.10	21.16	11.25	15.47	0.15	0.10	34.50	36.73	49.79	84.29
2017	103,358	57,050	706	234,433	395,547	23.42	21.28	12.93	18.09	0.16	0.10	36.51	39.47	53.12	89.63
2018	101,152	60,480	654	244,652	406,938	23.14	20.92	13.84	19.97	0.15	0.09	37.12	40.98	55.97	93.09
2019	98,858	55,058	637	253,630	408,183	22.93	20.67	12.77	18.52	0.15	0.08	35.85	39.27	58.84	94.69
Total															
1996	167,145	50,572	6,327	186,427	410,471	37.39	37.40	11.31	10.41	1.42	1.36	50.12	49.18	41.70	91.82
1997	157,954	105,956	5,596	194,159	463,665	33.89	34.17	22.73	21.33	1.20	1.17	57.82	56.67	41.65	99.47
1998	160,815	51,531	5,967	191,730	410,043	33.52	33.69	10.74	10.36	1.24	1.24	45.51	45.30	39.97	85.48
1999	165,427	57,802	8,121	205,079	436,429	33.12	33.21	11.57	11.37	1.63	1.61	46.32	46.19	41.06	87.38
2000	168,996	69,483	10,181	210,067	458,727	32.65	32.65	13.42	13.42	1.97	1.97	48.04	48.04	40.58	88.62
2001	164,968	66,765	10,256	213,120	455,109	30.71	30.60	12.43	12.63	1.91	1.94	45.04	45.17	39.67	84.71
2002	180,602	64,057	10,300	222,353	477,312	32.06	31.88	11.37	11.75	1.83	1.87	45.26	45.50	39.47	84.74
2003	185,209	58,023	9,218	198,334	450,784	31.13	30.74	9.75	10.27	1.55	1.48	42.44	42.49	33.34	75.78
2004	191,334	53,677	16,188	201,738	462,937	30.48	29.91	8.55	9.22	2.58	2.39	41.61	41.53	32.14	73.75
2005	200,187	63,522	20,581	210,297	494,587	30.26	29.50	9.60	10.53	3.11	2.87	42.97	42.90	31.79	74.76
2006	205,381	58,234	13,472	226,560	503,647	29.66	28.77	8.41	9.39	1.95	1.97	40.02	40.14	32.72	72.75
2007	209,413	47,205	18,709	242,894	518,221	29.03	27.93	6.54	7.40	2.59	2.75	38.17	38.08	33.67	71.84
2008	218,872	51,369	18,758	268,769	557,768	29.08	27.71	6.83	7.81	2.49	2.66	38.40	38.18	35.71	74.11
2009	225,763	45,491	20,035	339,398	630,687	28.60	27.20	5.76	6.70	2.54	2.69	36.90	36.58	42.99	79.89
2010	230,411	54,582	20,818	336,962	642,773	27.82	26.28	6.59	7.73	2.51	2.82	36.92	36.82	40.68	77.60
2011	239,183	58,093	14,454	339,059	650,789	27.58	25.96	6.70	8.05	1.67	1.80	35.94	35.82	39.09	75.03
2012	254,859	65,136	6,713	404,078	730,784	28.35	26.52	7.24	8.99	0.75	0.73	36.34	36.24	44.94	81.28
2013	252,806	57,098	6,446	454,996	771,346	27.57	25.72	6.23	7.85	0.70	0.69	34.50	34.27	49.61	84.11
2014	255,607	80,294	2,079	454,060	792,040	27.64	25.65	8.68	11.17	0.22	0.18	36.54	36.99	49.09	85.63
2015	257,809	91,766	1,831	465,660	817,066	27.89	25.65	9.93	13.27	0.20	0.15	38.01	39.08	50.37	88.38
2016	253,743	103,199	1,812	471,306	830,060	27.63	25.30	11.24	15.36	0.20	0.14	39.06	40.80	51.31	90.38
2017	254,167	118,023	2,035	494,590	868,815	27.94	25.43	12.98	18.06	0.22	0.15	41.14	43.63	54.38	95.5

**Table 6.—Disabled Worker Benefits In Current-Payment Status**  
(By age at end of year, 1996-2019 Social Security DI disability experience)

Year	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65	Total
Male												
1996	768	20,025	75,593	150,936	242,640	307,286	363,195	396,309	482,044	599,705	0	2,638,501
1997	729	18,330	69,226	139,506	233,304	308,492	362,595	417,193	503,624	607,320	0	2,660,319
1998	763	18,103	64,835	132,429	230,690	317,452	374,073	440,585	529,592	622,743	0	2,731,265
1999	815	18,920	60,732	124,586	226,686	323,580	386,484	467,617	551,624	633,107	0	2,794,151
2000	887	20,792	57,535	118,869	218,318	325,885	397,952	494,644	569,818	647,231	0	2,851,931
2001	1,082	25,291	59,109	116,707	211,521	329,107	412,356	515,749	603,613	673,161	0	2,947,696
2002	1,182	30,579	63,206	115,533	205,695	331,221	430,058	529,673	647,693	712,309	0	3,067,149
2003	1,052	32,437	69,442	116,011	201,779	334,681	447,952	551,669	688,353	756,310	21,685	3,221,371
2004	870	32,332	75,641	116,293	196,709	335,834	462,482	573,435	737,309	796,437	46,345	3,373,687
2005	697	31,312	80,573	115,271	194,958	330,913	474,246	596,708	788,316	829,479	74,786	3,517,259
2006	611	29,420	84,002	115,225	193,448	322,471	481,242	619,122	814,662	875,884	107,034	3,643,121
2007	623	28,380	86,530	118,519	192,012	314,743	483,943	643,244	825,507	932,822	147,589	3,773,912
2008	706	28,965	90,268	125,312	191,469	308,761	488,247	671,212	851,524	982,985	185,075	3,924,524
2009	770	31,435	95,185	136,107	194,554	308,454	499,108	706,505	895,305	1,050,371	182,575	4,100,407
2010	665	33,206	100,188	147,694	197,445	314,907	506,533	745,740	953,061	1,126,306	183,933	4,309,678
2011	399	31,222	101,835	156,392	199,196	317,767	502,455	771,376	1,011,826	1,182,862	218,481	4,493,811
2012	272	27,280	100,152	161,117	202,861	316,371	493,181	781,189	1,063,399	1,213,681	246,541	4,606,044
2013	215	23,426	95,651	161,933	206,427	308,773	475,772	777,957	1,097,757	1,249,308	244,915	4,642,134
2014	220	19,977	88,847	157,903	207,815	294,581	451,294	759,308	1,114,755	1,282,955	250,020	4,627,675
2015	213	17,401	80,718	150,581	207,948	277,197	433,205	728,050	1,117,193	1,317,977	250,817	4,581,300
2016	196	15,621	72,108	140,964	204,986	261,282	413,982	687,273	1,105,255	1,348,227	260,685	4,510,579
2017	297	16,383	66,863	131,346	200,638	252,890	395,286	648,549	1,080,159	1,373,285	266,634	4,432,330
2018	294	16,210	62,026	120,598	192,866	246,894	373,744	609,416	1,050,343	1,386,315	271,480	4,330,186
2019	300	15,439	58,681	112,021	185,204	244,382	352,662	573,453	1,016,972	1,390,550	281,574	4,231,238
Female												
1996	478	12,380	47,206	94,145	152,053	201,631	242,748	281,299	331,849	376,021	0	1,739,810
1997	457	11,590	45,861	92,644	155,082	213,006	256,741	308,246	361,640	395,107	0	1,840,374
1998	445	11,748	44,863	91,709	160,302	226,100	274,984	334,305	394,759	420,462	0	1,959,677
1999	474	12,644	43,926	89,852	164,335	238,202	294,693	362,563	426,265	443,091	0	2,076,045
2000	573	14,296	43,177	89,670	164,859	246,800	312,538	391,464	451,582	468,756	0	2,183,715
2001	715	17,339	45,741	92,537	165,846	256,575	332,522	416,824	489,879	502,151	0	2,320,129
2002	727	20,884	50,590	95,515	167,600	266,622	353,508	438,776	531,718	546,347	0	2,472,287
2003	682	22,578	55,878	99,774	169,470	277,724	375,324	465,180	570,499	593,608	16,532	2,647,249
2004	591	22,898	61,383	103,753	169,586	286,702	394,572	494,833	616,509	638,275	35,435	2,824,537
2005	473	22,141	65,812	105,867	173,619	291,295	412,264	527,063	667,304	677,094	58,798	3,001,730
2006	441	20,623	68,643	107,464	177,935	290,318	426,597	557,006	701,363	727,849	85,558	3,163,797
2007	436	19,552	69,937	111,023	181,609	288,752	437,617	584,975	725,575	784,345	120,990	3,324,811
2008	454	19,907	71,794	116,647	185,996	288,694	451,000	616,848	761,221	834,659	154,947	3,502,167
2009	519	21,485	74,016	125,724	192,169	291,177	468,127	653,845	811,562	895,273	153,715	3,687,612
2010	454	22,651	76,703	135,257	196,262	300,892	480,270	692,026	870,176	964,283	155,286	3,894,260
2011	278	21,498	77,277	140,993	198,055	309,068	479,372	720,873	928,821	1,019,213	186,285	4,081,733
2012	195	18,847	75,479	142,956	201,596	313,329	473,983	739,885	982,563	1,062,235	209,479	4,220,547
2013	158	15,956	71,994	141,452	204,214	311,248	461,327	747,605	1,023,339	1,111,262	210,261	4,298,816
2014	123	13,518	66,532	135,082	203,925	301,667	442,009	739,758	1,047,793	1,159,642	216,794	4,326,843
2015	150	11,480	59,986	126,466	201,655	286,314	429,823	718,837	1,063,357	1,208,799	221,263	4,328,130
2016	155	10,239	53,056	116,429	196,204	270,033	417,983	684,653	1,063,432	1,251,085	234,888	4,298,157
2017	233	10,649	48,754	107,718	189,195	261,899	405,797	652,072	1,053,608	1,288,243	244,977	4,263,145
2018	223	10,550	44,867	99,275	179,840	254,976	390,214	618,539	1,041,437	1,313,542	253,683	4,207,146
2019	226	10,215	42,319	92,546	169,812	250,826	374,585	588,749	1,023,504	1,329,585	264,769	4,147,136
Total												
1996	1,246	32,405	122,799	245,081	394,693	508,917	605,943	677,608	813,893	975,726	0	4,378,311
1997	1,186	29,920	115,087	232,150	388,386	521,498	619,336	725,439	865,264	1,002,427	0	4,500,693
1998	1,208	29,851	109,698	224,138	390,992	543,552	649,057	774,890	924,351	1,043,205	0	4,690,942
1999	1,289	31,564	104,658	214,438	391,021	561,782	681,177	830,180	977,889	1,076,198	0	4,870,196
2000	1,460	35,088	100,712	208,539	383,177	572,685	710,490	886,108	1,021,400	1,115,987	0	5,035,646
2001	1,797	42,630	104,850	209,244	377,367	585,682	744,878	932,573	1,093,492	1,175,312	0	5,267,925
2002	1,909	51,463	113,796	211,048	373,295	597,843	783,566	968,449	1,179,411	1,258,656	0	5,539,436
2003	1,734	55,015	125,320	215,785	371,249	612,405	823,276	1,016,849	1,258,852	1,349,918	38,217	5,868,620
2004	1,461	55,230	137,024	220,046	366,295	622,536	857,054	1,068,268	1,353,818	1,434,712	81,780	6,198,224
2005	1,170	53,453	146,385	221,138	368,577	622,208	886,510	1,123,771	1,455,620	1,506,573	133,584	6,518,989
2006	1,052	50,043	152,645	222,689	371,383	612,789	907,839	1,176,128	1,516,025	1,603,733	192,592	6,806,918
2007	1,059	47,932	156,467	229,542	373,621	603,495	921,560	1,228,219	1,551,082	1,717,167	268,579	7,098,723
2008	1,160	48,872	162,062	241,959	377,465	597,455	939,247	1,288,060	1,612,745	1,817,644	340,022	7,426,691
2009	1,289	52,920	169,201	261,831	386,763	599,631	967,235	1,360,350	1,706,865	1,945,644	336,290	7,788,019
2010	1,119	55,857	176,891	282,951	393,707	615,799	986,803	1,437,766	1,823,237	2,090,589	339,219	8,203,938
2011	677	52,720	179,112	297,385	397,251	626,835	981,827	1,492,249	1,940,647	2,202,075	404,766	8,575,544
2012	467	46,127	175,631	304,073	404,457	629,700	967,164	1,521,074	2,045,962	2,275,916	456,020	8,826,591
2013	373	39,382	167,645	303,385	410,641	620,021	937,099	1,525,562	2,121,096	2,360,570	455,176	8,940,950
2014	343	33,495	155,379	292,985	411,740	596,248	893,303	1,499,066	2,162,548	2,442,597	466,814	8,954,518
2015	363	28,881	140,704	277,047	409,603	563,511	863,028	1,446,887	2,180,550	2,526,776	472,080	8,909,430
2016	351	25,860	125,164	257,393	401,190	531,315	831,965	1,371,926	2,168,687	2,599,312	495,573	8,808,736
2017	530	27,032	115,617	239,064	389,833	514,789	801,083	1,300,621	2,133,767	2,661,528	511,611	8,695,475
2018	517	26,760	106,893	219,873	372,706	501,870	763,958	1,227,955	2,091,780	2,699,857	525,163	8,537,332
2019	526	25,654	101,000	204,567	355,016	495,208	727,247	1,162,202	2,040,476	2,720,135	546,343	8,378,374

Source: SSA administrative records.



**Disabled Worker Death Experience  
by Entitlement Age and Duration  
(2011-15)**





**Table 7A.—Male Disabled Workers  
Probability of Death  
(2011-15 Social Security DI disability experience)**

Entl age	Completed duration of disability entitlement										10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9		
16	0.007175	0.001547	0.003359	0.005631	0.003877	0.002814	0.004051	0.004955	0.006637	0.005415	0.003617	26
17	0.007607	0.003953	0.003932	0.005657	0.004147	0.004248	0.004716	0.004657	0.007050	0.006106	0.004675	27
18	0.008873	0.006475	0.004396	0.005408	0.005287	0.005596	0.005150	0.004156	0.006976	0.006388	0.005411	28
19	0.011197	0.008101	0.004881	0.005215	0.006381	0.005737	0.004912	0.004520	0.006447	0.007468	0.006112	29
20	0.011017	0.009251	0.005611	0.005454	0.006033	0.005882	0.005017	0.004991	0.005509	0.007406	0.007030	30
21	0.010965	0.009165	0.008060	0.005386	0.005204	0.006087	0.004888	0.004792	0.005810	0.006527	0.006355	31
22	0.012289	0.008988	0.007326	0.006063	0.006172	0.006271	0.005799	0.006282	0.006728	0.006774	0.005747	32
23	0.014125	0.011270	0.008073	0.006019	0.006777	0.006293	0.006645	0.007876	0.007310	0.006579	0.006615	33
24	0.015084	0.012043	0.009140	0.006941	0.007646	0.006472	0.007752	0.007933	0.007198	0.008229	0.007567	34
25	0.019201	0.014491	0.010604	0.008696	0.008641	0.008343	0.008238	0.008044	0.009082	0.008350	0.007150	35
26	0.020984	0.015923	0.011259	0.009039	0.009992	0.010024	0.009423	0.009400	0.008534	0.010004	0.007577	36
27	0.021112	0.015961	0.011961	0.010729	0.010452	0.009264	0.009392	0.009804	0.008417	0.010170	0.008741	37
28	0.022491	0.015984	0.012927	0.010725	0.010067	0.010621	0.011379	0.010022	0.009034	0.010744	0.009549	38
29	0.023582	0.015969	0.012594	0.011580	0.010190	0.011410	0.010747	0.011460	0.012242	0.011969	0.009783	39
30	0.024798	0.018525	0.013777	0.012464	0.010957	0.011252	0.011492	0.011626	0.013065	0.012384	0.010640	40
31	0.023328	0.018531	0.013916	0.011822	0.011447	0.011234	0.010903	0.011638	0.013221	0.012345	0.011153	41
32	0.024682	0.018588	0.014452	0.011441	0.012400	0.011609	0.011553	0.013702	0.013202	0.012048	0.011910	42
33	0.027330	0.020499	0.014827	0.013544	0.012077	0.013245	0.013247	0.013919	0.013848	0.013297	0.012289	43
34	0.028399	0.019836	0.015685	0.014254	0.013350	0.013610	0.013383	0.013378	0.013196	0.013584	0.013175	44
35	0.030470	0.020094	0.016485	0.014094	0.014369	0.015085	0.014798	0.013623	0.014430	0.015872	0.014510	45
36	0.031201	0.020976	0.016182	0.015754	0.014753	0.015542	0.014518	0.014686	0.015233	0.015908	0.015168	46
37	0.030694	0.021877	0.017780	0.015664	0.014618	0.016066	0.015998	0.016562	0.015904	0.016563	0.016356	47
38	0.031833	0.022443	0.018424	0.016603	0.015577	0.015557	0.016494	0.016178	0.017814	0.018384	0.017115	48
39	0.036764	0.023829	0.019231	0.017852	0.015731	0.017441	0.016566	0.017542	0.018489	0.018847	0.017803	49
40	0.036107	0.023856	0.018272	0.018094	0.016562	0.016585	0.018174	0.019148	0.018601	0.020020	0.019723	50
41	0.039447	0.025165	0.020036	0.018295	0.018046	0.019545	0.020216	0.019368	0.020055	0.020945	0.020555	51
42	0.042035	0.028313	0.021366	0.020549	0.019025	0.021219	0.020109	0.020070	0.021292	0.022295	0.021965	52
43	0.043696	0.029173	0.022790	0.021133	0.020493	0.020965	0.021334	0.022778	0.022831	0.024446	0.023508	53
44	0.043086	0.030906	0.023944	0.022227	0.021591	0.021792	0.023281	0.022017	0.023235	0.025748	0.024385	54
45	0.047117	0.032136	0.025599	0.022932	0.022878	0.022244	0.023522	0.024672	0.025474	0.025926	0.025702	55
46	0.050852	0.033966	0.026365	0.025600	0.024256	0.024609	0.025628	0.025956	0.027978	0.029357	0.028082	56
47	0.056916	0.034919	0.028458	0.026569	0.025875	0.026484	0.026246	0.027094	0.028357	0.030515	0.029326	57
48	0.060946	0.040410	0.030913	0.028603	0.027552	0.027901	0.029522	0.028408	0.031046	0.031931	0.031255	58
49	0.062478	0.040928	0.031050	0.028954	0.027345	0.028373	0.030452	0.031089	0.031883	0.033640	0.032894	59
50	0.042661	0.031050	0.026100	0.025797	0.025903	0.027369	0.028038	0.030147	0.030453	0.033520	0.035000	60
51	0.054740	0.037102	0.029870	0.028068	0.029607	0.030074	0.029908	0.031790	0.034426	0.034175	0.036142	61
52	0.058255	0.039429	0.031753	0.029201	0.030521	0.031569	0.032070	0.034136	0.035687	0.037208	0.037453	62
53	0.064498	0.041797	0.033611	0.031930	0.032328	0.033047	0.035015	0.034938	0.037026	0.037699	0.039538	63
54	0.064622	0.042791	0.034213	0.033523	0.032414	0.035090	0.035121	0.036589	0.037792	0.038309	0.040737	64
55	0.047245	0.033968	0.029988	0.029938	0.029907	0.031845	0.033180	0.035458	0.035353	0.037127	0.038128	65
56	0.057324	0.039982	0.033325	0.033011	0.032384	0.035754	0.035246	0.037774	0.037524	0.035501	0.045059	66
57	0.059355	0.041708	0.033661	0.033503	0.033890	0.036823	0.037060	0.037294	0.034520	0.042421	0.047487	67
58	0.061674	0.041877	0.035829	0.034605	0.034912	0.036656	0.038287	0.034318	0.040418	0.045527	0.049702	68
59	0.062680	0.042325	0.036097	0.035233	0.035322	0.037245	0.034937	0.040803	0.043175	0.047763	0.053008	69
60	0.061639	0.043211	0.036127	0.034947	0.035282	0.034098	0.040359	0.042692	0.046129	0.048749	0.055901	70
61	0.070474	0.047510	0.038960	0.036788	0.034431	0.039888	0.042919	0.045085	0.049417	0.051915	0.059338	71
62	0.073263	0.049457	0.040457	0.038238	0.040118	0.043727	0.045933	0.048901	0.053295	0.055304	0.062607	72
63	0.086323	0.058018	0.045471	0.044064	0.045420	0.047896	0.053293	0.052163	0.057833	0.058613	0.067118	73
64	0.102745	0.062102	0.051048	0.049513	0.050920	0.052707	0.057641	0.057725	0.060401	0.066597	0.071461	74
65	0.111476	0.065839	0.055680	0.050139	0.051346	0.056072	0.056916	0.059350	0.063215	0.073825	0.075068	75

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of *entl age* and *duration*. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. The value  $q_{[x]+t}$  at duration  $t$  represents the probability of death—in a multiple-decrement environment—during the  $(t+1)$  year of entitlement for those originally entitled to disability benefits at *entl age*  $[x]$  who have attained age  $[x]+t$ .
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 7C** for attained ages beyond age 75.
4. Results have been graduated using the Whittaker-Henderson Type B two-dimensional method.

**Table 7B.—Female Disabled Workers  
Probability of Death**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement										10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9		
16	0.003904	0.012404	0.009918	0.008138	0.003466	0.006455	0.005363	0.003831	0.004950	0.003733	0.005899	26
17	0.005316	0.010740	0.008640	0.008246	0.003865	0.006651	0.005272	0.004218	0.004801	0.004952	0.005796	27
18	0.006791	0.008646	0.007291	0.007964	0.004373	0.006454	0.004972	0.004515	0.005309	0.006054	0.005305	28
19	0.008646	0.007201	0.006341	0.007391	0.004447	0.005803	0.005529	0.004489	0.006513	0.006927	0.004833	29
20	0.010678	0.006584	0.006101	0.005403	0.005258	0.004257	0.005624	0.004961	0.005747	0.006264	0.005606	30
21	0.011517	0.007867	0.006459	0.006099	0.005867	0.004562	0.006319	0.005235	0.005656	0.006198	0.005486	31
22	0.012423	0.009719	0.007276	0.006680	0.004957	0.005150	0.006567	0.004881	0.005697	0.005980	0.006178	32
23	0.013172	0.010837	0.007910	0.007020	0.005017	0.005346	0.006921	0.005005	0.007600	0.005874	0.006168	33
24	0.013898	0.011295	0.007919	0.006633	0.006037	0.006123	0.007026	0.006841	0.006811	0.006131	0.006770	34
25	0.017233	0.011011	0.007993	0.008330	0.006975	0.007309	0.006728	0.007783	0.008114	0.006229	0.007443	35
26	0.017685	0.013516	0.009846	0.008791	0.007141	0.007891	0.008005	0.008085	0.008635	0.007182	0.006576	36
27	0.019429	0.014925	0.011309	0.008302	0.007914	0.008665	0.007461	0.008490	0.008767	0.007610	0.007552	37
28	0.020649	0.015735	0.010706	0.009132	0.008622	0.008221	0.008944	0.009679	0.009369	0.008400	0.008461	38
29	0.020395	0.015185	0.011149	0.009951	0.009950	0.009213	0.007940	0.009375	0.008868	0.008519	0.008509	39
30	0.020820	0.014919	0.011940	0.010664	0.009603	0.008994	0.008085	0.008647	0.008797	0.008566	0.009023	40
31	0.022663	0.015732	0.011449	0.010360	0.010366	0.009163	0.009398	0.009840	0.009123	0.009181	0.009652	41
32	0.023622	0.017757	0.012483	0.009412	0.010531	0.009187	0.008977	0.010102	0.010083	0.008795	0.009851	42
33	0.023155	0.018195	0.012306	0.011025	0.010045	0.009369	0.008948	0.010473	0.009301	0.010189	0.009696	43
34	0.024664	0.017724	0.012253	0.011304	0.010237	0.009919	0.010701	0.011267	0.009517	0.010550	0.010477	44
35	0.027061	0.018922	0.013601	0.011572	0.010651	0.011064	0.010975	0.011121	0.010946	0.011356	0.011405	45
36	0.027040	0.020485	0.014145	0.011679	0.010674	0.011007	0.011111	0.012517	0.010756	0.011589	0.012196	46
37	0.028185	0.020779	0.013498	0.013700	0.011706	0.011899	0.010820	0.011584	0.011268	0.011825	0.012711	47
38	0.028632	0.021097	0.015779	0.013097	0.012244	0.010775	0.012005	0.011849	0.011685	0.012686	0.013409	48
39	0.029234	0.020562	0.017321	0.013170	0.012432	0.011616	0.013482	0.013004	0.013748	0.012779	0.013873	49
40	0.030291	0.023116	0.017290	0.014710	0.013279	0.012760	0.013393	0.012747	0.012866	0.014153	0.014271	50
41	0.032381	0.022819	0.017434	0.014858	0.013735	0.013340	0.013966	0.013879	0.013916	0.014437	0.015587	51
42	0.034004	0.023967	0.017252	0.015265	0.013978	0.013793	0.013535	0.013401	0.015271	0.015143	0.015632	52
43	0.034625	0.025459	0.017110	0.015695	0.014504	0.014417	0.014114	0.014967	0.015471	0.015271	0.016862	53
44	0.038500	0.026132	0.019833	0.017240	0.015280	0.015501	0.015732	0.016582	0.016484	0.017072	0.018311	54
45	0.037812	0.025817	0.018963	0.016487	0.016160	0.016631	0.016935	0.016872	0.015967	0.016241	0.018074	55
46	0.039620	0.027165	0.020347	0.017402	0.017181	0.017134	0.017236	0.017664	0.016800	0.017588	0.019509	56
47	0.041447	0.028669	0.021329	0.019572	0.018835	0.016654	0.016918	0.018173	0.018284	0.019451	0.020639	57
48	0.045238	0.032142	0.023117	0.020158	0.018537	0.017561	0.018037	0.019385	0.019342	0.020293	0.021062	58
49	0.047226	0.032296	0.023861	0.020739	0.018378	0.018593	0.018693	0.020289	0.019599	0.019897	0.022106	59
50	0.031331	0.022107	0.019019	0.017715	0.016970	0.018033	0.017877	0.018807	0.019116	0.019839	0.023050	60
51	0.042390	0.027948	0.022083	0.019219	0.018478	0.018514	0.021116	0.019783	0.021438	0.023107	0.024058	61
52	0.043441	0.030004	0.021527	0.020917	0.019601	0.019577	0.020290	0.020205	0.021195	0.023653	0.025440	62
53	0.045811	0.030945	0.024194	0.021573	0.020997	0.021928	0.022382	0.022169	0.023221	0.024239	0.026955	63
54	0.046539	0.032143	0.025797	0.022088	0.022400	0.022431	0.023066	0.024277	0.024636	0.025502	0.028264	64
55	0.034072	0.025040	0.021257	0.019970	0.020724	0.020575	0.022134	0.023109	0.024327	0.025234	0.025684	65
56	0.043382	0.028811	0.024150	0.021674	0.022083	0.022682	0.024064	0.024890	0.024678	0.025452	0.030752	66
57	0.044624	0.031588	0.025414	0.023488	0.023853	0.023893	0.025440	0.025557	0.025175	0.028576	0.033119	67
58	0.045169	0.031710	0.025855	0.024469	0.025429	0.025800	0.027225	0.025607	0.028621	0.031484	0.034762	68
59	0.046707	0.033097	0.027347	0.026324	0.026622	0.025906	0.024587	0.029290	0.032241	0.033679	0.037479	69
60	0.048541	0.034897	0.029099	0.026964	0.027278	0.024576	0.030388	0.029313	0.032648	0.034662	0.039671	70
61	0.058022	0.040148	0.032903	0.029707	0.026882	0.031439	0.032721	0.033417	0.035367	0.036805	0.042047	71
62	0.060557	0.044179	0.035808	0.031223	0.031906	0.033607	0.034874	0.036768	0.038034	0.040633	0.044776	72
63	0.073565	0.050034	0.040567	0.037834	0.038492	0.036660	0.039457	0.041140	0.043779	0.045797	0.047372	73
64	0.088418	0.053873	0.044822	0.041258	0.040225	0.041586	0.042668	0.045962	0.051512	0.052505	0.051127	74
65	0.098645	0.062360	0.048541	0.043026	0.042607	0.039181	0.040938	0.046000	0.061663	0.059327	0.055270	75

- Notes:
1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
  2. The value  $q_{[x]+t}$  at duration  $t$  represents the probability of death—in a multiple-decrement environment—during the  $(t+1)$  year of entitlement for those originally entitled to disability benefits at entl age  $[x]$  who have attained age  $[x]+t$ .
  3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 7C** for attained ages beyond age 75.
  4. Results have been graduated using the Whittaker-Henderson Type B two-dimensional method.

**Table 7C.—Disabled Workers Age 76 and Older**  
**Probability of Death**  
(2011-15 Social Security DI disability experience)

Attained age	Male	Female
76	0.080425	0.059382
77	0.085531	0.063489
78	0.091585	0.068675
79	0.098383	0.074929
80	0.104788	0.080536
81	0.113110	0.088455
82	0.122062	0.094573
83	0.131697	0.103589
84	0.140430	0.111345
85	0.151890	0.122160
86	0.165777	0.130844
87	0.176875	0.142631
88	0.188397	0.156112
89	0.206651	0.166591
90	0.223252	0.182064
91	0.235073	0.197059
92	0.249318	0.205768
93	0.267740	0.225325
94	0.277033	0.240441
95	0.284003	0.260724
96	0.298740	0.281817
97	0.313086	0.293156
98	0.328740	0.308400
99	0.345177	0.324436
100	0.362436	0.341307
101	0.380558	0.359055
102	0.399586	0.377726
103	0.419565	0.397368
104	0.440543	0.418031
105	0.462571	0.439768
106	0.485699	0.462636
107	0.509984	0.486693
108	0.535483	0.512001
109	0.562257	0.538626
110	0.590370	0.566634

Notes:

1. The value at attained age *x* represents the probability of death within one year for those originally entitled to disability benefits who have attained that particular age. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. Results have been blended based on attributes from general population mortality for calendar year 2015. Values are an extension of the ultimate column of **tables 7A and 7B**.

**Table 8A.—Male Disabled Workers**  
**Benefit Continuation Table (excluding possibility of recovery)**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9			
16	100,000	99,283	99,129	98,796	98,240	97,859	97,584	97,189	96,707	96,065	95,545	26	
17	100,302	99,539	99,146	98,756	98,197	97,790	97,375	96,916	96,465	95,785	95,199	27	
18	100,501	99,609	98,964	98,529	97,996	97,478	96,933	96,434	96,033	95,363	94,754	28	
19	100,579	99,453	98,647	98,166	97,654	97,031	96,474	96,000	95,566	94,950	94,241	29	
20	100,096	98,993	98,077	97,527	96,995	96,410	95,843	95,362	94,886	94,363	93,665	30	
21	99,465	98,374	97,472	96,686	96,165	95,665	95,083	94,618	94,165	93,618	93,007	31	
22	99,412	98,190	97,307	96,594	96,008	95,415	94,817	94,267	93,675	93,045	92,416	32	
23	99,670	98,262	97,155	96,371	95,791	95,142	94,543	93,915	93,175	92,494	91,885	33	
24	99,760	98,255	97,072	96,185	95,517	94,787	94,174	93,444	92,703	92,036	91,277	34	
25	100,544	98,613	97,184	96,153	95,317	94,493	93,705	92,933	92,185	91,348	90,586	35	
26	100,931	98,813	97,240	96,145	95,276	94,324	93,378	92,498	91,629	90,847	89,938	36	
27	100,438	98,318	96,749	95,592	94,566	93,578	92,711	91,840	90,940	90,175	89,257	37	
28	100,242	97,987	96,421	95,175	94,154	93,206	92,216	91,167	90,253	89,438	88,477	38	
29	100,067	97,707	96,147	94,936	93,837	92,881	91,821	90,834	89,793	88,694	87,632	39	
30	99,957	97,478	95,672	94,354	93,178	92,157	91,120	90,073	89,026	87,863	86,775	40	
31	98,697	96,395	94,609	93,292	92,189	91,134	90,110	89,128	88,091	86,926	85,852	41	
32	98,121	95,699	93,920	92,563	91,504	90,369	89,320	88,288	87,078	85,928	84,894	42	
33	98,159	95,476	93,519	92,132	90,884	89,786	88,597	87,423	86,206	85,012	83,883	43	
34	97,233	94,472	92,598	91,146	89,847	88,648	87,442	86,272	85,118	83,995	82,852	44	
35	96,997	94,042	92,152	90,633	89,356	88,072	86,743	85,459	84,295	83,079	81,760	45	
36	96,120	93,121	91,168	89,693	88,280	86,978	85,626	84,383	83,144	81,877	80,574	46	
37	95,335	92,409	90,387	88,780	87,389	86,112	84,729	83,374	81,993	80,689	79,352	47	
38	94,504	91,496	89,443	87,795	86,337	84,992	83,670	82,290	80,959	79,517	78,054	48	
39	94,131	90,670	88,509	86,807	85,257	83,916	82,452	81,086	79,664	78,191	76,718	49	
40	92,748	89,399	87,266	85,671	84,121	82,728	81,356	79,877	78,348	76,891	75,352	50	
41	92,393	88,748	86,515	84,782	83,231	81,729	80,132	78,512	76,991	75,447	73,866	51	
42	91,912	88,048	85,555	83,727	82,006	80,446	78,739	77,156	75,607	73,997	72,348	52	
43	91,133	87,151	84,609	82,681	80,934	79,275	77,613	75,957	74,227	72,532	70,759	53	
44	89,740	85,873	83,219	81,226	79,421	77,706	76,013	74,243	72,608	70,921	69,096	54	
45	88,887	84,699	81,977	79,878	78,046	76,260	74,564	72,810	71,014	69,205	67,411	55	
46	88,594	84,089	81,233	79,091	77,066	75,197	73,346	71,466	69,611	67,663	65,678	56	
47	87,629	82,642	79,756	77,486	75,427	73,475	71,529	69,652	67,765	65,843	63,834	57	
48	87,364	82,040	78,725	76,291	74,109	72,067	70,056	67,988	66,057	64,006	61,962	58	
49	85,424	80,087	76,809	74,424	72,269	70,293	68,299	66,219	64,160	62,114	60,025	59	
50	78,815	75,453	73,110	71,202	69,365	67,568	65,719	63,876	61,950	60,063	58,051	60	
51	79,174	74,840	72,063	69,910	67,948	65,936	63,953	62,040	60,068	58,000	56,019	61	
52	77,920	73,381	70,488	68,250	66,257	64,235	62,207	60,212	58,157	56,082	53,994	62	
53	76,749	71,799	68,798	66,486	64,363	62,282	60,224	58,115	56,085	54,008	51,972	63	
54	74,373	69,567	66,590	64,312	62,156	60,141	58,031	55,993	53,944	51,905	49,917	64	
55	67,964	64,753	62,553	60,677	58,860	57,100	55,282	53,448	51,553	49,730	47,884	65	
56	67,715	63,833	61,281	59,239	57,283	55,428	53,446	51,562	49,614	47,752	46,058	66	
57	65,507	61,619	59,049	57,061	55,149	53,280	51,318	49,416	47,573	45,931	43,983	67	
58	63,306	59,402	56,914	54,875	52,976	51,127	49,253	47,367	45,741	43,892	41,894	68	
59	60,885	57,069	54,654	52,681	50,825	49,030	47,204	45,555	43,696	41,809	39,812	69	
60	58,120	54,538	52,181	50,296	48,538	46,825	45,228	43,403	41,550	39,633	37,702	70	
61	56,877	52,869	50,357	48,395	46,615	45,010	43,215	41,360	39,495	37,543	35,594	71	
62	55,289	51,238	48,704	46,734	44,947	43,144	41,257	39,362	37,437	35,442	33,482	72	
63	55,251	50,482	47,553	45,391	43,391	41,420	39,436	37,334	35,387	33,340	31,386	73	
64	55,094	49,433	46,363	43,996	41,818	39,689	37,597	35,430	33,385	31,369	29,279	74	
65	52,983	47,077	43,977	41,528	39,446	37,421	35,323	33,313	31,336	29,355	27,187	75	

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. The value  $l_{[x]}$  at duration 0 represents an assumed number of lives originally entitled to disability benefits at entl age  $[x]$ ; the value  $l_{[x]+t}$  at duration  $t > 0$  represents the number of lives from the original  $l_{[x]}$  who have not died and remain on the rolls as of attained age  $[x]+t$ . Lives are decremented using probabilities from **table 7A**.
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 8C** for attained ages beyond age 75.

**Table 8B.—Female Disabled Workers**  
**Benefit Continuance Table (excluding possibility of recovery)**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9			
16	100,000	99,610	98,374	97,398	96,605	96,270	95,649	95,136	94,772	94,303	93,951	26	
17	99,462	98,933	97,870	97,024	96,224	95,852	95,214	94,712	94,313	93,860	93,397	27	
18	98,852	98,181	97,332	96,622	95,853	95,434	94,818	94,347	93,921	93,422	92,856	28	
19	98,418	97,567	96,864	96,250	95,539	95,114	94,562	94,039	93,617	93,007	92,363	29	
20	97,706	96,663	96,027	95,441	94,925	94,426	94,024	93,495	93,031	92,496	91,917	30	
21	97,639	96,514	95,755	95,137	94,557	94,002	93,573	92,982	92,495	91,972	91,402	31	
22	97,453	96,242	95,307	94,614	93,982	93,516	93,034	92,423	91,972	91,448	90,901	32	
23	97,376	96,093	95,052	94,300	93,638	93,168	92,670	92,029	91,568	90,872	90,339	33	
24	97,168	95,818	94,736	93,986	93,363	92,799	92,231	91,583	90,956	90,336	89,782	34	
25	97,391	95,713	94,659	93,902	93,120	92,470	91,794	91,176	90,466	89,732	89,174	35	
26	97,555	95,830	94,535	93,604	92,781	92,118	91,391	90,659	89,926	89,149	88,510	36	
27	97,514	95,619	94,192	93,127	92,354	91,623	90,829	90,151	89,386	88,602	87,928	37	
28	97,424	95,412	93,911	92,906	92,058	91,264	90,514	89,704	88,836	88,004	87,264	38	
29	96,706	94,734	93,295	92,255	91,337	90,428	89,595	88,884	88,051	87,270	86,526	39	
30	95,931	93,934	92,533	91,428	90,453	89,584	88,778	88,060	87,299	86,531	85,790	40	
31	95,669	93,501	92,030	90,976	90,033	89,100	88,284	87,454	86,593	85,803	85,016	41	
32	95,100	92,854	91,205	90,066	89,218	88,278	87,467	86,682	85,806	84,941	84,195	42	
33	94,359	92,174	90,497	89,383	88,398	87,510	86,690	85,914	85,014	84,223	83,366	43	
34	93,932	91,615	89,991	88,888	87,883	86,983	86,120	85,198	84,238	83,436	82,558	44	
35	93,814	91,275	89,548	88,330	87,308	86,378	85,422	84,484	83,544	82,630	81,693	45	
36	93,097	90,580	88,724	87,469	86,447	85,524	84,583	83,643	82,596	81,708	80,761	46	
37	92,360	89,757	87,892	86,706	85,518	84,517	83,511	82,607	81,650	80,730	79,776	47	
38	91,612	88,989	87,112	85,737	84,614	83,578	82,677	81,684	80,716	79,773	78,762	48	
39	91,074	88,412	86,594	85,094	83,973	82,929	81,966	80,861	79,809	78,712	77,706	49	
40	90,477	87,736	85,708	84,226	82,987	81,885	80,840	79,757	78,740	77,727	76,628	50	
41	89,747	86,841	84,859	83,380	82,141	81,013	79,932	78,816	77,722	76,640	75,534	51	
42	88,788	85,769	83,713	82,269	81,013	79,881	78,779	77,713	76,672	75,501	74,357	52	
43	87,939	84,894	82,733	81,317	80,041	78,880	77,743	76,646	75,499	74,331	73,195	53	
44	87,946	84,560	82,350	80,717	79,325	78,113	76,902	75,692	74,437	73,210	71,961	54	
45	86,292	83,029	80,885	79,351	78,043	76,782	75,505	74,226	72,974	71,809	70,643	55	
46	85,626	82,233	79,999	78,371	77,007	75,684	74,387	73,105	71,814	70,608	69,366	56	
47	84,923	81,403	79,069	77,383	75,868	74,439	73,199	71,961	70,653	69,361	68,013	57	
48	84,419	80,600	78,009	76,206	74,670	73,286	71,999	70,700	69,329	67,988	66,609	58	
49	83,133	79,207	76,649	74,820	73,268	71,921	70,584	69,265	67,860	66,530	65,206	59	
50	78,112	75,665	73,992	72,585	71,299	70,089	68,825	67,595	66,324	65,056	63,765	60	
51	78,964	75,617	73,504	71,881	70,500	69,197	67,916	66,482	65,167	63,770	62,295	61	
52	77,567	74,197	71,971	70,422	68,949	67,598	66,275	64,930	63,618	62,270	60,796	62	
53	76,927	73,403	71,132	69,411	67,914	66,488	65,030	63,574	62,165	60,721	59,249	63	
54	75,736	72,211	69,890	68,087	66,583	65,092	63,632	62,164	60,655	59,161	57,652	64	
55	71,174	68,749	67,028	65,603	64,293	62,961	61,666	60,301	58,908	57,475	56,023	65	
56	71,186	68,098	66,136	64,539	63,140	61,746	60,345	58,893	57,427	56,010	54,584	66	
57	70,122	66,993	64,877	63,228	61,743	60,270	58,830	57,333	55,868	54,462	52,905	67	
58	68,766	65,660	63,578	61,934	60,419	58,883	57,364	55,802	54,373	52,817	51,153	68	
59	67,372	64,225	62,099	60,401	58,811	57,245	55,762	54,391	52,798	51,096	49,375	69	
60	65,693	62,504	60,323	58,568	56,989	55,434	54,072	52,429	50,892	49,230	47,524	70	
61	65,699	61,887	59,402	57,447	55,740	54,242	52,537	50,818	49,120	47,383	45,639	71	
62	64,940	61,007	58,312	56,224	54,469	52,731	50,959	49,182	47,374	45,572	43,720	72	
63	66,037	61,179	58,118	55,760	53,650	51,585	49,694	47,733	45,769	43,765	41,762	73	
64	66,714	60,815	57,539	54,960	52,692	50,572	48,469	46,401	44,268	41,988	39,784	74	
65	66,034	59,520	55,808	53,099	50,814	48,649	46,743	44,829	42,767	40,130	37,750	75	

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. The value  $l_{[x]}$  at duration 0 represents an assumed number of lives originally entitled to disability benefits at entl age  $[x]$ ; the value  $l_{[x]+t}$  at duration  $t > 0$  represents the number of lives from the original  $l_{[x]}$  who have not died and remain on the rolls as of attained age  $[x]+t$ . Lives are decremented using probabilities from **table 7B**.
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 8C** for attained ages beyond age 75.

**Table 8C.—Disabled Workers Age 76 and Older**  
**Benefit Continuance Table (excluding possibility of recovery)**  
(2011-15 Social Security DI disability experience)

Attained age	Male	Female
76	25,146	35,664
77	23,124	33,546
78	21,146	31,416
79	19,209	29,258
80	17,319	27,066
81	15,504	24,886
82	13,750	22,685
83	12,072	20,540
84	10,482	18,412
85	9,010	16,362
86	7,641	14,363
87	6,374	12,484
88	5,247	10,703
89	4,258	9,032
90	3,378	7,527
91	2,624	6,157
92	2,007	4,944
93	1,507	3,927
94	1,104	3,042
95	798	2,311
96	571	1,708
97	400	1,227
98	275	867
99	185	600
100	121	405
101	77	267
102	48	171
103	29	106
104	17	64
105	10	37
106	5	21
107	3	11
108	1	6
109	0	3
110	0	1

Notes:

1. The value at attained age  $x$  represents the number of lives remaining from those originally entitled to disability benefits who have attained that particular age. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. Lives are decremented using probabilities from **table 7C**. Values are an extension of the ultimate column of **tables 8A** and **8B**.

**Table 9A.—Male Disabled Workers**  
**Expected Future Time on Combined DI and OASI Rolls (excluding possibility of recovery)**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9			
16	46.07	45.40	44.47	43.62	42.87	42.03	41.15	40.31	39.51	38.77	37.98	26	
17	44.98	44.32	43.49	42.66	41.90	41.07	40.25	39.43	38.62	37.89	37.12	27	
18	43.91	43.30	42.58	41.77	40.99	40.21	39.43	38.63	37.79	37.05	36.29	28	
19	42.90	42.38	41.73	40.93	40.14	39.40	38.62	37.81	36.98	36.21	35.48	29	
20	42.11	41.58	40.96	40.19	39.41	38.64	37.87	37.06	36.24	35.44	34.70	30	
21	41.37	40.82	40.20	39.52	38.73	37.93	37.16	36.34	35.51	34.72	33.94	31	
22	40.43	39.93	39.28	38.57	37.80	37.03	36.27	35.47	34.69	33.93	33.15	32	
23	39.37	38.93	38.37	37.68	36.90	36.15	35.38	34.61	33.88	33.13	32.34	33	
24	38.39	37.97	37.43	36.77	36.02	35.30	34.52	33.79	33.05	32.29	31.55	34	
25	37.17	36.88	36.42	35.80	35.11	34.42	33.70	32.98	32.24	31.53	30.79	35	
26	36.11	35.87	35.45	34.84	34.16	33.50	32.83	32.14	31.44	30.70	30.01	36	
27	35.33	35.08	34.64	34.06	33.42	32.77	32.07	31.37	30.68	29.93	29.24	37	
28	34.47	34.25	33.80	33.23	32.59	31.91	31.25	30.60	29.91	29.18	28.49	38	
29	33.61	33.41	32.94	32.36	31.73	31.05	30.40	29.73	29.07	28.42	27.76	39	
30	32.71	32.53	32.13	31.58	30.97	30.31	29.64	28.98	28.32	27.69	27.03	40	
31	32.15	31.91	31.50	30.94	30.30	29.65	28.98	28.29	27.62	26.98	26.31	41	
32	31.39	31.17	30.75	30.19	29.54	28.90	28.24	27.56	26.94	26.29	25.60	42	
33	30.45	30.30	29.92	29.36	28.76	28.10	27.47	26.84	26.21	25.57	24.91	43	
34	29.78	29.63	29.22	28.68	28.09	27.46	26.83	26.19	25.54	24.87	24.21	44	
35	28.94	28.83	28.41	27.88	27.27	26.66	26.06	25.45	24.79	24.15	23.53	45	
36	28.25	28.14	27.73	27.18	26.61	26.00	25.40	24.77	24.13	23.49	22.87	46	
37	27.54	27.40	27.00	26.48	25.89	25.27	24.67	24.07	23.46	22.83	22.21	47	
38	26.84	26.71	26.31	25.79	25.22	24.61	23.99	23.39	22.76	22.17	21.57	48	
39	26.01	25.98	25.61	25.10	24.55	23.93	23.35	22.73	22.13	21.53	20.94	49	
40	25.45	25.38	24.99	24.44	23.89	23.28	22.66	22.07	21.49	20.89	20.31	50	
41	24.62	24.61	24.24	23.72	23.15	22.57	22.01	21.45	20.87	20.28	19.71	51	
42	23.83	23.85	23.53	23.03	22.51	21.93	21.40	20.83	20.24	19.67	19.11	52	
43	23.12	23.15	22.83	22.35	21.83	21.27	20.72	20.16	19.62	19.06	18.53	53	
44	22.53	22.52	22.22	21.76	21.24	20.70	20.15	19.62	19.05	18.49	17.96	54	
45	21.82	21.87	21.58	21.14	20.62	20.09	19.54	19.00	18.47	17.93	17.40	55	
46	21.02	21.12	20.84	20.39	19.92	19.40	18.88	18.36	17.84	17.34	16.84	56	
47	20.32	20.52	20.24	19.82	19.35	18.85	18.35	17.83	17.31	16.80	16.32	57	
48	19.51	19.75	19.56	19.16	18.71	18.23	17.74	17.26	16.75	16.27	15.79	58	
49	19.02	19.26	19.06	18.65	18.19	17.69	17.19	16.72	16.24	15.76	15.29	59	
50	19.48	19.33	18.93	18.42	17.90	17.36	16.84	16.31	15.80	15.28	14.79	60	
51	18.49	18.53	18.23	17.77	17.27	16.78	16.29	15.78	15.28	14.80	14.31	61	
52	17.86	17.94	17.65	17.21	16.72	16.23	15.74	15.24	14.77	14.29	13.83	62	
53	17.20	17.35	17.09	16.66	16.20	15.72	15.24	14.78	14.29	13.82	13.35	63	
54	16.77	16.90	16.63	16.20	15.75	15.26	14.79	14.31	13.84	13.36	12.87	64	
55	17.15	16.98	16.56	16.05	15.53	15.00	14.47	13.95	13.45	12.92	12.40	65	
56	16.29	16.25	15.91	15.44	14.95	14.43	13.95	13.44	12.95	12.43	11.87	66	
57	15.83	15.80	15.46	14.98	14.49	13.98	13.49	12.99	12.48	11.90	11.41	67	
58	15.37	15.35	15.00	14.53	14.04	13.53	13.02	12.52	11.95	11.43	10.95	68	
59	14.96	14.93	14.56	14.09	13.59	13.07	12.55	11.99	11.48	10.97	10.50	69	
60	14.61	14.54	14.17	13.69	13.16	12.63	12.06	11.54	11.03	10.54	10.06	70	
61	13.95	13.97	13.65	13.18	12.66	12.10	11.58	11.08	10.58	10.10	9.62	71	
62	13.40	13.42	13.09	12.62	12.10	11.59	11.09	10.60	10.12	9.66	9.20	72	
63	12.54	12.67	12.42	11.99	11.52	11.05	10.58	10.14	9.67	9.24	8.78	73	
64	11.74	12.02	11.78	11.39	10.96	10.52	10.08	9.66	9.22	8.79	8.38	74	
65	11.25	11.60	11.38	11.02	10.57	10.12	9.69	9.24	8.80	8.36	7.98	75	

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. The value  $e_{[x]+t}$  at duration  $t$  represents the average number of future years a beneficiary will remain on the combined DI and OASI rolls for those originally entitled to disability benefits at entl age  $[x]$  who have not died as of attained age  $[x]+t$ . Values are based on continuance experience from **tables 8A and 8C**.
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 9C** for attained ages beyond age 75.

**Table 9B.—Female Disabled Workers**  
**Expected Future Time on Combined DI and OASI Rolls (excluding possibility of recovery)**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											Attained age
	0	1	2	3	4	5	6	7	8	9	10 or more	
16	48.79	47.98	47.58	47.05	46.43	45.59	44.89	44.13	43.29	42.51	41.66	26
17	48.07	47.32	46.83	46.24	45.62	44.79	44.09	43.32	42.50	41.70	40.91	27
18	47.38	46.70	46.10	45.43	44.80	43.99	43.27	42.49	41.68	40.90	40.14	28
19	46.61	46.01	45.34	44.62	43.95	43.15	42.40	41.63	40.81	40.08	39.35	29
20	45.93	45.42	44.72	43.99	43.23	42.46	41.64	40.87	40.07	39.30	38.54	30
21	44.99	44.51	43.86	43.14	42.40	41.65	40.83	40.09	39.30	38.52	37.76	31
22	44.09	43.64	43.06	42.37	41.65	40.86	40.07	39.33	38.52	37.74	36.96	32
23	43.16	42.73	42.19	41.52	40.81	40.02	39.23	38.50	37.69	36.97	36.19	33
24	42.28	41.87	41.34	40.67	39.94	39.18	38.42	37.68	36.94	36.19	35.41	34
25	41.24	40.95	40.40	39.72	39.05	38.32	37.60	36.85	36.14	35.43	34.65	35
26	40.22	39.94	39.48	38.87	38.21	37.48	36.77	36.06	35.35	34.66	33.90	36
27	39.29	39.06	38.64	38.08	37.39	36.69	36.00	35.27	34.57	33.87	33.13	37
28	38.39	38.19	37.79	37.19	36.53	35.85	35.14	34.45	33.78	33.10	32.37	38
29	37.70	37.47	37.04	36.45	35.82	35.17	34.49	33.77	33.08	32.37	31.65	39
30	37.02	36.80	36.35	35.78	35.16	34.50	33.81	33.08	32.36	31.64	30.91	40
31	36.17	36.00	35.57	34.98	34.34	33.69	33.00	32.31	31.62	30.91	30.19	41
32	35.42	35.26	34.89	34.33	33.65	33.00	32.30	31.59	30.91	30.22	29.48	42
33	34.73	34.54	34.17	33.59	32.96	32.29	31.59	30.87	30.19	29.47	28.77	43
34	33.94	33.78	33.38	32.79	32.16	31.49	30.80	30.13	29.47	28.74	28.04	44
35	33.04	32.95	32.57	32.02	31.38	30.72	30.06	29.38	28.71	28.02	27.34	45
36	32.33	32.22	31.88	31.33	30.70	30.02	29.35	28.67	28.03	27.33	26.65	46
37	31.62	31.52	31.18	30.60	30.02	29.37	28.72	28.03	27.35	26.66	25.97	47
38	30.92	30.81	30.47	29.95	29.34	28.70	28.00	27.34	26.66	25.97	25.30	48
39	30.16	30.05	29.67	29.19	28.57	27.93	27.25	26.61	25.96	25.31	24.63	49
40	29.40	29.30	28.99	28.49	27.90	27.27	26.62	25.97	25.30	24.63	23.97	50
41	28.69	28.63	28.29	27.78	27.20	26.57	25.92	25.28	24.63	23.97	23.31	51
42	28.03	28.00	27.68	27.15	26.57	25.94	25.29	24.63	23.96	23.32	22.67	52
43	27.35	27.31	27.01	26.47	25.89	25.26	24.62	23.97	23.32	22.68	22.03	53
44	26.44	26.47	26.17	25.69	25.13	24.51	23.89	23.27	22.65	22.02	21.40	54
45	25.95	25.95	25.63	25.11	24.52	23.92	23.31	22.71	22.09	21.44	20.78	55
46	25.21	25.23	24.92	24.43	23.86	23.26	22.66	22.05	21.44	20.79	20.16	56
47	24.49	24.52	24.23	23.75	23.21	22.65	22.02	21.40	20.78	20.16	19.55	57
48	23.70	23.80	23.57	23.12	22.58	22.00	21.38	20.77	20.17	19.56	18.95	58
49	23.10	23.22	22.98	22.53	22.00	21.40	20.80	20.18	19.59	18.97	18.35	59
50	23.48	23.23	22.74	22.17	21.56	20.93	20.30	19.66	19.03	18.39	17.75	60
51	22.33	22.30	21.93	21.41	20.82	20.20	19.57	18.99	18.36	17.75	17.16	61
52	21.75	21.71	21.37	20.83	20.26	19.65	19.04	18.42	17.79	17.17	16.57	62
53	21.00	20.98	20.63	20.13	19.57	18.98	18.39	17.80	17.19	16.59	15.99	63
54	20.37	20.34	20.00	19.52	18.95	18.37	17.78	17.19	16.61	16.01	15.42	64
55	20.55	20.26	19.76	19.18	18.56	17.95	17.31	16.69	16.08	15.46	14.85	65
56	19.61	19.48	19.04	18.50	17.90	17.29	16.68	16.08	15.48	14.85	14.23	66
57	18.94	18.80	18.40	17.86	17.28	16.69	16.09	15.50	14.89	14.26	13.67	67
58	18.35	18.19	17.77	17.23	16.65	16.07	15.48	14.90	14.28	13.69	13.12	68
59	17.75	17.60	17.18	16.65	16.09	15.51	14.91	14.28	13.69	13.13	12.57	69
60	17.19	17.04	16.64	16.12	15.56	14.98	14.34	13.78	13.18	12.61	12.04	70
61	16.28	16.26	15.92	15.44	14.90	14.30	13.74	13.19	12.63	12.08	11.52	71
62	15.57	15.54	15.24	14.78	14.24	13.70	13.16	12.61	12.08	11.53	11.00	72
63	14.53	14.64	14.39	13.97	13.50	13.02	12.50	11.99	11.49	10.99	10.49	73
64	13.62	13.89	13.65	13.27	12.82	12.33	11.85	11.35	10.88	10.44	9.99	74
65	12.92	13.28	13.13	12.77	12.32	11.85	11.31	10.77	10.27	9.91	9.50	75

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. The value  $e_{[x]+t}$  at duration  $t$  represents the average number of future years a beneficiary will remain on the combined DI and OASI rolls for those originally entitled to disability benefits at entl age  $[x]$  who have not died as of attained age  $[x]+t$ . Values are based on continuance experience from **tables 8B** and **8C**.
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 9C** for attained ages beyond age 75.



**Table 9C.—Disabled Workers Age 76 and Older**  
**Expected Future Time on the OASI Rolls (excluding possibility of recovery)**  
(2011-15 Social Security DI disability experience)

Attained age	Male	Female
76	7.59	9.03
77	7.21	8.57
78	6.84	8.11
79	6.48	7.68
80	6.13	7.26
81	5.79	6.85
82	5.46	6.46
83	5.15	6.09
84	4.86	5.73
85	4.57	5.39
86	4.30	5.07
87	4.06	4.76
88	3.82	4.46
89	3.59	4.20
90	3.40	3.94
91	3.23	3.70
92	3.07	3.49
93	2.92	3.26
94	2.80	3.07
95	2.68	2.88
96	2.55	2.72
97	2.43	2.59
98	2.30	2.45
99	2.18	2.32
100	2.07	2.20
101	1.97	2.07
102	1.85	1.96
103	1.74	1.85
104	1.62	1.73
105	1.40	1.64
106	1.30	1.50
107	0.83	1.41
108	0.50	1.17
109	0.00	0.83
110	0.00	0.50

Notes:

1. The value at attained age  $x$  represents the average number of future years a beneficiary will remain on the OASI rolls for those originally entitled to disability benefits who have attained that particular age. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. Values are based on continuance experience from **table 8C** and are an extension of the ultimate column of **tables 9A** and **9B**.

**Table 10A.—Male Disabled Workers**  
**Absolute Death Rate Per Thousand Entitled**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement										10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9		
16	7.201	1.557	3.391	5.676	3.996	2.950	4.217	5.159	6.902	5.583	3.718	26
17	7.634	3.974	3.956	5.701	4.273	4.435	4.894	4.828	7.299	6.261	4.786	27
18	8.904	6.501	4.412	5.451	5.443	5.813	5.324	4.288	7.174	6.524	5.514	28
19	11.226	8.130	4.896	5.255	6.542	5.926	5.050	4.634	6.587	7.606	6.202	29
20	11.043	9.286	5.630	5.494	6.161	6.043	5.133	5.094	5.602	7.512	7.114	30
21	10.992	9.202	8.087	5.423	5.300	6.222	4.985	4.874	5.897	6.603	6.419	31
22	12.324	9.028	7.354	6.107	6.272	6.396	5.898	6.379	6.815	6.841	5.799	32
23	14.165	11.332	8.105	6.061	6.883	6.405	6.751	7.991	7.399	6.645	6.667	33
24	15.128	12.117	9.172	6.992	7.763	6.580	7.869	8.042	7.281	8.318	7.621	34
25	19.267	14.577	10.645	8.758	8.776	8.475	8.355	8.152	9.185	8.445	7.197	35
26	21.058	16.021	11.303	9.098	10.137	10.183	9.561	9.520	8.629	10.107	7.627	36
27	21.192	16.068	12.010	10.798	10.603	9.407	9.519	9.918	8.501	10.258	8.796	37
28	22.583	16.098	12.980	10.794	10.203	10.762	11.528	10.132	9.129	10.833	9.605	38
29	23.675	16.085	12.641	11.659	10.319	11.565	10.877	11.585	12.353	12.072	9.834	39
30	24.894	18.656	13.829	12.546	11.089	11.388	11.625	11.754	13.174	12.500	10.695	40
31	23.422	18.679	13.967	11.893	11.580	11.358	11.019	11.750	13.329	12.444	11.205	41
32	24.784	18.739	14.509	11.504	12.542	11.738	11.673	13.822	13.309	12.138	11.963	42
33	27.454	20.668	14.891	13.618	12.213	13.383	13.377	14.033	13.951	13.378	12.337	43
34	28.537	20.007	15.745	14.327	13.486	13.732	13.497	13.478	13.291	13.671	13.223	44
35	30.616	20.265	16.550	14.159	14.509	15.216	14.919	13.718	14.520	15.964	14.560	45
36	31.342	21.164	16.243	15.836	14.885	15.665	14.630	14.782	15.321	15.990	15.218	46
37	30.831	22.065	17.847	15.741	14.734	16.185	16.111	16.656	15.994	16.639	16.403	47
38	31.975	22.632	18.497	16.678	15.695	15.667	16.594	16.268	17.906	18.457	17.160	48
39	36.926	24.037	19.293	17.922	15.842	17.562	16.661	17.631	18.574	18.916	17.846	49
40	36.262	24.063	18.334	18.169	16.675	16.689	18.271	19.239	18.671	20.091	19.766	50
41	39.600	25.358	20.097	18.363	18.158	19.664	20.322	19.449	20.126	21.014	20.594	51
42	42.215	28.525	21.442	20.625	19.130	21.324	20.198	20.150	21.361	22.350	22.001	52
43	43.861	29.368	22.856	21.205	20.602	21.058	21.414	22.856	22.895	24.507	23.543	53
44	43.240	31.119	24.016	22.289	21.709	21.874	23.358	22.076	23.291	25.801	24.416	54
45	47.297	32.358	25.669	22.998	22.985	22.326	23.592	24.732	25.531	25.970	25.731	55
46	51.043	34.204	26.425	25.664	24.356	24.691	25.699	26.022	28.028	29.399	28.110	56
47	57.107	35.125	28.511	26.627	25.979	26.565	26.309	27.148	28.408	30.557	29.352	57
48	61.138	40.601	30.962	28.672	27.650	27.976	29.588	28.454	31.090	31.971	31.278	58
49	62.621	41.091	31.101	29.015	27.447	28.441	30.514	31.138	31.932	33.677	32.918	59
50	42.723	31.127	26.127	25.831	25.968	27.421	28.081	30.185	30.489	33.546	35.023	60
51	54.840	37.202	29.900	28.104	29.684	30.134	29.953	31.825	34.461	34.205	36.161	61
52	58.349	39.529	31.781	29.234	30.602	31.623	32.117	34.170	35.718	37.233	37.471	62
53	64.589	41.874	33.630	31.963	32.414	33.096	35.062	34.972	37.053	37.721	39.553	63
54	64.680	42.850	34.230	33.552	32.493	35.145	35.160	36.627	37.816	38.325	40.748	64
55	47.273	33.997	29.998	29.961	29.964	31.890	33.214	35.485	35.370	37.142	38.132	65
56	57.360	40.015	33.334	33.035	32.447	35.799	35.273	37.795	37.540	35.505	45.059	66
57	59.391	41.737	33.672	33.524	33.950	36.862	37.086	37.311	34.527	42.421	47.487	67
58	61.706	41.907	35.836	34.626	34.967	36.686	38.308	34.329	40.418	45.527	49.702	68
59	62.706	42.349	36.101	35.253	35.367	37.270	34.945	40.803	43.175	47.763	53.008	69
60	61.663	43.227	36.128	34.963	35.319	34.113	40.359	42.692	46.129	48.749	55.901	70
61	70.493	47.518	38.962	36.803	34.456	39.888	42.919	45.085	49.417	51.915	59.338	71
62	73.276	49.465	40.461	38.245	40.118	43.727	45.933	48.901	53.295	55.304	62.607	72
63	86.333	58.028	45.473	44.064	45.420	47.896	53.293	52.163	57.833	58.613	67.118	73
64	102.759	62.109	51.048	49.513	50.920	52.707	57.641	57.725	60.401	66.597	71.461	74
65	111.477	65.839	55.680	50.139	51.346	56.072	56.916	59.350	63.215	73.825	75.068	75

- Notes:
1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
  2. The value  $q'_{[x]+t}$  at duration  $t$  represents the number of deaths per thousand during the  $(t+1)$  year of entitlement for those originally entitled to disability benefits at entl age  $[x]$  who have not died as of attained age  $[x]+t$ . Rates are derived from death probabilities shown in **table 7A** and recovery probabilities shown in **table 14A**. See appendix for details.
  3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 10C** for attained ages beyond age 75.

**Table 10B.—Female Disabled Workers**  
**Absolute Death Rate Per Thousand Entitled**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											Attained age
	0	1	2	3	4	5	6	7	8	9	10 or more	
16	3.928	12.544	9.999	8.173	3.545	6.738	5.558	3.970	5.088	3.834	6.028	26
17	5.343	10.831	8.693	8.290	3.957	6.902	5.450	4.354	4.933	5.076	5.917	27
18	6.819	8.701	7.326	8.017	4.479	6.655	5.122	4.642	5.450	6.185	5.404	28
19	8.670	7.235	6.369	7.449	4.549	5.952	5.671	4.593	6.658	7.052	4.907	29
20	10.702	6.613	6.126	5.447	5.359	4.349	5.740	5.059	5.845	6.357	5.677	30
21	11.540	7.903	6.483	6.141	5.969	4.653	6.443	5.323	5.739	6.272	5.546	31
22	12.452	9.767	7.303	6.728	5.034	5.245	6.680	4.948	5.766	6.048	6.235	32
23	13.211	10.891	7.936	7.071	5.094	5.432	7.028	5.071	7.682	5.935	6.221	33
24	13.942	11.369	7.946	6.680	6.129	6.214	7.128	6.927	6.883	6.198	6.825	34
25	17.294	11.082	8.026	8.390	7.082	7.411	6.830	7.882	8.202	6.290	7.505	35
26	17.749	13.609	9.887	8.852	7.245	7.997	8.114	8.182	8.731	7.261	6.626	36
27	19.495	15.029	11.354	8.360	8.018	8.774	7.550	8.588	8.854	7.691	7.605	37
28	20.729	15.839	10.748	9.188	8.722	8.325	9.053	9.774	9.468	8.481	8.517	38
29	20.473	15.282	11.189	10.011	10.069	9.326	8.027	9.468	8.950	8.597	8.563	39
30	20.898	15.026	11.983	10.724	9.710	9.096	8.170	8.731	8.876	8.638	9.077	40
31	22.740	15.845	11.488	10.418	10.466	9.256	9.493	9.934	9.212	9.250	9.705	41
32	23.699	17.887	12.524	9.462	10.628	9.280	9.062	10.197	10.170	8.859	9.902	42
33	23.229	18.329	12.353	11.079	10.137	9.459	9.030	10.563	9.373	10.260	9.744	43
34	24.739	17.844	12.296	11.359	10.329	10.010	10.796	11.351	9.583	10.615	10.525	44
35	27.152	19.048	13.645	11.626	10.742	11.155	11.063	11.192	11.009	11.420	11.451	45
36	27.142	20.639	14.193	11.732	10.758	11.095	11.194	12.603	10.819	11.650	12.243	46
37	28.296	20.919	13.542	13.756	11.798	11.985	10.896	11.657	11.334	11.885	12.755	47
38	28.732	21.232	15.824	13.151	12.334	10.844	12.081	11.915	11.744	12.741	13.451	48
39	29.336	20.697	17.369	13.219	12.522	11.687	13.562	13.072	13.812	12.828	13.910	49
40	30.386	23.264	17.340	14.760	13.371	12.833	13.470	12.807	12.922	14.197	14.305	50
41	32.481	22.973	17.481	14.908	13.819	13.412	14.040	13.940	13.968	14.478	15.620	51
42	34.122	24.119	17.296	15.313	14.064	13.863	13.591	13.445	15.317	15.183	15.662	52
43	34.744	25.614	17.153	15.743	14.582	14.478	14.169	15.019	15.518	15.306	16.891	53
44	38.624	26.287	19.878	17.285	15.362	15.561	15.786	16.637	16.517	17.107	18.337	54
45	37.918	25.949	19.003	16.532	16.232	16.685	16.983	16.912	15.999	16.273	18.096	55
46	39.742	27.315	20.387	17.440	17.248	17.192	17.284	17.702	16.833	17.617	19.530	56
47	41.562	28.817	21.370	19.611	18.908	16.702	16.961	18.209	18.316	19.478	20.660	57
48	45.361	32.279	23.154	20.194	18.600	17.609	18.078	19.421	19.370	20.321	21.080	58
49	47.330	32.413	23.895	20.782	18.439	18.641	18.726	20.323	19.624	19.915	22.124	59
50	31.369	22.157	19.035	17.738	17.011	18.067	17.905	18.831	19.137	19.856	23.067	60
51	42.455	28.028	22.102	19.243	18.523	18.548	21.145	19.809	21.462	23.126	24.073	61
52	43.501	30.070	21.545	20.939	19.644	19.609	20.316	20.229	21.212	23.674	25.454	62
53	45.874	31.004	24.209	21.595	21.044	21.960	22.411	22.192	23.239	24.253	26.966	63
54	46.585	32.195	25.810	22.108	22.449	22.464	23.094	24.295	24.651	25.515	28.272	64
55	34.094	25.066	21.264	19.984	20.762	20.601	22.154	23.128	24.339	25.245	25.687	65
56	43.408	28.839	24.156	21.692	22.125	22.705	24.085	24.904	24.686	25.458	30.752	66
57	44.648	31.616	25.421	23.507	23.889	23.914	25.458	25.567	25.179	28.576	33.119	67
58	45.192	31.733	25.861	24.483	25.465	25.824	27.240	25.613	28.621	31.484	34.762	68
59	46.731	33.120	27.351	26.334	26.656	25.922	24.596	29.290	32.241	33.679	37.479	69
60	48.564	34.911	29.100	26.974	27.306	24.589	30.388	29.313	32.648	34.662	39.671	70
61	58.037	40.157	32.904	29.717	26.901	31.439	32.721	33.417	35.367	36.805	42.047	71
62	60.568	44.187	35.810	31.225	31.906	33.607	34.874	36.768	38.034	40.633	44.776	72
63	73.579	50.045	40.567	37.834	38.492	36.660	39.457	41.140	43.779	45.797	47.372	73
64	88.432	53.885	44.822	41.258	40.225	41.586	42.668	45.962	51.512	52.505	51.127	74
65	98.656	62.360	48.541	43.026	42.607	39.181	40.938	46.000	61.663	59.327	55.270	75

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. The value  $q'_{[x]+t}$  at duration  $t$  represents the number of deaths per thousand during the  $(t+1)$  year of entitlement for those originally entitled to disability benefits at entl age  $[x]$  who have not died as of attained age  $[x]+t$ . Rates are derived from death probabilities shown in **table 7B** and recovery probabilities shown in **table 14B**. See appendix for details.
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 10C** for attained ages beyond age 75.

**Table 10C.—Disabled Workers Age 76 and Older**  
***Absolute Death Rate Per Thousand Entitled***  
(2011-15 Social Security DI disability experience)

Attained age	Male	Female
76	80.425	59.382
77	85.531	63.489
78	91.585	68.675
79	98.383	74.929
80	104.788	80.536
81	113.110	88.455
82	122.062	94.573
83	131.697	103.589
84	140.430	111.345
85	151.890	122.160
86	165.777	130.844
87	176.875	142.631
88	188.397	156.112
89	206.651	166.591
90	223.252	182.064
91	235.073	197.059
92	249.318	205.768
93	267.740	225.325
94	277.033	240.441
95	284.003	260.724
96	298.740	281.817
97	313.086	293.156
98	328.740	308.400
99	345.177	324.436
100	362.436	341.307
101	380.558	359.055
102	399.586	377.726
103	419.565	397.368
104	440.543	418.031
105	462.571	439.768
106	485.699	462.636
107	509.984	486.693
108	535.483	512.001
109	562.257	538.626
110	590.370	566.634

Notes:

1. The value at attained age *x* represents the number of deaths per thousand within one year for those originally entitled to disability benefits who have attained that particular age. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. Values are derived from death probabilities shown in **table 7C** and are an extension of the ultimate column of **tables 10A** and **10B**.

**Table 11.—Disabled Workers**  
**Aggregate Probability of Death and Expected Future Time on Combined**  
**DI and OASI Rolls (excluding possibility of recovery), by Entitlement Age**  
(2011-15 Social Security DI disability experience)

Entl age	Male		Female	
	Probability of death	Future time on OASDI rolls	Probability of death	Future time on OASDI rolls
16	0.014600	31.03	0.008185	36.50
17	0.010620	32.26	0.008591	37.55
18	0.010045	32.00	0.007990	37.19
19	0.011128	31.32	0.008016	36.54
20	0.011090	30.94	0.008443	36.01
21	0.011873	30.17	0.009149	35.14
22	0.012281	29.36	0.009622	34.35
23	0.013914	28.53	0.010318	33.56
24	0.014465	27.72	0.010808	32.83
25	0.016066	26.81	0.011750	32.13
26	0.017398	26.14	0.012692	31.40
27	0.018144	25.51	0.013354	30.73
28	0.019067	24.91	0.013899	30.08
29	0.019972	24.28	0.014187	29.50
30	0.021041	23.68	0.014666	28.90
31	0.020961	23.22	0.014882	28.26
32	0.021831	22.67	0.015435	27.61
33	0.022940	22.12	0.015774	27.06
34	0.023621	21.65	0.016304	26.44
35	0.024666	21.14	0.017183	25.79
36	0.025325	20.75	0.017740	25.21
37	0.026245	20.27	0.018500	24.63
38	0.026754	19.86	0.019220	24.11
39	0.028496	19.46	0.019890	23.53
40	0.029040	19.06	0.020648	23.00
41	0.030360	18.62	0.021544	22.43
42	0.032018	18.17	0.022548	21.90
43	0.033568	17.76	0.023206	21.38
44	0.034618	17.39	0.024668	20.79
45	0.035656	16.96	0.025200	20.35
46	0.037647	16.52	0.026485	19.82
47	0.039397	16.13	0.027901	19.30
48	0.041839	15.63	0.029593	18.73
49	0.043847	15.20	0.030897	18.20
50	0.038766	15.47	0.027293	18.45
51	0.043750	14.75	0.031422	17.50
52	0.045474	14.30	0.032472	17.01
53	0.047990	13.86	0.034385	16.45
54	0.049644	13.42	0.036340	15.90
55	0.044756	13.47	0.033038	15.90
56	0.049919	12.85	0.037162	15.15
57	0.051509	12.45	0.038827	14.64
58	0.053603	12.06	0.040875	14.15
59	0.055431	11.69	0.042567	13.69
60	0.056496	11.29	0.044293	13.25
61	0.060108	10.93	0.047897	12.82
62	0.062451	10.62	0.050738	12.42
63	0.067280	10.36	0.055766	11.98
64	0.072671	10.12	0.061300	11.66
65	0.068358	10.86	0.059346	12.55

Notes:

1. *Entl age* denotes age last birthday at entitlement to disabled worker benefits.
2. *Probability of death* at entl age [x] represents the average probability of termination due to death within one year for disability beneficiaries who became entitled at that particular age. Values are based on aggregate counts of exposure and deaths across all durations, and have been graduated using Whittaker-Henderson method.
3. *Future time on OASDI rolls* at entl age [x] represents the aggregate expected number of years on the combined DI and OASI rolls for disability beneficiaries who became entitled at that particular age. Values are exposure-weighted averages of expected future times across all durations from **tables 9A, 9B, and 9C**. Experience reflects continuing entitlement after NRA.

**Table 12.—Disabled Workers**  
**Aggregate Probability of Death and Expected Future Time on Combined**  
**DI and OASI Rolls (excluding possibility of recovery), by Attained Age**  
(2011-15 Social Security DI disability experience)

Attained age	Male		Female	
	Probability of death	Future time on OASDI rolls	Probability of death	Future time on OASDI rolls
16	0.012544	46.07	0.004759	48.79
17	0.007102	45.02	0.006541	48.06
18	0.005859	44.01	0.008035	47.37
19	0.009998	43.07	0.008369	46.66
20	0.008926	42.29	0.009224	46.00
21	0.008533	41.55	0.008144	45.25
22	0.008158	40.77	0.008616	44.48
23	0.008970	39.96	0.008127	43.70
24	0.008433	39.15	0.008318	42.91
25	0.008696	38.30	0.008851	42.12
26	0.009211	37.44	0.008002	41.30
27	0.009362	36.61	0.008694	40.46
28	0.009780	35.77	0.009477	39.63
29	0.010049	34.95	0.009664	38.84
30	0.011093	34.14	0.009417	38.06
31	0.011075	33.37	0.009985	37.28
32	0.010931	32.60	0.010524	36.52
33	0.011890	31.81	0.010648	35.77
34	0.012529	31.05	0.011252	35.03
35	0.012418	30.29	0.011450	34.28
36	0.013234	29.52	0.011448	33.54
37	0.013832	28.78	0.012135	32.79
38	0.014457	28.04	0.012579	32.05
39	0.015830	27.31	0.012619	31.33
40	0.016153	26.61	0.013578	30.59
41	0.016859	25.91	0.014243	29.87
42	0.017464	25.20	0.014520	29.18
43	0.018302	24.51	0.014773	28.48
44	0.019127	23.82	0.015630	27.77
45	0.020380	23.15	0.016131	27.08
46	0.021607	22.48	0.016874	26.40
47	0.023407	21.82	0.017547	25.72
48	0.023956	21.18	0.018198	25.04
49	0.025631	20.54	0.019281	24.37
50	0.026384	19.98	0.019413	23.79
51	0.027277	19.41	0.020343	23.16
52	0.028582	18.84	0.020488	22.54
53	0.030164	18.27	0.021316	21.91
54	0.031262	17.72	0.021960	21.29
55	0.031728	17.26	0.021969	20.72
56	0.033067	16.75	0.022897	20.13
57	0.034230	16.27	0.023556	19.52
58	0.035474	15.78	0.024159	18.93
59	0.036790	15.31	0.024958	18.33
60	0.037772	14.85	0.025905	17.73
61	0.039297	14.37	0.027414	17.12
62	0.039954	13.90	0.028394	16.53
63	0.041069	13.42	0.029795	15.94
64	0.042280	12.92	0.030776	15.35
65	0.039144	12.44	0.028230	14.79
66	0.043862	11.93	0.031667	14.21
67	0.046182	11.46	0.033318	13.66
68	0.048624	10.98	0.034728	13.12
69	0.052077	10.52	0.037341	12.57
70	0.055284	10.07	0.039491	12.04
71	0.058951	9.63	0.042134	11.51
72	0.062301	9.20	0.044962	11.00
73	0.067099	8.78	0.047548	10.49
74	0.071469	8.38	0.051148	9.99
75	0.075068	7.98	0.055271	9.50

Notes:

1. *Attained age* calculated as sum of entitlement age and duration.
2. *Probability of death* at attained age *x* represents the average probability of termination due to death within one year for disability beneficiaries who have attained that particular age. Values are based on aggregate counts of exposure and deaths across all durations, and have been graduated using Whittaker-Henderson method. See **table 7C** for attained ages beyond age 75.
3. *Future time on OASDI rolls* at attained age *x* represents the aggregate expected number of years on the combined DI and OASI rolls for disability beneficiaries who have attained that particular age. Values are exposure-weighted averages of expected future times across all durations from **tables 9A** and **9B**. See **table 9C** for attained ages beyond age 75. Experience reflects continuing entitlement after NRA.

**Table 13.—Disabled Workers**  
**Aggregate Probability of Death and Expected Future Time on Combined**  
**DI and OASI Rolls (excluding possibility of recovery), by Duration**  
(2011-15 Social Security DI disability experience)

Duration	Male		Female	
	Probability of death	Future time on OASDI rolls	Probability of death	Future time on OASDI rolls
0	0.055222	19.15	0.042163	22.89
1	0.036892	19.46	0.028988	23.16
2	0.029622	19.44	0.022545	23.14
3	0.027861	19.25	0.020074	22.94
4	0.027341	18.96	0.019292	22.61
5	0.028416	18.59	0.019079	22.18
6	0.029153	18.16	0.019766	21.66
7	0.029953	17.68	0.020179	21.12
8	0.031104	17.24	0.020680	20.64
9	0.032428	16.88	0.021371	20.20
10	0.033694	16.56	0.022126	19.75
11	0.034741	16.22	0.022759	19.30
12	0.036164	15.87	0.024203	18.80
13	0.038118	15.48	0.025839	18.27
14	0.039903	15.05	0.027242	17.71
15	0.041928	14.61	0.029291	17.16
16	0.043538	14.22	0.030636	16.66
17	0.045407	13.87	0.032386	16.23
18	0.047237	13.61	0.034149	15.85
19	0.048894	13.40	0.035358	15.52
20	0.050151	13.24	0.037212	15.22
21	0.051165	13.07	0.038743	14.91
22	0.053048	12.89	0.041632	14.57
23	0.056122	12.66	0.044326	14.20
24	0.058162	12.44	0.047644	13.82
25	0.062127	12.22	0.051277	13.41
26	0.063757	12.04	0.055306	13.07
27	0.066424	11.92	0.058503	12.80
28	0.067415	11.86	0.061708	12.61
29	0.069647	11.77	0.064309	12.41
30	0.071196	11.60	0.068659	12.10
31	0.073799	11.37	0.073444	11.69
32	0.076534	11.09	0.077054	11.23
33	0.080011	10.77	0.082177	10.73
34	0.083188	10.45	0.087945	10.24
35	0.083884	10.18	0.092800	9.86
36	0.086948	9.97	0.096485	9.56
37	0.087876	9.76	0.100686	9.27
38	0.089660	9.55	0.102765	9.01
39	0.090183	9.34	0.105438	8.79
40	0.091016	9.15	0.107398	8.58

Notes:

1. *Duration* measured in years since entitlement to disabled worker benefits.
2. *Probability of death* at duration *t* represents the average probability of termination due to death during the (*t*+1) year of entitlement to benefits. Values are based on aggregate counts of exposure and deaths across all entitlement ages. Results have been graduated using Whittaker-Henderson method, and blended to reflect mortality trends established in **table 7C**.
3. *Future time on OASDI rolls* at duration *t* represents the aggregate expected number of years on the combined DI and OASI rolls for disability beneficiaries who have not died after *t* years. Values are exposure-weighted averages of expected future times across all ages from **tables 9A, 9B, and 9C**. Experience reflects continuing entitlement after NRA.





**Disabled Worker Recovery Experience  
by Entitlement Age and Duration  
(2011-15)**



**Table 14A.—Male Disabled Workers  
Probability of Recovery Termination  
(2011-15 Social Security DI disability experience)**

Entl age	Completed duration of disability entitlement										10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9		
16	0.007082	0.012704	0.018789	0.015833	0.058788	0.090651	0.077700	0.078069	0.075748	0.059446	0.053852	26
17	0.007068	0.010411	0.012004	0.015496	0.058517	0.083178	0.071661	0.070035	0.067265	0.049071	0.046031	27
18	0.006960	0.007976	0.007108	0.015767	0.056589	0.073667	0.064653	0.060997	0.054541	0.041367	0.037202	28
19	0.005218	0.007095	0.006176	0.015172	0.048728	0.063044	0.054089	0.048638	0.041970	0.036043	0.028970	29
20	0.004646	0.007573	0.006653	0.014518	0.041177	0.052663	0.044685	0.039984	0.033105	0.027892	0.023401	30
21	0.004856	0.007906	0.006574	0.013668	0.036060	0.043136	0.038742	0.033237	0.029200	0.022797	0.019851	31
22	0.005701	0.008833	0.007624	0.014350	0.031764	0.038856	0.033335	0.030151	0.025251	0.019561	0.017784	32
23	0.005546	0.010938	0.007804	0.013800	0.030565	0.034584	0.031230	0.028504	0.023831	0.019878	0.015642	33
24	0.005829	0.012104	0.007014	0.014594	0.030035	0.032660	0.029630	0.026859	0.022697	0.021247	0.014024	34
25	0.006770	0.011725	0.007670	0.014124	0.030627	0.030890	0.027810	0.026301	0.022358	0.022385	0.013048	35
26	0.006925	0.012140	0.007832	0.012956	0.028386	0.030954	0.028629	0.024997	0.021863	0.020253	0.012973	36
27	0.007497	0.013275	0.008080	0.012749	0.028316	0.030112	0.026550	0.022734	0.019623	0.017046	0.012435	37
28	0.008062	0.014109	0.008064	0.012776	0.026379	0.026085	0.025651	0.021531	0.020651	0.016255	0.011603	38
29	0.007775	0.014345	0.007394	0.013409	0.024887	0.026647	0.023678	0.021478	0.017902	0.016978	0.010328	39
30	0.007640	0.013922	0.007446	0.012963	0.023614	0.023688	0.022631	0.021626	0.016420	0.018358	0.010289	40
31	0.007981	0.015690	0.007307	0.011817	0.022803	0.021691	0.020832	0.018861	0.016043	0.015735	0.009262	41
32	0.008136	0.015945	0.007861	0.010900	0.022474	0.021852	0.020335	0.017262	0.016035	0.014707	0.008743	42
33	0.008957	0.016236	0.008496	0.010763	0.022041	0.020530	0.019255	0.016093	0.014626	0.011971	0.007803	43
34	0.009557	0.016952	0.007617	0.010072	0.020067	0.017577	0.016755	0.014683	0.014165	0.012671	0.007173	44
35	0.009399	0.016674	0.007854	0.009077	0.019207	0.017072	0.016134	0.013753	0.012253	0.011409	0.006820	45
36	0.008860	0.017599	0.007405	0.010225	0.017581	0.015573	0.015140	0.012905	0.011393	0.010135	0.006525	46
37	0.008811	0.016887	0.007427	0.009763	0.015594	0.014589	0.013972	0.011166	0.011176	0.009032	0.005684	47
38	0.008766	0.016510	0.007801	0.008987	0.014976	0.013941	0.011935	0.011030	0.010171	0.007900	0.005163	48
39	0.008653	0.017145	0.006415	0.007731	0.013909	0.013662	0.011359	0.010045	0.009094	0.007280	0.004794	49
40	0.008416	0.016998	0.006673	0.008227	0.013403	0.012399	0.010495	0.009431	0.007494	0.007048	0.004355	50
41	0.007605	0.015069	0.006039	0.007351	0.012187	0.011982	0.010347	0.008234	0.007021	0.006477	0.003724	51
42	0.008398	0.014683	0.007016	0.007312	0.010894	0.009767	0.008749	0.007846	0.006411	0.004856	0.003215	52
43	0.007406	0.013150	0.005729	0.006698	0.010527	0.008780	0.007429	0.006731	0.005540	0.004931	0.002977	53
44	0.007008	0.013532	0.005967	0.005527	0.010739	0.007392	0.006565	0.005284	0.004798	0.004102	0.002496	54
45	0.007497	0.013568	0.005364	0.005672	0.009251	0.007276	0.005907	0.004809	0.004433	0.003378	0.002239	55
46	0.007354	0.013726	0.004485	0.004952	0.008121	0.006542	0.005491	0.005062	0.003533	0.002839	0.002004	56
47	0.006546	0.011591	0.003704	0.004300	0.007953	0.006034	0.004750	0.003951	0.003561	0.002747	0.001729	57
48	0.006149	0.009262	0.003112	0.004732	0.007025	0.005322	0.004429	0.003194	0.002776	0.002481	0.001463	58
49	0.004479	0.007816	0.003220	0.004180	0.007337	0.004721	0.003989	0.003111	0.003043	0.002162	0.001414	59
50	0.002840	0.004919	0.002078	0.002615	0.004965	0.003769	0.003011	0.002472	0.002313	0.001519	0.001272	60
51	0.003575	0.005304	0.002011	0.002511	0.005148	0.003958	0.002971	0.002183	0.002013	0.001736	0.001054	61
52	0.003154	0.005002	0.001720	0.002240	0.005265	0.003404	0.002881	0.001974	0.001717	0.001315	0.000930	62
53	0.002750	0.003619	0.001125	0.002069	0.005229	0.002923	0.002625	0.001904	0.001444	0.001147	0.000760	63
54	0.001748	0.002691	0.000984	0.001714	0.004811	0.003077	0.002212	0.002041	0.001267	0.000819	0.000521	64
55	0.001163	0.001688	0.000627	0.001496	0.003789	0.002765	0.002011	0.001479	0.000945	0.000799	0.000223	65
56	0.001215	0.001629	0.000507	0.001434	0.003846	0.002506	0.001503	0.001095	0.000824	0.000245	—	66
57	0.001191	0.001349	0.000655	0.001267	0.003505	0.002086	0.001361	0.000893	0.000383	—	—	67
58	0.001021	0.001396	0.000365	0.001182	0.003122	0.001594	0.001065	0.000657	—	—	—	68
59	0.000818	0.001129	0.000226	0.001114	0.002494	0.001324	0.000449	—	—	—	—	69
60	0.000767	0.000736	0.000077	0.000908	0.002049	0.000892	—	—	—	—	—	70
61	0.000523	0.000347	0.000091	0.000807	0.001419	—	—	—	—	—	—	71
62	0.000348	0.000310	0.000178	0.000358	—	—	—	—	—	—	—	72
63	0.000228	0.000328	0.000096	—	—	—	—	—	—	—	—	73
64	0.000257	0.000205	—	—	—	—	—	—	—	—	—	74
65	0.000018	—	—	—	—	—	—	—	—	—	—	75

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Recovery is not considered beyond NRA.
2. The value  $q_{[x]+t}$  at duration  $t$  represents the probability of recovery while on the DI rolls—in a multiple-decrement environment—during the  $(t+1)$  year of entitlement for those originally entitled to disability benefits at entl age  $[x]$  who have attained age  $[x]+t$ .
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement.
4. Results have been graduated using the Whittaker-Henderson Type B two-dimensional method.

**Table 14B.—Female Disabled Workers**  
**Probability of Recovery Termination**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement										10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9		
16	0.012330	0.022170	0.016170	0.008621	0.044056	0.082650	0.069374	0.069006	0.053709	0.052202	0.042398	26
17	0.010189	0.016760	0.012174	0.010599	0.046140	0.071801	0.064622	0.061836	0.053014	0.048257	0.040639	27
18	0.008058	0.012682	0.009508	0.013157	0.046916	0.059686	0.058027	0.054046	0.051272	0.042102	0.036424	28
19	0.005485	0.009396	0.008634	0.015392	0.044463	0.049559	0.049424	0.044842	0.043041	0.035055	0.029867	29
20	0.004507	0.008738	0.008219	0.016255	0.037553	0.041901	0.040003	0.038333	0.033316	0.029015	0.024884	30
21	0.004053	0.009147	0.007282	0.013513	0.033858	0.038942	0.038117	0.032978	0.028800	0.023558	0.021425	31
22	0.004698	0.009807	0.007409	0.014162	0.030567	0.036117	0.033471	0.026790	0.023694	0.022345	0.018105	32
23	0.005833	0.009908	0.006571	0.014327	0.030018	0.031544	0.030117	0.025720	0.021312	0.020435	0.016896	33
24	0.006236	0.012997	0.006700	0.013928	0.029838	0.028932	0.028541	0.024554	0.020701	0.021469	0.016130	34
25	0.006961	0.012675	0.008245	0.014330	0.029861	0.027339	0.029595	0.024999	0.021291	0.019239	0.016388	35
26	0.007120	0.013504	0.008250	0.013698	0.028583	0.026334	0.026676	0.023552	0.021952	0.021499	0.014967	36
27	0.006734	0.013800	0.007963	0.013839	0.025685	0.024670	0.023386	0.022587	0.019443	0.020849	0.013971	37
28	0.007658	0.013079	0.007817	0.012030	0.022736	0.024745	0.023838	0.019261	0.020868	0.018969	0.012981	38
29	0.007583	0.012568	0.007161	0.011912	0.023386	0.024121	0.021622	0.019444	0.018226	0.018091	0.012478	39
30	0.007411	0.014179	0.007112	0.011206	0.021852	0.022272	0.020794	0.019131	0.017736	0.016677	0.011895	40
31	0.006752	0.014113	0.006786	0.011078	0.018890	0.020041	0.019837	0.018734	0.019170	0.014796	0.010891	41
32	0.006429	0.014463	0.006567	0.010611	0.018217	0.019955	0.018688	0.018550	0.016927	0.014346	0.010255	42
33	0.006290	0.014446	0.007517	0.009761	0.018053	0.018911	0.018148	0.016963	0.015176	0.013842	0.009795	43
34	0.005999	0.013327	0.006931	0.009611	0.017707	0.018005	0.017460	0.014701	0.013662	0.012198	0.009044	44
35	0.006603	0.013090	0.006424	0.009156	0.016842	0.016228	0.015870	0.012655	0.011297	0.011126	0.007929	45
36	0.007414	0.014751	0.006754	0.009055	0.015471	0.015706	0.014659	0.013537	0.011517	0.010386	0.007705	46
37	0.007768	0.013234	0.006509	0.008117	0.015471	0.014270	0.013831	0.012450	0.011615	0.010045	0.006847	47
38	0.006880	0.012603	0.005672	0.008101	0.014487	0.012642	0.012551	0.010961	0.009936	0.008564	0.006184	48
39	0.006906	0.012916	0.005466	0.007364	0.014226	0.012107	0.011732	0.010296	0.009196	0.007658	0.005332	49
40	0.006189	0.012569	0.005760	0.006750	0.013727	0.011304	0.011294	0.009284	0.008587	0.006219	0.004776	50
41	0.006102	0.013274	0.005377	0.006691	0.012113	0.010655	0.010433	0.008729	0.007449	0.005681	0.004216	51
42	0.006806	0.012462	0.005064	0.006189	0.012142	0.010082	0.008192	0.006518	0.006033	0.005272	0.003801	52
43	0.006763	0.011943	0.004928	0.006074	0.010620	0.008421	0.007670	0.006933	0.005972	0.004533	0.003426	53
44	0.006356	0.011694	0.004517	0.005182	0.010637	0.007608	0.006822	0.006515	0.004000	0.004055	0.002854	54
45	0.005517	0.010061	0.004164	0.005391	0.008870	0.006414	0.005605	0.004744	0.003969	0.003854	0.002452	55
46	0.006038	0.010851	0.003932	0.004301	0.007658	0.006646	0.005521	0.004231	0.003924	0.003284	0.002149	56
47	0.005439	0.010179	0.003805	0.003971	0.007623	0.005745	0.005055	0.003970	0.003472	0.002798	0.002010	57
48	0.005339	0.008403	0.003171	0.003541	0.006732	0.005389	0.004553	0.003670	0.002879	0.002744	0.001716	58
49	0.004334	0.007131	0.002788	0.004100	0.006532	0.005153	0.003534	0.003329	0.002535	0.001825	0.001574	59
50	0.002393	0.004473	0.001640	0.002602	0.004759	0.003715	0.003114	0.002483	0.002196	0.001723	0.001448	60
51	0.003011	0.005621	0.001715	0.002483	0.004848	0.003671	0.002714	0.002634	0.002214	0.001633	0.001216	61
52	0.002705	0.004371	0.001671	0.002043	0.004302	0.003275	0.002569	0.002358	0.001626	0.001721	0.001079	62
53	0.002693	0.003795	0.001234	0.002021	0.004428	0.002934	0.002534	0.002017	0.001509	0.001131	0.000812	63
54	0.001961	0.003189	0.000987	0.001781	0.004309	0.002942	0.002399	0.001500	0.001208	0.001014	0.000565	64
55	0.001277	0.002021	0.000686	0.001376	0.003631	0.002497	0.001750	0.001594	0.001002	0.000825	0.000203	65
56	0.001196	0.001922	0.000530	0.001619	0.003801	0.002026	0.001691	0.001148	0.000651	0.000443	—	66
57	0.001070	0.001769	0.000513	0.001564	0.003027	0.001739	0.001394	0.000775	0.000303	—	—	67
58	0.001020	0.001460	0.000471	0.001143	0.002794	0.001875	0.001059	0.000491	—	—	—	68
59	0.001029	0.001384	0.000255	0.000784	0.002518	0.001260	0.000732	—	—	—	—	69
60	0.000936	0.000781	0.000081	0.000766	0.002031	0.001017	—	—	—	—	—	70
61	0.000507	0.000445	0.000081	0.000641	0.001412	—	—	—	—	—	—	71
62	0.000357	0.000376	0.000097	0.000146	—	—	—	—	—	—	—	72
63	0.000360	0.000414	0.000005	—	—	—	—	—	—	—	—	73
64	0.000298	0.000450	—	—	—	—	—	—	—	—	—	74
65	0.000209	—	—	—	—	—	—	—	—	—	—	75

Notes:  
1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Recovery is not considered beyond NRA.  
2. The value  $q_{[x]+t}$  at duration  $t$  represents the probability of recovery while on the DI rolls—in a multiple-decrement environment—during the  $(t+1)$  year of entitlement for those originally entitled to disability benefits at entl age  $[x]$  who have attained age  $[x]+t$ .  
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement.  
4. Results have been graduated using the Whittaker-Henderson Type B two-dimensional method.

**Table 15A.—Male Disabled Workers**  
**Benefit Continuation Table (excluding possibility of death)**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9			
16	100,000	99,292	98,031	96,189	94,666	89,101	81,024	74,728	68,894	63,675	59,890	26	
17	89,700	89,066	88,139	87,081	85,732	80,715	74,001	68,698	63,887	59,590	56,665	27	
18	80,716	80,154	79,515	78,950	77,705	73,308	67,908	63,518	59,644	56,391	54,057	28	
19	72,682	72,303	71,790	71,347	70,265	66,841	62,627	59,240	56,359	53,994	52,046	29	
20	66,747	66,437	65,934	65,495	64,544	61,886	58,627	56,007	53,768	51,988	50,538	30	
21	62,742	62,437	61,943	61,536	60,695	58,506	55,982	53,813	52,024	50,505	49,355	31	
22	60,186	59,843	59,314	58,862	58,017	56,174	53,991	52,191	50,617	49,339	48,375	32	
23	58,581	58,256	57,619	57,169	56,380	54,657	52,767	51,119	49,662	48,479	47,515	33	
24	57,425	57,090	56,399	56,003	55,186	53,528	51,780	50,246	48,896	47,786	46,772	34	
25	56,501	56,118	55,460	55,035	54,258	52,596	50,971	49,553	48,250	47,171	46,116	35	
26	55,437	55,053	54,385	53,959	53,260	51,748	50,146	48,710	47,492	46,454	45,514	36	
27	54,218	53,812	53,098	52,669	51,998	50,526	49,005	47,704	46,619	45,704	44,924	37	
28	53,191	52,762	52,018	51,599	50,940	49,596	48,302	47,063	46,050	45,099	44,365	38	
29	52,301	51,894	51,150	50,772	50,091	48,844	47,542	46,416	45,419	44,606	43,850	39	
30	51,435	51,042	50,331	49,956	49,308	48,144	47,004	45,940	44,947	44,209	43,397	40	
31	50,411	50,009	49,224	48,864	48,287	47,186	46,162	45,200	44,347	43,636	42,950	41	
32	49,779	49,374	48,587	48,205	47,680	46,608	45,590	44,663	43,892	43,188	42,552	42	
33	49,016	48,577	47,788	47,382	46,872	45,839	44,898	44,033	43,324	42,690	42,180	43	
34	48,197	47,736	46,927	46,570	46,101	45,176	44,362	43,638	42,997	42,388	41,851	44	
35	47,499	47,053	46,268	45,905	45,488	44,614	43,852	43,144	42,551	42,030	41,551	45	
36	46,889	46,474	45,656	45,318	44,855	44,066	43,380	42,723	42,172	41,692	41,268	46	
37	46,188	45,781	45,008	44,674	44,238	43,548	42,913	42,313	41,841	41,373	40,999	47	
38	45,629	45,229	44,482	44,135	43,738	43,083	42,482	41,975	41,512	41,090	40,766	48	
39	45,087	44,697	43,931	43,649	43,312	42,710	42,126	41,647	41,229	40,854	40,556	49	
40	44,658	44,282	43,529	43,239	42,883	42,308	41,783	41,344	40,954	40,647	40,362	50	
41	44,093	43,758	43,099	42,839	42,524	42,006	41,503	41,074	40,736	40,450	40,186	51	
42	43,646	43,279	42,644	42,345	42,035	41,577	41,171	40,811	40,491	40,231	40,036	52	
43	43,112	42,793	42,230	41,988	41,707	41,268	40,906	40,602	40,329	40,106	39,907	53	
44	42,724	42,425	41,851	41,601	41,371	40,927	40,624	40,357	40,144	39,951	39,788	54	
45	42,457	42,139	41,567	41,344	41,109	40,729	40,433	40,194	40,001	39,824	39,689	55	
46	42,147	41,837	41,263	41,078	40,875	40,543	40,278	40,057	39,854	39,713	39,600	56	
47	41,769	41,496	41,015	40,863	40,687	40,363	40,119	39,928	39,770	39,628	39,521	57	
48	41,419	41,164	40,783	40,656	40,464	40,180	39,966	39,789	39,662	39,552	39,453	58	
49	41,174	40,990	40,670	40,539	40,370	40,074	39,885	39,726	39,602	39,481	39,395	59	
50	40,560	40,445	40,246	40,162	40,057	39,858	39,708	39,588	39,490	39,399	39,339	60	
51	40,545	40,400	40,186	40,105	40,004	39,798	39,640	39,522	39,436	39,357	39,289	61	
52	40,392	40,265	40,064	39,995	39,905	39,695	39,560	39,446	39,368	39,300	39,248	62	
53	40,199	40,088	39,943	39,898	39,815	39,607	39,491	39,387	39,312	39,255	39,211	63	
54	40,028	39,958	39,850	39,811	39,743	39,552	39,430	39,343	39,263	39,213	39,181	64	
55	39,824	39,778	39,711	39,686	39,627	39,477	39,368	39,289	39,231	39,194	39,161	65	
56	39,737	39,689	39,624	39,604	39,547	39,395	39,296	39,237	39,194	39,162	39,152	66	
57	39,650	39,603	39,550	39,524	39,474	39,336	39,254	39,201	39,166	39,151	—	67	
58	39,564	39,523	39,468	39,454	39,407	39,284	39,221	39,179	39,153	—	—	68	
59	39,477	39,445	39,400	39,391	39,347	39,249	39,197	39,179	—	—	—	69	
60	39,391	39,361	39,332	39,329	39,293	39,212	39,177	—	—	—	—	70	
61	39,305	39,284	39,270	39,266	39,234	39,178	—	—	—	—	—	71	
62	39,219	39,205	39,193	39,186	39,172	—	—	—	—	—	—	72	
63	39,133	39,124	39,111	39,107	—	—	—	—	—	—	—	73	
64	39,048	39,038	39,030	—	—	—	—	—	—	—	—	74	
65	38,963	38,962	—	—	—	—	—	—	—	—	—	75	

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Recovery is not considered beyond NRA.
2. The value  $l_{[x]}$  at duration 0 represents an assumed number of lives originally entitled to disability benefits at entl age  $[x]$ ; the value  $l_{[x]+t}$  at duration  $t > 0$  represents the number of lives from the original  $l_{[x]}$  who have not recovered and remain on the rolls as of attained age  $[x]+t$ . Lives are decremented using probabilities from **table 14A**.
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement.

**Table 15B.—Female Disabled Workers  
Benefit Continuation Table (excluding possibility of death)  
(2011-15 Social Security DI disability experience)**

Entl age	Completed duration of disability entitlement											10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9			
16	100,000	98,767	96,577	95,015	94,196	90,046	82,604	76,873	71,568	67,724	64,189	26	
17	92,285	91,345	89,814	88,721	87,781	83,731	77,719	72,697	68,202	64,586	61,468	27	
18	84,882	84,198	83,130	82,340	81,257	77,445	72,823	68,597	64,890	61,563	58,970	28	
19	77,603	77,177	76,452	75,792	74,625	71,307	67,773	64,423	61,534	58,886	56,822	29	
20	71,655	71,332	70,709	70,128	68,988	66,397	63,615	61,070	58,729	56,772	55,125	30	
21	67,910	67,635	67,016	66,528	65,629	63,407	60,938	58,615	56,682	55,050	53,753	31	
22	65,014	64,709	64,074	63,599	62,698	60,782	58,587	56,626	55,109	53,803	52,601	32	
23	62,970	62,603	61,983	61,576	60,694	58,872	57,015	55,298	53,876	52,728	51,649	33	
24	61,781	61,396	60,598	60,192	59,354	57,583	55,917	54,321	52,987	51,890	50,776	34	
25	60,822	60,399	59,633	59,141	58,294	56,553	55,007	53,379	52,045	50,937	49,957	35	
26	59,617	59,193	58,394	57,912	57,119	55,486	54,025	52,584	51,346	50,219	49,138	36	
27	57,995	57,604	56,809	56,357	55,577	54,150	52,814	51,579	50,414	49,434	48,403	37	
28	56,723	56,289	55,553	55,119	54,456	53,218	51,901	50,664	49,688	48,651	47,727	38	
29	55,594	55,172	54,479	54,089	53,445	52,195	50,936	49,835	48,866	47,975	47,107	39	
30	54,579	54,175	53,407	53,027	52,433	51,287	50,145	49,102	48,163	47,309	46,519	40	
31	53,483	53,122	52,372	52,017	51,441	50,469	49,458	48,477	47,569	46,657	45,966	41	
32	52,608	52,270	51,514	51,176	50,633	49,711	48,719	47,809	46,922	46,128	45,465	42	
33	51,770	51,444	50,701	50,320	49,829	48,929	48,004	47,133	46,333	45,630	44,999	43	
34	50,771	50,466	49,793	49,448	48,973	48,106	47,240	46,415	45,733	45,108	44,558	44	
35	49,788	49,459	48,812	48,498	48,054	47,245	46,478	45,740	45,161	44,651	44,155	45	
36	49,391	49,025	48,302	47,976	47,542	46,806	46,071	45,396	44,781	44,265	43,805	46	
37	48,716	48,338	47,698	47,388	47,003	46,276	45,616	44,985	44,425	43,909	43,467	47	
38	47,851	47,522	46,923	46,657	46,279	45,609	45,032	44,467	43,980	43,543	43,169	48	
39	47,338	47,011	46,404	46,150	45,810	45,158	44,611	44,088	43,634	43,233	42,902	49	
40	46,792	46,502	45,918	45,654	45,346	44,724	44,218	43,719	43,313	42,941	42,673	50	
41	46,325	46,042	45,431	45,187	44,885	44,341	43,869	43,411	43,032	42,711	42,469	51	
42	45,771	45,459	44,892	44,665	44,389	43,850	43,408	43,052	42,771	42,513	42,290	52	
43	45,372	45,065	44,527	44,308	44,039	43,571	43,204	42,873	42,576	42,322	42,129	53	
44	44,923	44,637	44,115	43,916	43,688	43,223	42,894	42,601	42,323	42,154	41,985	54	
45	44,400	44,155	43,711	43,529	43,294	42,910	42,635	42,396	42,195	42,028	41,865	55	
46	44,193	43,926	43,449	43,278	43,092	42,762	42,478	42,243	42,064	41,899	41,762	56	
47	43,906	43,667	43,223	43,059	42,888	42,561	42,316	42,102	41,935	41,789	41,672	57	
48	43,569	43,336	42,972	42,836	42,684	42,397	42,169	41,977	41,823	41,703	41,588	58	
49	43,270	43,082	42,775	42,656	42,481	42,204	41,987	41,839	41,700	41,594	41,517	59	
50	42,678	42,576	42,386	42,316	42,206	42,005	41,849	41,719	41,615	41,524	41,452	60	
51	42,678	42,549	42,310	42,237	42,132	41,928	41,774	41,661	41,551	41,459	41,392	61	
52	42,460	42,345	42,160	42,090	42,004	41,823	41,686	41,579	41,481	41,414	41,342	62	
53	42,314	42,200	42,040	41,988	41,903	41,717	41,595	41,490	41,406	41,344	41,297	63	
54	42,152	42,069	41,935	41,894	41,819	41,639	41,516	41,416	41,354	41,304	41,263	64	
55	41,934	41,880	41,795	41,766	41,709	41,558	41,454	41,381	41,315	41,274	41,240	65	
56	41,857	41,807	41,727	41,705	41,637	41,479	41,395	41,325	41,278	41,251	41,232	66	
57	41,780	41,735	41,661	41,640	41,575	41,449	41,377	41,319	41,287	41,274	—	67	
58	41,703	41,661	41,600	41,580	41,532	41,416	41,338	41,294	41,274	—	—	68	
59	41,627	41,584	41,526	41,515	41,482	41,378	41,326	41,296	—	—	—	69	
60	41,550	41,512	41,480	41,477	41,445	41,361	41,319	—	—	—	—	70	
61	41,474	41,453	41,435	41,432	41,405	41,347	—	—	—	—	—	71	
62	41,398	41,383	41,367	41,363	41,357	—	—	—	—	—	—	72	
63	41,322	41,307	41,290	41,290	—	—	—	—	—	—	—	73	
64	41,246	41,234	41,215	—	—	—	—	—	—	—	—	74	
65	41,170	41,162	—	—	—	—	—	—	—	—	—	75	

- Notes:
1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Recovery is not considered beyond NRA.
  2. The value  $l_{[x]}$  at duration 0 represents an assumed number of lives originally entitled to disability benefits at entl age  $[x]$ ; the value  $l_{[x]+t}$  at duration  $t > 0$  represents the number of lives from the original  $l_{[x]}$  who have not recovered and remain on the rolls as of attained age  $[x]+t$ . Lives are decremented using probabilities from **table 14B**.
  3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement.

**Table 16A.—Male Disabled Workers**  
**Expected Future Time on DI Rolls (excluding possibility of death)**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											Attained age
	0	1	2	3	4	5	6	7	8	9	10 or more	
16	25.77	24.95	24.26	23.72	23.09	23.50	24.79	25.84	26.99	28.16	28.90	26
17	27.23	26.42	25.70	25.00	24.39	24.87	26.08	27.06	28.06	29.05	29.52	27
18	28.77	27.96	27.19	26.38	25.79	26.31	27.36	28.22	29.02	29.66	29.92	28
19	30.43	29.58	28.79	27.97	27.39	27.77	28.60	29.21	29.68	29.95	30.06	29
20	31.71	30.85	30.08	29.28	28.71	28.92	29.50	29.86	30.08	30.09	29.94	30
21	32.46	31.62	30.86	30.07	29.47	29.56	29.87	30.05	30.07	29.96	29.64	31
22	32.68	31.86	31.14	30.38	29.81	29.78	29.96	29.98	29.89	29.65	29.24	32
23	32.53	31.71	31.05	30.29	29.71	29.63	29.67	29.61	29.47	29.17	28.76	33
24	32.18	31.37	30.75	29.96	29.40	29.29	29.27	29.14	28.93	28.60	28.20	34
25	31.74	30.96	30.32	29.55	28.96	28.86	28.77	28.58	28.33	27.97	27.60	35
26	31.36	30.58	29.95	29.18	28.56	28.37	28.27	28.08	27.79	27.40	26.96	36
27	31.03	30.26	29.66	28.90	28.26	28.07	27.93	27.68	27.31	26.85	26.30	37
28	30.63	29.88	29.30	28.53	27.89	27.63	27.36	27.07	26.65	26.20	25.63	38
29	30.17	29.40	28.82	28.03	27.40	27.09	26.82	26.46	26.03	25.49	24.92	39
30	29.70	28.92	28.33	27.54	26.89	26.53	26.16	25.75	25.31	24.73	24.18	40
31	29.27	28.51	27.95	27.15	26.47	26.08	25.65	25.18	24.66	24.05	23.43	41
32	28.67	27.90	27.35	26.56	25.85	25.43	24.99	24.50	23.92	23.30	22.64	42
33	28.11	27.36	26.81	26.03	25.31	24.87	24.38	23.85	23.23	22.57	21.84	43
34	27.59	26.86	26.31	25.51	24.76	24.26	23.68	23.08	22.42	21.73	21.00	44
35	27.01	26.26	25.69	24.89	24.12	23.58	22.98	22.35	21.65	20.92	20.15	45
36	26.37	25.60	25.05	24.23	23.48	22.89	22.24	21.58	20.85	20.08	19.29	46
37	25.77	24.99	24.41	23.59	22.82	22.17	21.49	20.79	20.02	19.24	18.41	47
38	25.09	24.31	23.71	22.89	22.09	21.42	20.72	19.96	19.18	18.37	17.51	48
39	24.40	23.61	23.01	22.16	21.33	20.62	19.90	19.12	18.31	17.48	16.60	49
40	23.65	22.85	22.23	21.38	20.55	19.83	19.07	18.27	17.44	16.56	15.68	50
41	22.97	22.14	21.47	20.60	19.74	18.98	18.21	17.39	16.53	15.64	14.74	51
42	22.20	21.38	20.69	19.83	18.98	18.18	17.35	16.50	15.63	14.73	13.80	52
43	21.48	20.63	19.90	19.01	18.14	17.32	16.47	15.59	14.69	13.77	12.84	53
44	20.67	19.81	19.08	18.19	17.29	16.47	15.59	14.69	13.76	12.83	11.88	54
45	19.81	18.96	18.21	17.31	16.41	15.55	14.66	13.75	12.81	11.87	10.91	55
46	18.97	18.11	17.35	16.43	15.51	14.63	13.72	12.80	11.86	10.90	9.93	56
47	18.15	17.27	16.46	15.52	14.59	13.70	12.78	11.84	10.88	9.92	8.95	57
48	17.31	16.41	15.56	14.61	13.67	12.77	11.83	10.88	9.91	8.94	7.96	58
49	16.43	15.50	14.62	13.66	12.72	11.81	10.86	9.90	8.93	7.96	6.97	59
50	15.64	14.68	13.75	12.78	11.81	10.87	9.91	8.93	7.96	6.97	5.98	60
51	14.66	13.71	12.78	11.81	10.83	9.89	8.93	7.95	6.97	5.98	4.99	61
52	13.72	12.76	11.82	10.84	9.87	8.92	7.94	6.97	5.98	4.99	3.99	62
53	12.79	11.82	10.86	9.87	8.89	7.94	6.96	5.98	4.99	3.99	3.00	63
54	11.84	10.86	9.89	8.90	7.92	6.95	5.97	4.98	3.99	3.00	2.00	64
55	10.90	9.91	8.93	7.93	6.94	5.97	4.98	3.99	3.00	2.00	1.00	65
56	9.92	8.93	7.95	6.95	5.96	4.98	3.99	3.00	2.00	1.00	—	66
57	8.94	7.95	6.96	5.97	4.97	3.99	3.00	2.00	1.00	—	—	67
58	7.96	6.97	5.98	4.98	3.98	2.99	2.00	1.00	—	—	—	68
59	6.98	5.98	4.99	3.99	2.99	2.00	1.00	—	—	—	—	69
60	5.99	4.99	3.99	2.99	2.00	1.00	—	—	—	—	—	70
61	4.99	4.00	3.00	2.00	1.00	—	—	—	—	—	—	71
62	4.00	3.00	2.00	1.00	—	—	—	—	—	—	—	72
63	3.00	2.00	1.00	—	—	—	—	—	—	—	—	73
64	2.00	1.00	—	—	—	—	—	—	—	—	—	74
65	1.00	—	—	—	—	—	—	—	—	—	—	75

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Recovery is not considered beyond NRA.
2. The value  $e_{[x]+t}$  at duration  $t$  represents the average number of future years a beneficiary will remain on the DI rolls for those originally entitled to disability benefits at entl age  $[x]$  who have not recovered as of attained age  $[x]+t$ . Values are based on continuance experience from **table 15A**.
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement.

**Table 16B.—Female Disabled Workers**  
**Expected Future Time on DI Rolls (excluding possibility of death)**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											Attained age
	0	1	2	3	4	5	6	7	8	9	10 or more	
16	27.05	26.38	25.96	25.38	24.60	24.71	25.89	26.78	27.73	28.28	28.81	26
17	28.04	27.32	26.78	26.11	25.38	25.58	26.52	27.32	28.09	28.63	29.06	27
18	29.15	28.38	27.74	27.00	26.36	26.63	27.29	27.94	28.50	29.02	29.27	28
19	30.45	29.62	28.90	28.14	27.58	27.84	28.26	28.70	29.03	29.31	29.36	29
20	31.59	30.73	29.99	29.24	28.71	28.81	29.05	29.24	29.39	29.38	29.25	30
21	32.10	31.23	30.52	29.74	29.14	29.14	29.30	29.44	29.43	29.29	28.98	31
22	32.35	31.50	30.81	30.04	29.46	29.37	29.46	29.46	29.26	28.95	28.60	32
23	32.31	31.49	30.80	30.00	29.43	29.33	29.27	29.16	28.92	28.54	28.12	33
24	31.92	31.11	30.52	29.72	29.13	29.01	28.86	28.69	28.40	27.99	27.60	34
25	31.43	30.65	30.03	29.28	28.70	28.57	28.36	28.21	27.92	27.51	27.04	35
26	31.07	30.28	29.69	28.93	28.33	28.15	27.90	27.65	27.30	26.90	26.48	36
27	30.87	30.08	29.49	28.73	28.12	27.85	27.54	27.19	26.81	26.33	25.88	37
28	30.54	29.77	29.16	28.38	27.72	27.36	27.04	26.69	26.20	25.75	25.24	38
29	30.14	29.36	28.73	27.93	27.27	26.91	26.56	26.13	25.64	25.11	24.56	39
30	29.68	28.90	28.31	27.51	26.81	26.40	25.99	25.53	25.02	24.46	23.87	40
31	29.27	28.46	27.86	27.05	26.35	25.85	25.36	24.87	24.33	23.80	23.15	41
32	28.75	27.93	27.33	26.51	25.79	25.26	24.76	24.22	23.67	23.07	22.40	42
33	28.20	27.37	26.77	25.97	25.22	24.67	24.14	23.57	22.97	22.32	21.63	43
34	27.72	26.88	26.24	25.42	24.66	24.10	23.53	22.94	22.27	21.57	20.83	44
35	27.22	26.39	25.74	24.90	24.13	23.53	22.91	22.27	21.55	20.79	20.02	45
36	26.46	25.65	25.03	24.19	23.41	22.77	22.13	21.45	20.74	19.97	19.18	46
37	25.82	25.02	24.35	23.51	22.70	22.05	21.36	20.65	19.90	19.13	18.32	47
38	25.26	24.43	23.73	22.87	22.05	21.37	20.63	19.89	19.10	18.29	17.44	48
39	24.53	23.70	23.00	22.12	21.29	20.59	19.83	19.06	18.25	17.42	16.55	49
40	23.81	22.96	22.24	21.37	20.51	19.79	19.01	18.22	17.39	16.53	15.64	50
41	23.05	22.19	21.48	20.60	19.73	18.97	18.17	17.35	16.50	15.62	14.71	51
42	22.31	21.46	20.73	19.83	18.95	18.18	17.36	16.50	15.60	14.69	13.77	52
43	21.52	20.66	19.90	19.00	18.11	17.30	16.45	15.57	14.67	13.76	12.82	53
44	20.72	19.85	19.08	18.17	17.26	16.44	15.56	14.67	13.76	12.81	11.86	54
45	19.96	19.06	18.25	17.33	16.42	15.56	14.66	13.74	12.80	11.85	10.89	55
46	19.06	18.18	17.37	16.44	15.50	14.62	13.72	12.79	11.84	10.89	9.92	56
47	18.20	17.29	16.46	15.53	14.59	13.69	12.77	11.83	10.88	9.91	8.94	57
48	17.34	16.43	15.56	14.61	13.66	12.75	11.82	10.87	9.91	8.93	7.96	58
49	16.46	15.53	14.63	13.67	12.73	11.81	10.87	9.90	8.93	7.96	6.97	59
50	15.66	14.69	13.76	12.78	11.81	10.86	9.90	8.93	7.95	6.97	5.98	60
51	14.67	13.71	12.79	11.81	10.84	9.89	8.92	7.94	6.96	5.98	4.99	61
52	13.74	12.78	11.83	10.85	9.87	8.91	7.94	6.96	5.98	4.99	3.99	62
53	12.79	11.82	10.87	9.88	8.90	7.94	6.96	5.98	4.99	3.99	3.00	63
54	11.84	10.86	9.90	8.91	7.92	6.95	5.97	4.99	3.99	3.00	2.00	64
55	10.90	9.91	8.93	7.94	6.95	5.97	4.98	3.99	3.00	2.00	1.00	65
56	9.92	8.93	7.95	6.95	5.96	4.98	3.99	3.00	2.00	1.00	—	66
57	8.94	7.95	6.96	5.97	4.98	3.99	3.00	2.00	1.00	—	—	67
58	7.96	6.97	5.98	4.98	3.98	2.99	2.00	1.00	—	—	—	68
59	6.97	5.98	4.99	3.99	2.99	2.00	1.00	—	—	—	—	69
60	5.99	4.99	3.99	2.99	2.00	1.00	—	—	—	—	—	70
61	4.99	4.00	3.00	2.00	1.00	—	—	—	—	—	—	71
62	4.00	3.00	2.00	1.00	—	—	—	—	—	—	—	72
63	3.00	2.00	1.00	—	—	—	—	—	—	—	—	73
64	2.00	1.00	—	—	—	—	—	—	—	—	—	74
65	1.00	—	—	—	—	—	—	—	—	—	—	75

- Notes:
1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Recovery is not considered beyond NRA.
  2. The value  $e_{[x]+t}$  at duration  $t$  represents the average number of future years a beneficiary will remain on the DI rolls for those originally entitled to disability benefits at entl age  $[x]$  who have not recovered as of attained age  $[x]+t$ . Values are based on continuance experience from **table 15B**.
  3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement.



**Table 17A.—Male Disabled Workers**  
**Absolute Recovery Rate Per Thousand Entitled**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											Attained age
	0	1	2	3	4	5	6	7	8	9	10 or more	
16	7.108	12.714	18.821	15.878	58.905	90.783	77.862	78.268	76.007	59.611	53.951	26
17	7.095	10.432	12.028	15.540	58.641	83.360	71.835	70.203	67.509	49.224	46.141	27
18	6.991	8.002	7.124	15.810	56.742	73.879	64.824	61.127	54.736	41.502	37.304	28
19	5.247	7.124	6.191	15.212	48.887	63.230	54.225	48.750	42.108	36.180	29.060	29
20	4.672	7.608	6.672	14.558	41.303	52.821	44.799	40.085	33.198	27.997	23.484	30
21	4.883	7.943	6.601	13.705	36.155	43.270	38.838	33.318	29.286	22.872	19.915	31
22	5.736	8.873	7.652	14.394	31.863	38.980	33.433	30.247	25.337	19.628	17.836	32
23	5.586	11.000	7.836	13.842	30.670	34.695	31.335	28.618	23.919	19.944	15.694	33
24	5.873	12.178	7.046	14.645	30.152	32.767	29.747	26.967	22.780	21.336	14.078	34
25	6.836	11.811	7.711	14.186	30.761	31.021	27.926	26.408	22.461	22.480	13.095	35
26	6.999	12.238	7.877	13.015	28.530	31.112	28.766	25.116	21.958	20.356	13.023	36
27	7.577	13.383	8.129	12.818	28.466	30.254	26.677	22.847	19.707	17.134	12.490	37
28	8.154	14.224	8.117	12.845	26.514	26.226	25.799	21.640	20.746	16.343	11.659	38
29	7.868	14.461	7.441	13.488	25.016	26.802	23.807	21.603	18.013	17.081	10.379	39
30	7.737	14.053	7.498	13.045	23.745	23.823	22.763	21.754	16.529	18.473	10.344	40
31	8.076	15.838	7.358	11.888	22.936	21.815	20.947	18.972	16.151	15.833	9.314	41
32	8.238	16.096	7.919	10.963	22.616	21.981	20.454	17.382	16.142	14.797	8.796	42
33	9.082	16.406	8.560	10.837	22.176	20.668	19.385	16.207	14.729	12.052	7.851	43
34	9.696	17.123	7.678	10.145	20.203	17.698	16.869	14.783	14.260	12.758	7.221	44
35	9.546	16.845	7.920	9.142	19.347	17.203	16.255	13.848	12.343	11.501	6.870	45
36	9.002	17.787	7.466	10.307	17.713	15.696	15.252	13.001	11.481	10.217	6.575	46
37	8.949	17.076	7.494	9.841	15.710	14.708	14.086	11.260	11.266	9.108	5.731	47
38	8.909	16.699	7.874	9.063	15.094	14.051	12.035	11.121	10.263	7.974	5.208	48
39	8.817	17.354	6.478	7.801	14.020	13.783	11.455	10.134	9.179	7.350	4.837	49
40	8.572	17.205	6.735	8.303	13.516	12.503	10.592	9.523	7.565	7.120	4.399	50
41	7.759	15.263	6.100	7.419	12.299	12.101	10.453	8.315	7.093	6.546	3.763	51
42	8.580	14.896	7.092	7.388	10.999	9.872	8.838	7.926	6.480	4.911	3.251	52
43	7.573	13.347	5.795	6.770	10.637	8.874	7.510	6.809	5.604	4.992	3.013	53
44	7.164	13.747	6.040	5.589	10.857	7.474	6.643	5.343	4.855	4.156	2.527	54
45	7.680	13.792	5.434	5.738	9.359	7.358	5.978	4.869	4.491	3.423	2.268	55
46	7.548	13.966	4.545	5.017	8.221	6.624	5.563	5.129	3.583	2.882	2.033	56
47	6.740	11.799	3.758	4.358	8.058	6.116	4.814	4.006	3.613	2.790	1.755	57
48	6.345	9.455	3.161	4.801	7.124	5.398	4.496	3.240	2.820	2.522	1.486	58
49	4.625	7.981	3.271	4.242	7.439	4.789	4.051	3.160	3.093	2.199	1.438	59
50	2.902	4.997	2.106	2.649	5.031	3.822	3.054	2.510	2.349	1.545	1.295	60
51	3.677	5.405	2.042	2.547	5.226	4.019	3.016	2.218	2.048	1.766	1.074	61
52	3.250	5.103	1.748	2.273	5.347	3.459	2.928	2.009	1.748	1.340	0.948	62
53	2.843	3.697	1.144	2.103	5.316	2.972	2.672	1.938	1.471	1.169	0.775	63
54	1.807	2.750	1.001	1.743	4.891	3.132	2.252	2.079	1.292	0.835	0.532	64
55	1.191	1.717	0.637	1.519	3.847	2.810	2.045	1.506	0.962	0.814	0.227	65
56	1.251	1.662	0.516	1.458	3.910	2.552	1.530	1.116	0.840	0.249	—	66
57	1.228	1.378	0.666	1.289	3.566	2.125	1.387	0.910	0.390	—	—	67
58	1.054	1.426	0.372	1.203	3.178	1.624	1.086	0.669	—	—	—	68
59	0.845	1.154	0.230	1.134	2.539	1.349	0.457	—	—	—	—	69
60	0.792	0.752	0.078	0.924	2.086	0.908	—	—	—	—	—	70
61	0.542	0.356	0.093	0.822	1.444	—	—	—	—	—	—	71
62	0.361	0.318	0.182	0.365	—	—	—	—	—	—	—	72
63	0.238	0.338	0.098	—	—	—	—	—	—	—	—	73
64	0.271	0.212	—	—	—	—	—	—	—	—	—	74
65	0.019	—	—	—	—	—	—	—	—	—	—	75

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Recovery is not considered beyond NRA.
2. The value  $q_{[x]+t}^t$  at duration  $t$  represents the number of recoveries per thousand during the  $(t+1)$  year of entitlement for those originally entitled to disability benefits at entl age  $[x]$  who have attained age  $[x]+t$ . Rates are derived from death probabilities shown in **table 7A** and recovery probabilities shown in **table 14A**. See appendix for details.
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement.

**Table 17B.—Female Disabled Workers**  
**Absolute Recovery Rate Per Thousand Entitled**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement										10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9		
16	12.354	22.310	16.251	8.656	44.134	82.926	69.565	69.142	53.845	52.301	42.525	26
17	10.216	16.851	12.227	10.643	46.231	72.047	64.797	61.970	53.144	48.379	40.759	27
18	8.086	12.737	9.543	13.210	47.021	59.883	58.175	54.171	51.411	42.232	36.522	28
19	5.509	9.430	8.662	15.449	44.564	49.706	49.563	44.945	43.184	35.178	29.940	29
20	4.531	8.767	8.244	16.299	37.653	41.992	40.117	38.430	33.413	29.107	24.955	30
21	4.077	9.183	7.306	13.555	33.959	39.032	38.240	33.066	28.883	23.632	21.484	31
22	4.727	9.855	7.436	14.210	30.644	36.211	33.583	26.856	23.762	22.413	18.162	32
23	5.872	9.962	6.597	14.378	30.094	31.630	30.223	25.785	21.394	20.496	16.949	33
24	6.280	13.071	6.727	13.975	29.929	29.022	28.643	24.639	20.772	21.536	16.185	34
25	7.022	12.746	8.278	14.390	29.967	27.440	29.696	25.098	21.378	19.300	16.450	35
26	7.184	13.597	8.291	13.759	28.687	26.439	26.784	23.648	22.048	21.577	15.017	36
27	6.800	13.905	8.008	13.897	25.788	24.778	23.474	22.684	19.529	20.929	14.024	37
28	7.738	13.183	7.859	12.085	22.835	24.848	23.946	19.355	20.967	19.050	13.036	38
29	7.662	12.665	7.201	11.972	23.504	24.234	21.709	19.536	18.308	18.169	12.532	39
30	7.489	14.286	7.155	11.266	21.958	22.374	20.879	19.215	17.815	16.749	11.949	40
31	6.830	14.226	6.825	11.136	18.989	20.134	19.931	18.827	19.259	14.865	10.944	41
32	6.506	14.594	6.608	10.661	18.314	20.048	18.773	18.645	17.013	14.410	10.306	42
33	6.364	14.580	7.564	9.815	18.145	19.001	18.230	17.053	15.247	13.913	9.843	43
34	6.074	13.447	6.974	9.666	17.799	18.095	17.555	14.785	13.728	12.263	9.092	44
35	6.694	13.216	6.468	9.210	16.933	16.319	15.958	12.726	11.360	11.190	7.975	45
36	7.516	14.905	6.802	9.108	15.555	15.794	14.741	13.623	11.580	10.447	7.752	46
37	7.880	13.374	6.553	8.173	15.563	14.356	13.907	12.523	11.681	10.105	6.891	47
38	6.981	12.738	5.717	8.155	14.577	12.711	12.627	11.027	9.995	8.619	6.226	48
39	7.009	13.051	5.514	7.413	14.316	12.178	11.812	10.364	9.260	7.707	5.369	49
40	6.285	12.717	5.810	6.800	13.819	11.377	11.371	9.344	8.643	6.264	4.810	50
41	6.203	13.428	5.425	6.741	12.197	10.727	10.507	8.790	7.501	5.722	4.249	51
42	6.925	12.614	5.108	6.237	12.228	10.152	8.248	6.562	6.080	5.312	3.831	52
43	6.883	12.098	4.971	6.122	10.698	8.482	7.725	6.986	6.019	4.568	3.455	53
44	6.482	11.850	4.562	5.227	10.719	7.668	6.876	6.570	4.033	4.090	2.880	54
45	5.624	10.194	4.204	5.436	8.943	6.468	5.653	4.785	4.001	3.886	2.474	55
46	6.161	11.002	3.973	4.339	7.725	6.704	5.569	4.269	3.957	3.313	2.170	56
47	5.555	10.328	3.846	4.010	7.696	5.793	5.098	4.007	3.504	2.826	2.031	57
48	5.464	8.541	3.208	3.577	6.795	5.437	4.595	3.706	2.907	2.772	1.734	58
49	4.440	7.249	2.822	4.143	6.593	5.202	3.567	3.363	2.560	1.843	1.592	59
50	2.431	4.523	1.656	2.625	4.800	3.749	3.142	2.507	2.217	1.740	1.465	60
51	3.077	5.701	1.734	2.507	4.893	3.705	2.743	2.660	2.238	1.652	1.231	61
52	2.766	4.438	1.689	2.065	4.345	3.308	2.595	2.382	1.643	1.742	1.093	62
53	2.757	3.855	1.249	2.043	4.475	2.967	2.563	2.040	1.527	1.145	0.823	63
54	2.008	3.241	1.000	1.801	4.358	2.976	2.427	1.519	1.223	1.027	0.573	64
55	1.299	2.047	0.693	1.390	3.669	2.523	1.770	1.613	1.014	0.836	0.206	65
56	1.223	1.950	0.537	1.637	3.844	2.049	1.712	1.163	0.659	0.449	—	66
57	1.095	1.798	0.520	1.583	3.064	1.760	1.412	0.785	0.307	—	—	67
58	1.044	1.484	0.477	1.157	2.830	1.900	1.074	0.497	—	—	—	68
59	1.054	1.407	0.259	0.795	2.552	1.277	0.741	—	—	—	—	69
60	0.959	0.795	0.082	0.777	2.059	1.030	—	—	—	—	—	70
61	0.522	0.454	0.082	0.651	1.431	—	—	—	—	—	—	71
62	0.368	0.385	0.099	0.148	—	—	—	—	—	—	—	72
63	0.374	0.425	0.005	—	—	—	—	—	—	—	—	73
64	0.312	0.463	—	—	—	—	—	—	—	—	—	74
65	0.220	—	—	—	—	—	—	—	—	—	—	75

- Notes:
1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Recovery is not considered beyond NRA.
  2. The value  $q_{[x]+t}^t$  at duration  $t$  represents the number of recoveries per thousand during the  $(t+1)$  year of entitlement for those originally entitled to disability benefits at entl age  $[x]$  who have attained age  $[x]+t$ . Rates are derived from death probabilities shown in **table 7B** and recovery probabilities shown in **table 14B**. See appendix for details.
  3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement.

**Table 18.—Disabled Workers**  
**Aggregate Probability of Recovery and Expected Future Time on DI Rolls**  
**(excluding possibility of death), by Entitlement Age**  
(2011-15 Social Security DI disability experience)

Entl age	Male		Female	
	Probability of recovery	Future time on DI rolls	Probability of recovery	Future time on DI rolls
16	0.022259	23.70	0.021791	24.58
17	0.026900	24.48	0.027588	25.54
18	0.023290	24.70	0.025905	25.56
19	0.019066	24.60	0.020944	25.58
20	0.016281	24.73	0.017653	25.65
21	0.013735	24.46	0.015305	25.33
22	0.012496	24.11	0.013747	25.01
23	0.011691	23.60	0.012874	24.59
24	0.011463	23.02	0.012982	24.13
25	0.011318	22.29	0.013178	23.66
26	0.011060	21.83	0.013026	23.19
27	0.010773	21.42	0.012375	22.79
28	0.010321	20.99	0.011808	22.37
29	0.009993	20.50	0.011335	21.89
30	0.009708	19.99	0.010966	21.38
31	0.009310	19.55	0.010184	20.81
32	0.008974	18.99	0.009834	20.20
33	0.008596	18.46	0.009432	19.61
34	0.008334	17.95	0.008712	19.01
35	0.007937	17.42	0.008065	18.38
36	0.007785	16.96	0.008050	17.69
37	0.007309	16.45	0.007535	17.06
38	0.006852	15.96	0.006837	16.48
39	0.006620	15.50	0.006539	15.85
40	0.006332	14.96	0.006174	15.27
41	0.006023	14.46	0.005856	14.61
42	0.005665	13.94	0.005365	14.04
43	0.005282	13.48	0.005084	13.45
44	0.004918	13.02	0.004719	12.87
45	0.004845	12.50	0.004190	12.35
46	0.004636	11.99	0.004183	11.81
47	0.004254	11.47	0.003913	11.24
48	0.003838	10.87	0.003640	10.64
49	0.003625	10.27	0.003367	10.07
50	0.002642	10.09	0.002494	9.91
51	0.002775	9.24	0.002683	9.06
52	0.002619	8.60	0.002357	8.46
53	0.002300	7.97	0.002217	7.86
54	0.002027	7.35	0.002034	7.28
55	0.001620	6.89	0.001611	6.84
56	0.001561	6.21	0.001582	6.18
57	0.001465	5.62	0.001410	5.61
58	0.001324	5.03	0.001323	5.03
59	0.001099	4.44	0.001145	4.45
60	0.000878	3.85	0.000901	3.87
61	0.000540	3.29	0.000520	3.31
62	0.000293	2.75	0.000262	2.76
63	0.000238	2.22	0.000312	2.22
64	0.000244	1.66	0.000350	1.66
65	0.000018	1.00	0.000209	1.00

Notes:

1. *Entl age* denotes age last birthday at entitlement to disabled worker benefits.
2. *Probability of recovery* at entl age [x] represents the average probability of termination due to recovery within one year for disability beneficiaries who became entitled at that particular age. Values are based on aggregate counts of exposure and recoveries across all durations, and have been graduated using Whittaker-Henderson method.
3. *Future time on DI rolls* at entl age [x] represents the aggregate expected number of years on the DI rolls for disability beneficiaries who became entitled at that particular age. Values are exposure-weighted averages of expected future times across all durations from **tables 16A** and **16B**. Experience does not reflect continuing entitlement after NRA.

**Table 19.—Disabled Workers**  
**Aggregate Probability of Recovery and Expected Future Time on DI Rolls**  
**(excluding possibility of death), by Attained Age**  
(2011-15 Social Security DI disability experience)

Attained age	Male		Female	
	Probability of recovery	Future time on DI rolls	Probability of recovery	Future time on DI rolls
16	0.007082	25.77	0.012330	27.05
17	0.007251	27.04	0.015463	27.88
18	0.011053	28.20	0.011903	28.71
19	0.006253	29.24	0.007970	29.47
20	0.005652	30.08	0.006499	30.09
21	0.008480	30.48	0.008531	30.33
22	0.013103	30.54	0.012800	30.35
23	0.016755	30.49	0.017159	30.32
24	0.021251	30.40	0.018547	30.23
25	0.024821	30.30	0.021730	30.08
26	0.024078	30.22	0.022075	29.93
27	0.024799	30.09	0.023414	29.77
28	0.023459	29.92	0.022273	29.59
29	0.022406	29.68	0.020784	29.36
30	0.020590	29.38	0.019374	29.06
31	0.019299	29.02	0.018548	28.69
32	0.018961	28.59	0.017017	28.27
33	0.017530	28.12	0.016722	27.80
34	0.017036	27.60	0.016226	27.31
35	0.015834	27.05	0.015367	26.79
36	0.015313	26.46	0.014829	26.22
37	0.014953	25.85	0.014375	25.63
38	0.013893	25.21	0.013520	25.01
39	0.013235	24.54	0.013275	24.36
40	0.012748	23.83	0.012201	23.69
41	0.011609	23.12	0.011539	22.98
42	0.010892	22.36	0.010971	22.25
43	0.010170	21.59	0.010313	21.49
44	0.009379	20.79	0.009760	20.71
45	0.008957	19.97	0.008870	19.91
46	0.008487	19.13	0.008497	19.08
47	0.007661	18.27	0.007732	18.24
48	0.006904	17.40	0.007143	17.37
49	0.005996	16.51	0.006037	16.49
50	0.005120	15.61	0.005060	15.59
51	0.004609	14.68	0.004678	14.67
52	0.004010	13.75	0.004098	13.74
53	0.003680	12.80	0.003683	12.79
54	0.003025	11.84	0.003269	11.84
55	0.002545	10.88	0.002687	10.88
56	0.002305	9.91	0.002363	9.91
57	0.002036	8.93	0.002117	8.93
58	0.001785	7.95	0.001886	7.95
59	0.001709	6.96	0.001815	6.96
60	0.001543	5.98	0.001671	5.98
61	0.001323	4.99	0.001307	4.99
62	0.001106	3.99	0.001132	3.99
63	0.000914	3.00	0.000982	3.00
64	0.000779	2.00	0.000748	2.00
65	0.000410	1.00	0.000401	1.00

Notes:

1. *Attained age* calculated as sum of entitlement age and duration.
2. *Probability of recovery* at attained age *x* represents the average probability of termination due to recovery within one year for disability beneficiaries who have attained that particular age. Values are based on aggregate counts of exposure and recoveries across all durations, and have been graduated using Whittaker-Henderson method.
3. *Future time on DI rolls* at attained age *x* represents the aggregate expected number of years on the DI rolls for disability beneficiaries who have attained that particular age. Values are exposure-weighted averages of expected future times across all durations from **tables 16A** and **16B**. Experience does not reflect continuing entitlement after NRA.

**Table 20.—Disabled Workers**  
**Aggregate Probability of Recovery and Expected Future Time on DI Rolls**  
**(excluding possibility of death), by Duration**  
(2011-15 Social Security DI disability experience)

Duration	Male		Female	
	Probability of recovery	Future time on DI rolls	Probability of recovery	Future time on DI rolls
0	0.003235	13.60	0.003060	14.22
1	0.005897	13.29	0.005777	13.87
2	0.002734	13.11	0.002618	13.64
3	0.004312	12.89	0.004175	13.37
4	0.009314	12.75	0.008783	13.13
5	0.008969	12.77	0.008176	13.01
6	0.008265	12.76	0.007844	12.84
7	0.007452	12.63	0.007094	12.63
8	0.006798	12.55	0.006570	12.49
9	0.006264	12.58	0.006206	12.41
10	0.005984	12.73	0.005848	12.39
11	0.005602	12.83	0.005653	12.31
12	0.004921	12.74	0.005212	12.09
13	0.004693	12.61	0.004748	11.82
14	0.004265	12.40	0.004271	11.54
15	0.003903	12.23	0.003845	11.30
16	0.003421	12.07	0.003513	11.11
17	0.003310	11.82	0.003269	10.88
18	0.003082	11.60	0.002955	10.71
19	0.002780	11.44	0.002828	10.59
20	0.002550	11.31	0.002639	10.50
21	0.002203	11.15	0.002427	10.40
22	0.002098	10.95	0.002244	10.26
23	0.001794	10.73	0.001862	10.08
24	0.001589	10.47	0.001815	9.86
25	0.001409	10.17	0.001477	9.59
26	0.001107	9.87	0.001227	9.33
27	0.001149	9.56	0.001149	9.07
28	0.000987	9.28	0.001058	8.83
29	0.001161	8.99	0.001033	8.63
30	0.000700	8.71	0.000727	8.42
31	0.000559	8.42	0.000480	8.17
32	0.000600	8.08	0.000738	7.86
33	0.000492	7.65	0.000687	7.47
34	0.000298	7.16	0.000365	6.96
35	0.000431	6.64	0.000263	6.44
36	0.000269	6.14	0.000254	5.95
37	0.000146	5.63	0.000385	5.47
38	0.000361	5.09	0.000023	4.93
39	0.000136	4.55	0.000181	4.41
40	0.000117	4.02	0.000246	3.87

Notes:

1. *Duration* measured in years since entitlement to disabled worker benefits.
2. *Probability of recovery* at duration  $t$  represents the average probability of termination due to recovery during the  $(t+1)$  year of entitlement to benefits. Values are based on aggregate counts of exposure and recoveries across all entitlement ages. Results have been graduated using Whittaker-Henderson method.
3. *Future time on DI rolls* at duration  $t$  represents the aggregate expected number of years on the DI rolls for disability beneficiaries who have not recovered after  $t$  years. Values are exposure-weighted averages of expected future times across all ages from **tables 16A** and **16B**. Experience does not reflect continuing entitlement after NRA.



**Disabled Worker Combined Death and Recovery Experience  
by Entitlement Age and Duration  
(2011-15)**





**Table 21A.—Male Disabled Workers  
Probability of Death or Recovery Termination  
(2011-15 Social Security DI disability experience)**

Entl age	Completed duration of disability entitlement										10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9		
16	0.014257	0.014251	0.022148	0.021464	0.062665	0.093465	0.081751	0.083024	0.082385	0.064861	0.057469	26
17	0.014675	0.014364	0.015936	0.021153	0.062664	0.087426	0.076377	0.074692	0.074315	0.055177	0.050706	27
18	0.015833	0.014451	0.011504	0.021175	0.061876	0.079263	0.069803	0.065153	0.061517	0.047755	0.042613	28
19	0.016415	0.015196	0.011057	0.020387	0.055109	0.068781	0.059001	0.053158	0.048417	0.043511	0.035082	29
20	0.015663	0.016824	0.012264	0.019972	0.047210	0.058545	0.049702	0.044975	0.038614	0.035298	0.030431	30
21	0.015821	0.017071	0.014634	0.019054	0.041264	0.049223	0.043630	0.038029	0.035010	0.029324	0.026206	31
22	0.017990	0.017821	0.014950	0.020413	0.037936	0.045127	0.039134	0.036433	0.031979	0.026335	0.023531	32
23	0.019671	0.022208	0.015877	0.019819	0.037342	0.040877	0.037875	0.036380	0.031141	0.026457	0.022257	33
24	0.020913	0.024147	0.016154	0.021535	0.037681	0.039132	0.037382	0.034792	0.029895	0.029476	0.021591	34
25	0.025971	0.026216	0.018274	0.022820	0.039268	0.039233	0.036048	0.034345	0.031440	0.030735	0.020198	35
26	0.027909	0.028063	0.019091	0.021995	0.038378	0.040978	0.038052	0.034397	0.030397	0.030257	0.020550	36
27	0.028609	0.029236	0.020041	0.023478	0.038768	0.039376	0.035942	0.032538	0.028040	0.027216	0.021176	37
28	0.030553	0.030093	0.020991	0.023501	0.036446	0.036706	0.037030	0.031553	0.029685	0.026999	0.021152	38
29	0.031357	0.030314	0.019988	0.024989	0.035077	0.038057	0.034425	0.032938	0.030144	0.028947	0.020111	39
30	0.032438	0.032447	0.021223	0.025427	0.034571	0.034940	0.034123	0.033252	0.029485	0.030742	0.020929	40
31	0.031309	0.034221	0.021223	0.023639	0.034250	0.032925	0.031735	0.030499	0.029264	0.028080	0.020415	41
32	0.032818	0.034533	0.022313	0.022341	0.034874	0.033461	0.031888	0.030964	0.029237	0.026755	0.020653	42
33	0.036287	0.036735	0.023323	0.024307	0.034118	0.033775	0.032502	0.030012	0.028474	0.025268	0.020092	43
34	0.037956	0.036788	0.023302	0.024326	0.033417	0.031187	0.030138	0.028061	0.027361	0.026255	0.020348	44
35	0.039869	0.036768	0.024339	0.023171	0.033576	0.032157	0.030932	0.027376	0.026683	0.027281	0.021330	45
36	0.040061	0.038575	0.023587	0.025979	0.032334	0.031115	0.029658	0.027591	0.026626	0.026043	0.021693	46
37	0.039505	0.038764	0.025207	0.025427	0.030212	0.030655	0.029970	0.027728	0.027080	0.025595	0.022040	47
38	0.040599	0.038953	0.026225	0.025590	0.030553	0.029498	0.028429	0.027208	0.027985	0.026284	0.022278	48
39	0.045417	0.040974	0.025646	0.025583	0.029640	0.031103	0.027925	0.027587	0.027583	0.026127	0.022597	49
40	0.044523	0.040854	0.024945	0.026321	0.029965	0.028984	0.028669	0.028579	0.026095	0.027068	0.024078	50
41	0.047052	0.040234	0.026075	0.025646	0.030233	0.031527	0.030563	0.027602	0.027076	0.027422	0.024279	51
42	0.050433	0.042996	0.028382	0.027861	0.029919	0.030986	0.028858	0.027916	0.027703	0.027151	0.025180	52
43	0.051102	0.042323	0.028519	0.027831	0.031020	0.029745	0.028763	0.029509	0.028371	0.029377	0.026485	53
44	0.050094	0.044438	0.029911	0.027754	0.032330	0.029184	0.029846	0.027301	0.028033	0.029850	0.026881	54
45	0.054614	0.045704	0.030963	0.028604	0.032129	0.029520	0.029429	0.029481	0.029907	0.029304	0.027941	55
46	0.058206	0.047692	0.030850	0.030552	0.032377	0.031151	0.031119	0.031018	0.031511	0.032196	0.030086	56
47	0.063462	0.046510	0.032162	0.030869	0.033828	0.032518	0.030996	0.031045	0.031918	0.033262	0.031055	57
48	0.067095	0.049672	0.034025	0.033335	0.034577	0.033223	0.033951	0.031602	0.033822	0.034412	0.032718	58
49	0.066957	0.048744	0.034270	0.033134	0.034682	0.033094	0.034441	0.034200	0.034926	0.035802	0.034308	59
50	0.045501	0.035969	0.028178	0.028412	0.030868	0.031138	0.031049	0.032619	0.032766	0.035039	0.036272	60
51	0.058315	0.042406	0.031881	0.030579	0.034755	0.034032	0.032879	0.033973	0.036439	0.035911	0.037196	61
52	0.061409	0.044431	0.033473	0.031441	0.035786	0.034973	0.034951	0.036110	0.037404	0.038523	0.038383	62
53	0.067248	0.045416	0.034736	0.033999	0.037557	0.035970	0.037640	0.036842	0.038470	0.038846	0.040298	63
54	0.066370	0.045482	0.035197	0.035237	0.037225	0.038167	0.037333	0.038630	0.039059	0.039128	0.041258	64
55	0.048408	0.035656	0.030615	0.031434	0.033696	0.034610	0.035191	0.036937	0.036298	0.037926	0.038351	65
56	0.058539	0.041611	0.033832	0.034445	0.036230	0.038260	0.036749	0.038869	0.038348	0.035746	0.045059	66
57	0.060546	0.043057	0.034316	0.034770	0.037395	0.038909	0.038421	0.038187	0.034903	0.042421	0.047487	67
58	0.062695	0.043273	0.036194	0.035787	0.038034	0.038250	0.039352	0.034975	0.040418	0.045527	0.049702	68
59	0.063498	0.043454	0.036323	0.036347	0.037816	0.038569	0.035386	0.040803	0.043175	0.047763	0.053008	69
60	0.062406	0.043947	0.036204	0.035855	0.037331	0.034990	0.040359	0.042692	0.046129	0.048749	0.055901	70
61	0.070997	0.047857	0.039051	0.037595	0.035850	0.039888	0.042919	0.045085	0.049417	0.051915	0.059338	71
62	0.073611	0.049767	0.040635	0.038596	0.040118	0.043727	0.045933	0.048901	0.053295	0.055304	0.062607	72
63	0.086551	0.058346	0.045567	0.044064	0.045420	0.047896	0.053293	0.052163	0.057833	0.058613	0.067118	73
64	0.103002	0.062307	0.051048	0.049513	0.050920	0.052707	0.057641	0.057725	0.060401	0.066597	0.071461	74
65	0.111494	0.065839	0.055680	0.050139	0.051346	0.056072	0.056916	0.059350	0.063215	0.073825	0.075068	75

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. The value  $q_{[x]+t}$  at duration  $t$  represents the probability of death or recovery from disability during the  $(t+1)$  year of entitlement for those originally entitled to benefits at entl age  $[x]$  who have attained age  $[x]+t$ . Values are derived from death probabilities (table 7A) and recovery probabilities (table 14A).
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See table 7C for death probabilities beyond attained age 75.

**Table 21B.—Female Disabled Workers  
Probability of Death or Recovery Termination  
(2011-15 Social Security DI disability experience)**

Entl age	Completed duration of disability entitlement										10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9		
16	0.016234	0.034574	0.026088	0.016759	0.047522	0.089105	0.074737	0.072837	0.058659	0.055935	0.048297	26
17	0.015505	0.027500	0.020814	0.018845	0.050005	0.078452	0.069894	0.066054	0.057815	0.053209	0.046435	27
18	0.014849	0.021328	0.016799	0.021121	0.051289	0.066140	0.062999	0.058561	0.056581	0.048156	0.041729	28
19	0.014131	0.016597	0.014975	0.022783	0.048910	0.055362	0.054953	0.049331	0.049554	0.041982	0.034700	29
20	0.015185	0.015322	0.014320	0.021658	0.042811	0.046158	0.045627	0.043294	0.039063	0.035279	0.030490	30
21	0.015570	0.017014	0.013741	0.019612	0.039725	0.043504	0.044436	0.038213	0.034456	0.029756	0.026911	31
22	0.017121	0.019526	0.014685	0.020842	0.035524	0.041267	0.040038	0.031671	0.029391	0.028325	0.024283	32
23	0.019005	0.020745	0.014481	0.021347	0.035035	0.036890	0.037038	0.030725	0.028912	0.026309	0.023064	33
24	0.020134	0.024292	0.014619	0.020561	0.035875	0.035055	0.035567	0.031395	0.027512	0.027600	0.022900	34
25	0.024194	0.023686	0.016238	0.022660	0.036836	0.034648	0.036323	0.032782	0.029405	0.025468	0.023831	35
26	0.024805	0.027020	0.018096	0.022489	0.035724	0.034225	0.034681	0.031637	0.030587	0.028681	0.021543	36
27	0.026163	0.028725	0.019272	0.022141	0.033599	0.033335	0.030847	0.031077	0.028210	0.028459	0.021523	37
28	0.028307	0.028814	0.018523	0.021162	0.031358	0.032966	0.032782	0.028940	0.030237	0.027369	0.021442	38
29	0.027978	0.027753	0.018310	0.021863	0.033336	0.033334	0.029562	0.028819	0.027094	0.026610	0.020987	39
30	0.028231	0.029098	0.019052	0.021870	0.031455	0.031266	0.028879	0.027778	0.026533	0.025243	0.020918	40
31	0.029415	0.029845	0.018235	0.021438	0.029256	0.029204	0.029235	0.028574	0.028293	0.023977	0.020543	41
32	0.030051	0.032220	0.019050	0.020023	0.028748	0.029142	0.027665	0.028652	0.027010	0.023141	0.020106	42
33	0.029445	0.032641	0.019823	0.020786	0.028098	0.028280	0.027096	0.027436	0.024477	0.024031	0.019491	43
34	0.030663	0.031051	0.019184	0.020915	0.027944	0.027924	0.028161	0.025968	0.023179	0.022748	0.019521	44
35	0.033664	0.032012	0.020025	0.020728	0.027493	0.027292	0.026845	0.023776	0.022243	0.022482	0.019334	45
36	0.034454	0.035236	0.020899	0.020734	0.026145	0.026713	0.025770	0.026054	0.022273	0.021975	0.019901	46
37	0.035953	0.034013	0.020007	0.021817	0.027177	0.026169	0.024651	0.024034	0.022883	0.021870	0.019558	47
38	0.035512	0.033700	0.021451	0.021198	0.026731	0.023417	0.024556	0.022810	0.021621	0.021250	0.019593	48
39	0.036140	0.033478	0.022787	0.020534	0.026658	0.023723	0.025214	0.023300	0.022944	0.020437	0.019205	49
40	0.036480	0.035685	0.023050	0.021460	0.027006	0.024064	0.024687	0.022031	0.021453	0.020372	0.019047	50
41	0.038483	0.036093	0.022811	0.021549	0.025848	0.023995	0.024399	0.022608	0.021365	0.020118	0.019803	51
42	0.040810	0.036429	0.022316	0.021454	0.026120	0.023875	0.021727	0.019919	0.021304	0.020415	0.019433	52
43	0.041388	0.037402	0.022038	0.021769	0.025124	0.022838	0.021784	0.021900	0.021443	0.019804	0.020288	53
44	0.044856	0.037826	0.024350	0.022422	0.025917	0.023109	0.022554	0.023097	0.020484	0.021127	0.021165	54
45	0.043329	0.035878	0.023127	0.021878	0.025030	0.023045	0.022540	0.021616	0.019936	0.020095	0.020526	55
46	0.045658	0.038016	0.024279	0.021703	0.024839	0.023780	0.022757	0.021895	0.020724	0.020872	0.021658	56
47	0.046886	0.038848	0.025134	0.023543	0.026458	0.022399	0.021973	0.022143	0.021756	0.022249	0.022649	57
48	0.050577	0.040545	0.026288	0.023699	0.025269	0.022950	0.022590	0.023055	0.022221	0.023037	0.022778	58
49	0.051560	0.039427	0.026649	0.024839	0.024910	0.023746	0.022227	0.023618	0.022134	0.021722	0.023680	59
50	0.033724	0.026580	0.020659	0.020317	0.021729	0.021748	0.020991	0.021290	0.021312	0.021562	0.024498	60
51	0.045401	0.033569	0.023798	0.021702	0.023326	0.022185	0.023830	0.022417	0.023652	0.024740	0.025274	61
52	0.046146	0.034375	0.023198	0.022960	0.023903	0.022852	0.022859	0.022563	0.022821	0.025374	0.026519	62
53	0.048504	0.034740	0.025428	0.023594	0.025425	0.024862	0.024916	0.024186	0.024730	0.025370	0.027767	63
54	0.048500	0.035332	0.026784	0.023869	0.026709	0.025373	0.025465	0.025777	0.025844	0.026516	0.028829	64
55	0.035349	0.027061	0.021943	0.021346	0.024355	0.023072	0.023884	0.024703	0.025329	0.026059	0.025887	65
56	0.044578	0.030733	0.024680	0.023293	0.025884	0.024708	0.025755	0.026038	0.025329	0.025895	0.030752	66
57	0.045694	0.033357	0.025927	0.025052	0.026880	0.025632	0.026834	0.026332	0.025478	0.028576	0.033119	67
58	0.046189	0.033170	0.026326	0.025612	0.028223	0.027675	0.028284	0.026098	0.028621	0.031484	0.034762	68
59	0.047736	0.034481	0.027602	0.027108	0.029140	0.027166	0.025319	0.029290	0.032241	0.033679	0.037479	69
60	0.049477	0.035678	0.029180	0.027730	0.029309	0.025593	0.030388	0.029313	0.032648	0.034662	0.039671	70
61	0.058529	0.040593	0.032984	0.030348	0.028294	0.031439	0.032721	0.033417	0.035367	0.036805	0.042047	71
62	0.060914	0.044555	0.035905	0.031369	0.031906	0.033607	0.034874	0.036768	0.038034	0.040633	0.044776	72
63	0.073925	0.050448	0.040572	0.037834	0.038492	0.036660	0.039457	0.041140	0.043779	0.045797	0.047372	73
64	0.088716	0.054323	0.044822	0.041258	0.040225	0.041586	0.042668	0.045962	0.051512	0.052505	0.051127	74
65	0.098854	0.062360	0.048541	0.043026	0.042607	0.039181	0.040938	0.046000	0.061663	0.059327	0.055270	75

Notes:  
1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.  
2. The value  $q_{[x]+t}$  at duration  $t$  represents the probability of death or recovery from disability during the  $(t+1)$  year of entitlement for those originally entitled to benefits at entl age  $[x]$  who have attained age  $[x]+t$ . Values are derived from death probabilities (**table 7B**) and recovery probabilities (**table 14B**).  
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 7C** for death probabilities beyond attained age 75.

**Table 22A.—Male Disabled Workers  
Benefit Continuance Table  
(2011-15 Social Security DI disability experience)**

Entl age	Completed duration of disability entitlement											10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9			
16	100,000	98,574	97,169	95,017	92,978	87,152	79,006	72,547	66,524	61,043	57,084	26	
17	89,953	88,633	87,360	85,968	84,150	78,877	71,981	66,483	61,517	56,945	53,803	27	
18	81,076	79,792	78,639	77,734	76,088	71,380	65,722	61,134	57,151	53,635	51,075	28	
19	73,027	71,828	70,737	69,955	68,529	64,752	60,298	56,740	53,724	51,123	48,899	29	
20	66,708	65,663	64,558	63,766	62,492	59,542	56,056	53,270	50,874	48,910	47,184	30	
21	62,283	61,298	60,252	59,370	58,239	55,836	53,088	50,772	48,841	47,131	45,748	31	
22	59,709	58,635	57,590	56,729	55,571	53,463	51,050	49,052	47,265	45,754	44,549	32	
23	58,267	57,121	55,852	54,965	53,876	51,864	49,744	47,860	46,119	44,683	43,501	33	
24	57,170	55,974	54,622	53,740	52,583	50,602	48,622	46,804	45,176	43,825	42,533	34	
25	56,700	55,227	53,779	52,796	51,591	49,565	47,620	45,903	44,326	42,932	41,615	35	
26	55,851	54,292	52,768	51,761	50,623	48,680	46,685	44,909	43,364	42,046	40,774	36	
27	54,348	52,793	51,250	50,223	49,044	47,143	45,287	43,659	42,238	41,054	39,936	37	
28	53,211	51,585	50,033	48,983	47,832	46,089	44,397	42,753	41,404	40,175	39,090	38	
29	52,229	50,591	49,057	48,076	46,875	45,231	43,510	42,012	40,628	39,403	38,263	39	
30	51,304	49,640	48,029	47,010	45,815	44,231	42,686	41,229	39,858	38,683	37,493	40	
31	49,637	48,083	46,438	45,452	44,378	42,858	41,447	40,132	38,908	37,769	36,708	41	
32	48,727	47,128	45,501	44,486	43,492	41,975	40,570	39,276	38,060	36,947	35,959	42	
33	47,998	46,256	44,557	43,518	42,460	41,011	39,626	38,338	37,187	36,128	35,216	43	
34	46,743	44,969	43,315	42,306	41,277	39,898	38,654	37,489	36,437	35,440	34,508	44	
35	45,952	44,120	42,498	41,464	40,503	39,143	37,884	36,712	35,707	34,754	33,806	45	
36	44,945	43,144	41,480	40,502	39,450	38,174	36,986	35,889	34,899	33,970	33,085	46	
37	43,904	42,170	40,535	39,513	38,508	37,345	36,200	35,115	34,141	33,216	32,367	47	
38	42,990	41,245	39,638	38,598	37,610	36,461	35,385	34,379	33,444	32,508	31,654	48	
39	42,308	40,386	38,731	37,738	36,773	35,683	34,573	33,608	32,681	31,780	30,949	49	
40	41,285	39,447	37,835	36,891	35,920	34,844	33,834	32,864	31,925	31,092	30,250	50	
41	40,602	38,692	37,135	36,167	35,239	34,174	33,097	32,085	31,199	30,354	29,522	51	
42	39,979	37,963	36,331	35,300	34,317	33,290	32,258	31,327	30,452	29,608	28,805	52	
43	39,148	37,147	35,575	34,560	33,598	32,556	31,588	30,679	29,774	28,929	28,080	53	
44	38,197	36,284	34,672	33,635	32,701	31,644	30,721	29,804	28,990	28,177	27,336	54	
45	37,596	35,543	33,919	32,869	31,929	30,903	29,991	29,108	28,250	27,405	26,601	55	
46	37,198	35,033	33,362	32,333	31,345	30,330	29,385	28,471	27,588	26,719	25,858	56	
47	36,455	34,141	32,553	31,506	30,533	29,500	28,541	27,656	26,797	25,942	25,080	57	
48	36,035	33,617	31,947	30,860	29,831	28,800	27,843	26,898	26,048	25,167	24,301	58	
49	35,020	32,675	31,082	30,017	29,022	28,015	27,088	26,155	25,260	24,378	23,506	59	
50	31,806	30,359	29,267	28,442	27,634	26,781	25,947	25,141	24,321	23,524	22,700	60	
51	31,944	30,081	28,805	27,887	27,034	26,094	25,206	24,377	23,549	22,691	21,877	61	
52	31,316	29,393	28,087	27,147	26,293	25,352	24,465	23,610	22,757	21,906	21,063	62	
53	30,695	28,631	27,331	26,382	25,485	24,528	23,646	22,756	21,918	21,075	20,255	63	
54	29,614	27,649	26,391	25,462	24,565	23,651	22,748	21,899	21,053	20,231	19,439	64	
55	26,916	25,613	24,700	23,944	23,191	22,410	21,634	20,873	20,102	19,372	18,637	65	
56	26,758	25,192	24,144	23,327	22,524	21,708	20,877	20,110	19,328	18,587	17,922	66	
57	25,828	24,264	23,219	22,422	21,642	20,833	20,022	19,253	18,518	17,872	17,114	67	
58	24,901	23,340	22,330	21,522	20,752	19,963	19,199	18,443	17,798	17,079	16,301	68	
59	23,878	22,362	21,390	20,613	19,864	19,113	18,376	17,726	17,003	16,269	15,491	69	
60	22,743	21,324	20,387	19,649	18,944	18,237	17,599	16,889	16,168	15,422	14,670	70	
61	22,205	20,629	19,642	18,875	18,165	17,514	16,815	16,093	15,367	14,608	13,850	71	
62	21,540	19,954	18,961	18,191	17,489	16,787	16,053	15,316	14,567	13,791	13,028	72	
63	21,513	19,651	18,504	17,661	16,883	16,116	15,344	14,526	13,768	12,972	12,212	73	
64	21,447	19,238	18,039	17,118	16,270	15,442	14,628	13,785	12,989	12,204	11,392	74	
65	20,615	18,317	17,111	16,158	15,348	14,560	13,744	12,962	12,193	11,422	10,578	75	

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. The value  $l_{[x]}$  at duration 0 represents an assumed number of lives originally entitled to disability benefits at entl age  $[x]$ ; the value  $l_{[x]+t}$  at duration  $t > 0$  represents the number of lives from the original  $l_{[x]}$  who have not died or recovered and remain on the rolls as of attained age  $[x]+t$ . Lives are decremented using probabilities from **table 21A**.
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 22C** for attained ages beyond age 75.

**Table 22B.—Female Disabled Workers  
Benefit Continuation Table**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement										10 or more	Attained age
	0	1	2	3	4	5	6	7	8	9		
16	100,000	98,377	94,976	92,498	90,948	86,626	78,907	73,010	67,692	63,721	60,157	26
17	91,749	90,326	87,842	86,014	84,393	80,173	73,883	68,719	64,180	60,469	57,252	27
18	83,833	82,588	80,827	79,469	77,791	73,801	68,920	64,578	60,796	57,356	54,594	28
19	76,274	75,196	73,948	72,841	71,181	67,700	63,952	60,438	57,457	54,610	52,316	29
20	69,881	68,820	67,766	66,796	65,349	62,551	59,664	56,942	54,477	52,349	50,501	30
21	66,170	65,140	64,032	63,152	61,913	59,454	56,868	54,341	52,264	50,463	48,961	31
22	63,213	62,131	60,918	60,023	58,772	56,684	54,345	52,169	50,517	49,032	47,643	32
23	61,171	60,008	58,763	57,912	56,676	54,690	52,672	50,721	49,163	47,742	46,486	33
24	59,888	58,682	57,256	56,419	55,259	53,277	51,409	49,581	48,024	46,703	45,414	34
25	59,097	57,667	56,301	55,387	54,132	52,138	50,332	48,504	46,914	45,534	44,374	35
26	58,025	56,586	55,057	54,061	52,845	50,957	49,213	47,506	46,003	44,596	43,317	36
27	56,416	54,940	53,362	52,334	51,175	49,456	47,807	46,332	44,892	43,626	42,384	37
28	55,124	53,564	52,021	51,057	49,977	48,410	46,814	45,279	43,969	42,640	41,472	38
29	53,622	52,122	50,675	49,747	48,659	47,037	45,469	44,125	42,853	41,692	40,583	39
30	52,212	50,738	49,262	48,323	47,266	45,779	44,348	43,067	41,871	40,760	39,731	40
31	51,018	49,517	48,039	47,163	46,152	44,802	43,494	42,222	41,016	39,856	38,900	41
32	49,880	48,381	46,822	45,930	45,010	43,716	42,442	41,268	40,086	39,003	38,101	42
33	48,697	47,263	45,720	44,814	43,882	42,649	41,443	40,320	39,214	38,254	37,335	43
34	47,534	46,076	44,645	43,789	42,873	41,675	40,511	39,370	38,348	37,459	36,607	44
35	46,550	44,983	43,543	42,671	41,787	40,638	39,529	38,468	37,553	36,718	35,892	45
36	45,824	44,245	42,686	41,794	40,927	39,857	38,792	37,792	36,807	35,987	35,198	46
37	44,836	43,224	41,754	40,919	40,026	38,938	37,919	36,984	36,095	35,269	34,498	47
38	43,674	42,123	40,703	39,830	38,986	37,944	37,055	36,145	35,321	34,557	33,823	48
39	42,949	41,397	40,011	39,099	38,296	37,275	36,391	35,473	34,646	33,851	33,160	49
40	42,171	40,633	39,183	38,280	37,459	36,447	35,570	34,692	33,928	33,200	32,523	50
41	41,412	39,818	38,381	37,505	36,697	35,748	34,890	34,039	33,269	32,558	31,904	51
42	40,473	38,821	37,407	36,572	35,787	34,852	34,020	33,281	32,618	31,923	31,272	52
43	39,732	38,088	36,663	35,855	35,074	34,193	33,412	32,684	31,968	31,283	30,664	53
44	39,340	37,575	36,154	35,274	34,483	33,589	32,813	32,073	31,332	30,690	30,042	54
45	38,141	36,488	35,179	34,365	33,613	32,772	32,017	31,295	30,619	30,009	29,406	55
46	37,670	35,950	34,583	33,743	33,011	32,191	31,425	30,710	30,038	29,415	28,802	56
47	37,116	35,376	34,002	33,147	32,367	31,511	30,805	30,128	29,461	28,820	28,178	57
48	36,610	34,758	33,349	32,472	31,702	30,901	30,192	29,510	28,830	28,189	27,540	58
49	35,799	33,953	32,614	31,745	30,956	30,185	29,468	28,813	28,132	27,509	26,913	59
50	33,160	32,042	31,190	30,546	29,925	29,275	28,638	28,037	27,440	26,855	26,276	60
51	33,525	32,003	30,929	30,193	29,538	28,849	28,209	27,537	26,920	26,283	25,632	61
52	32,760	31,248	30,174	29,474	28,797	28,109	27,467	26,839	26,233	25,634	24,984	62
53	32,377	30,807	29,737	28,981	28,297	27,578	26,892	26,222	25,588	24,955	24,321	63
54	31,751	30,211	29,144	28,363	27,686	26,947	26,263	25,594	24,934	24,290	23,646	64
55	29,677	28,628	27,853	27,242	26,660	26,011	25,411	24,804	24,191	23,578	22,964	65
56	29,628	28,307	27,437	26,760	26,137	25,460	24,831	24,191	23,561	22,964	22,370	66
57	29,099	27,769	26,843	26,147	25,492	24,807	24,171	23,522	22,903	22,319	21,682	67
58	28,483	27,167	26,266	25,575	24,920	24,217	23,547	22,881	22,284	21,646	20,964	68
59	27,838	26,509	25,595	24,889	24,214	23,508	22,869	22,290	21,637	20,939	20,235	69
60	27,080	25,740	24,822	24,098	23,430	22,743	22,161	21,488	20,858	20,177	19,477	70
61	27,011	25,430	24,398	23,593	22,877	22,230	21,531	20,826	20,130	19,418	18,704	71
62	26,642	25,019	23,904	23,046	22,323	21,611	20,885	20,157	19,416	18,678	17,918	72
63	27,088	25,086	23,820	22,854	21,989	21,143	20,368	19,564	18,759	17,938	17,116	73
64	27,364	24,936	23,581	22,524	21,595	20,726	19,864	19,016	18,142	17,207	16,305	74
65	27,069	24,393	22,872	21,762	20,826	19,939	19,158	18,374	17,529	16,448	15,471	75

Notes:  
1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.  
2. The value  $l_{[x]}$  at duration 0 represents an assumed number of lives originally entitled to disability benefits at entl age  $[x]$ ; the value  $l_{[x]+t}$  at duration  $t > 0$  represents the number of lives from the original  $l_{[x]}$  who have not died or recovered and remain on the rolls as of attained age  $[x]+t$ . Lives are decremented using probabilities from **table 21B**.  
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 22C** for attained ages beyond age 75.

**Table 22C.—Disabled Workers Age 76 and Older**  
**Benefit Continuance Table**  
(2011-15 Social Security DI disability experience)

Attained age	Male	Female
76	9,784	14,616
77	8,997	13,748
78	8,227	12,875
79	7,474	11,991
80	6,739	11,093
81	6,033	10,200
82	5,351	9,298
83	4,698	8,419
84	4,079	7,547
85	3,506	6,707
86	2,973	5,888
87	2,480	5,118
88	2,041	4,388
89	1,656	3,703
90	1,314	3,086
91	1,021	2,524
92	781	2,027
93	586	1,610
94	429	1,247
95	310	947
96	222	700
97	156	503
98	107	356
99	72	246
100	47	166
101	30	109
102	19	70
103	11	44
104	6	27
105	3	16
106	2	9
107	1	5
108	0	3
109	0	1
110	0	0

Notes:

1. The value at attained age  $x$  represents the number of lives remaining from those originally entitled to disability benefits who have attained that particular age. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. Lives are decremented using probabilities from **table 7C**. Values are an extension of the ultimate column of **tables 22A** and **22B**.

**Table 23A.—Male Disabled Workers**  
**Expected Future Time on Combined DI and OASI Rolls**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											Attained age
	0	1	2	3	4	5	6	7	8	9	10 or more	
16	23.91	23.25	22.58	22.08	21.55	21.96	23.17	24.19	25.33	26.56	27.37	26
17	25.13	24.50	23.85	23.23	22.72	23.20	24.38	25.35	26.36	27.43	28.01	27
18	26.42	25.83	25.21	24.49	24.01	24.56	25.63	26.52	27.33	28.09	28.48	28
19	27.84	27.30	26.71	26.00	25.53	25.99	26.88	27.53	28.05	28.45	28.72	29
20	29.06	28.51	27.99	27.33	26.88	27.19	27.85	28.28	28.59	28.71	28.75	30
21	29.84	29.32	28.82	28.24	27.77	27.95	28.37	28.64	28.75	28.78	28.63	31
22	30.01	29.55	29.08	28.51	28.10	28.19	28.49	28.63	28.70	28.63	28.39	32
23	29.75	29.34	29.00	28.46	28.02	28.09	28.26	28.36	28.41	28.31	28.06	33
24	29.38	28.99	28.70	28.16	27.77	27.84	27.95	28.02	28.01	27.86	27.69	34
25	28.72	28.47	28.23	27.74	27.38	27.48	27.58	27.59	27.56	27.44	27.29	35
26	28.25	28.05	27.84	27.38	26.98	27.04	27.17	27.23	27.18	27.01	26.84	36
27	28.04	27.85	27.67	27.23	26.87	26.94	27.02	27.01	26.90	26.66	26.39	37
28	27.70	27.56	27.40	26.97	26.61	26.60	26.59	26.60	26.45	26.24	25.95	38
29	27.31	27.18	27.02	26.56	26.22	26.16	26.17	26.09	25.96	25.75	25.51	39
30	26.89	26.78	26.66	26.22	25.89	25.80	25.72	25.61	25.47	25.23	25.02	40
31	26.79	26.64	26.56	26.13	25.75	25.64	25.50	25.32	25.10	24.84	24.54	41
32	26.36	26.24	26.16	25.74	25.32	25.22	25.07	24.88	24.66	24.39	24.04	42
33	25.83	25.78	25.75	25.35	24.97	24.83	24.68	24.50	24.24	23.93	23.54	43
34	25.56	25.54	25.50	25.10	24.71	24.55	24.32	24.06	23.74	23.39	23.01	44
35	25.08	25.10	25.04	24.66	24.23	24.05	23.84	23.58	23.23	22.85	22.48	45
36	24.70	24.71	24.68	24.26	23.90	23.68	23.42	23.12	22.77	22.37	21.96	46
37	24.34	24.32	24.28	23.90	23.51	23.22	22.94	22.64	22.27	21.88	21.44	47
38	23.92	23.91	23.86	23.49	23.10	22.81	22.49	22.13	21.73	21.34	20.91	48
39	23.38	23.47	23.45	23.05	22.64	22.32	22.02	21.64	21.24	20.83	20.37	49
40	23.02	23.07	23.03	22.61	22.20	21.87	21.51	21.13	20.74	20.28	19.83	50
41	22.49	22.58	22.50	22.09	21.66	21.32	21.00	20.64	20.22	19.77	19.31	51
42	21.91	22.05	22.02	21.65	21.25	20.89	20.55	20.14	19.71	19.25	18.78	52
43	21.47	21.60	21.53	21.15	20.74	20.39	20.00	19.57	19.15	18.70	18.25	53
44	21.05	21.13	21.09	20.73	20.31	19.97	19.55	19.14	18.66	18.19	17.73	54
45	20.47	20.63	20.59	20.23	19.81	19.46	19.03	18.59	18.14	17.69	17.21	55
46	19.83	20.02	20.00	19.62	19.22	18.85	18.44	18.02	17.58	17.13	16.69	56
47	19.31	19.59	19.52	19.15	18.74	18.38	17.98	17.54	17.09	16.63	16.19	57
48	18.66	18.97	18.93	18.58	18.21	17.84	17.44	17.03	16.57	16.14	15.69	58
49	18.29	18.56	18.49	18.13	17.73	17.35	16.93	16.51	16.08	15.64	15.21	59
50	18.96	18.84	18.52	18.05	17.56	17.10	16.64	16.15	15.68	15.19	14.73	60
51	17.99	18.07	17.85	17.42	16.96	16.55	16.12	15.65	15.18	14.73	14.26	61
52	17.43	17.54	17.33	16.91	16.44	16.04	15.60	15.15	14.69	14.25	13.80	62
53	16.85	17.03	16.81	16.40	15.96	15.56	15.12	14.70	14.24	13.79	13.33	63
54	16.49	16.62	16.39	15.97	15.54	15.12	14.70	14.25	13.80	13.34	12.86	64
55	16.93	16.76	16.37	15.87	15.37	14.88	14.40	13.91	13.42	12.91	12.40	65
56	16.10	16.07	15.75	15.28	14.81	14.35	13.90	13.41	12.93	12.43	11.87	66
57	15.67	15.65	15.33	14.86	14.38	13.91	13.46	12.97	12.47	11.90	11.41	67
58	15.24	15.23	14.89	14.44	13.95	13.48	13.00	12.51	11.95	11.43	10.95	68
59	14.87	14.84	14.49	14.02	13.53	13.04	12.55	11.99	11.48	10.97	10.50	69
60	14.55	14.48	14.13	13.64	13.13	12.62	12.06	11.54	11.03	10.54	10.06	70
61	13.92	13.94	13.62	13.15	12.64	12.10	11.58	11.08	10.58	10.10	9.62	71
62	13.38	13.41	13.08	12.61	12.10	11.59	11.09	10.60	10.12	9.66	9.20	72
63	12.53	12.67	12.42	11.99	11.52	11.05	10.58	10.14	9.67	9.24	8.78	73
64	11.73	12.02	11.78	11.39	10.96	10.52	10.08	9.66	9.22	8.79	8.38	74
65	11.25	11.60	11.38	11.02	10.57	10.12	9.69	9.24	8.80	8.36	7.98	75

Notes:  
1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.  
2. The value  $e_{[x]+t}$  at duration  $t$  represents the average number of future years a beneficiary will remain on the combined DI and OASI rolls for those originally entitled to disability benefits at entl age  $[x]$  who have not died or recovered as of attained age  $[x]+t$ . Values are based on continuance experience from **tables 22A** and **22C**.  
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 9C** for attained ages beyond age 75.

**Table 23B.—Female Disabled Workers**  
**Expected Future Time on Combined DI and OASI Rolls**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											Attained age
	0	1	2	3	4	5	6	7	8	9	10 or more	
16	26.10	25.52	25.42	25.09	24.51	24.70	26.07	27.14	28.23	28.96	29.64	26
17	27.19	26.61	26.35	25.90	25.39	25.70	26.85	27.83	28.76	29.49	30.12	27
18	28.44	27.86	27.45	26.91	26.48	26.89	27.76	28.59	29.34	30.07	30.56	28
19	29.85	29.27	28.76	28.19	27.83	28.24	28.86	29.51	30.02	30.55	30.87	29
20	31.18	30.65	30.12	29.55	29.19	29.47	29.88	30.28	30.63	30.85	30.96	30
21	31.72	31.22	30.75	30.17	29.76	29.98	30.32	30.70	30.90	30.99	30.92	31
22	32.05	31.60	31.21	30.67	30.31	30.41	30.70	30.96	30.96	30.88	30.76	32
23	32.05	31.67	31.33	30.78	30.44	30.53	30.68	30.84	30.80	30.70	30.52	33
24	31.76	31.40	31.17	30.63	30.26	30.36	30.45	30.55	30.53	30.38	30.23	34
25	31.24	31.01	30.75	30.25	29.94	30.06	30.12	30.24	30.25	30.15	29.92	35
26	30.87	30.65	30.48	30.04	29.72	29.80	29.84	29.89	29.85	29.78	29.64	36
27	30.74	30.56	30.44	30.03	29.70	29.72	29.72	29.65	29.59	29.43	29.28	37
28	30.50	30.37	30.26	29.82	29.45	29.39	29.38	29.35	29.21	29.11	28.91	38
29	30.35	30.21	30.06	29.61	29.26	29.26	29.25	29.12	28.97	28.76	28.54	39
30	30.17	30.03	29.92	29.49	29.14	29.07	28.99	28.84	28.65	28.42	28.14	40
31	29.91	29.80	29.70	29.24	28.87	28.73	28.58	28.42	28.24	28.05	27.73	41
32	29.61	29.51	29.47	29.04	28.62	28.45	28.29	28.08	27.90	27.66	27.30	42
33	29.35	29.22	29.19	28.77	28.37	28.18	27.98	27.75	27.51	27.19	26.85	43
34	29.08	28.98	28.90	28.45	28.05	27.84	27.63	27.41	27.13	26.76	26.37	44
35	28.71	28.69	28.62	28.20	27.78	27.55	27.31	27.05	26.70	26.30	25.89	45
36	28.22	28.21	28.22	27.81	27.39	27.11	26.84	26.54	26.24	25.82	25.39	46
37	27.87	27.89	27.86	27.41	27.01	26.76	26.46	26.12	25.75	25.34	24.90	47
38	27.62	27.61	27.56	27.15	26.73	26.45	26.07	25.72	25.30	24.85	24.38	48
39	27.14	27.14	27.06	26.68	26.23	25.94	25.55	25.20	24.79	24.36	23.86	49
40	26.68	26.67	26.64	26.25	25.82	25.52	25.14	24.76	24.31	23.83	23.32	50
41	26.22	26.25	26.21	25.81	25.37	25.03	24.63	24.23	23.78	23.29	22.76	51
42	25.84	25.91	25.88	25.45	25.00	24.66	24.25	23.78	23.25	22.75	22.21	52
43	25.37	25.44	25.41	24.97	24.52	24.14	23.69	23.21	22.72	22.20	21.64	53
44	24.70	24.84	24.80	24.40	23.95	23.58	23.12	22.64	22.17	21.62	21.08	54
45	24.48	24.56	24.46	24.03	23.55	23.15	22.68	22.19	21.67	21.10	20.52	55
46	23.86	23.97	23.90	23.48	22.99	22.57	22.11	21.61	21.08	20.52	19.94	56
47	23.28	23.40	23.33	22.92	22.46	22.05	21.55	21.02	20.49	19.93	19.37	57
48	22.67	22.85	22.80	22.40	21.93	21.49	20.98	20.45	19.92	19.37	18.81	58
49	22.22	22.40	22.30	21.90	21.44	20.98	20.48	19.93	19.40	18.83	18.24	59
50	22.86	22.64	22.24	21.70	21.14	20.60	20.04	19.46	18.87	18.28	17.67	60
51	21.72	21.73	21.47	20.98	20.44	19.91	19.35	18.81	18.23	17.66	17.10	61
52	21.24	21.24	20.98	20.47	19.94	19.41	18.85	18.28	17.70	17.10	16.53	62
53	20.56	20.58	20.31	19.82	19.29	18.78	18.25	17.70	17.13	16.55	15.97	63
54	20.01	20.01	19.72	19.25	18.71	18.21	17.67	17.12	16.56	15.99	15.41	64
55	20.28	20.00	19.54	18.97	18.37	17.82	17.23	16.64	16.05	15.45	14.85	65
56	19.37	19.25	18.85	18.31	17.74	17.20	16.62	16.05	15.46	14.85	14.23	66
57	18.75	18.63	18.25	17.72	17.17	16.63	16.05	15.48	14.89	14.26	13.67	67
58	18.19	18.05	17.65	17.12	16.55	16.02	15.46	14.90	14.28	13.69	13.12	68
59	17.63	17.49	17.10	16.57	16.02	15.48	14.90	14.28	13.69	13.13	12.57	69
60	17.11	16.97	16.58	16.07	15.51	14.96	14.34	13.78	13.18	12.61	12.04	70
61	16.24	16.22	15.89	15.41	14.88	14.30	13.74	13.19	12.63	12.08	11.52	71
62	15.56	15.53	15.23	14.78	14.24	13.70	13.16	12.61	12.08	11.53	11.00	72
63	14.52	14.64	14.39	13.97	13.50	13.02	12.50	11.99	11.49	10.99	10.49	73
64	13.61	13.88	13.65	13.27	12.82	12.33	11.85	11.35	10.88	10.44	9.99	74
65	12.91	13.28	13.13	12.77	12.32	11.85	11.31	10.77	10.27	9.91	9.50	75

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Experience after NRA reflects workers who remain on the DI rolls until NRA and then convert to the OASI rolls thereafter, as well as workers who voluntarily switch from DI to OASI prior to NRA.
2. The value  $e_{[x]+t}$  at duration  $t$  represents the average number of future years a beneficiary will remain on the combined DI and OASI rolls for those originally entitled to disability benefits at entl age  $[x]$  who have not died or recovered as of attained age  $[x]+t$ . Values are based on continuance experience from **tables 22B** and **22C**.
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement. See **table 9C** for attained ages beyond age 75.

**Table 24A.—Male Disabled Workers**  
**Expected Future Time on DI Rolls**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											Attained age
	0	1	2	3	4	5	6	7	8	9	10 or more	
16	21.78	21.09	20.39	19.84	19.26	19.51	20.48	21.25	22.13	23.08	23.64	26
17	22.77	22.10	21.41	20.75	20.19	20.50	21.42	22.15	22.90	23.70	24.05	27
18	23.79	23.17	22.50	21.76	21.22	21.58	22.40	23.04	23.61	24.13	24.31	28
19	24.93	24.33	23.70	22.96	22.43	22.71	23.35	23.78	24.09	24.29	24.37	29
20	25.87	25.27	24.70	24.00	23.48	23.62	24.05	24.28	24.40	24.36	24.24	30
21	26.43	25.84	25.28	24.65	24.12	24.14	24.36	24.45	24.40	24.26	23.98	31
22	26.45	25.92	25.39	24.76	24.27	24.21	24.33	24.30	24.20	23.98	23.61	32
23	26.10	25.62	25.19	24.59	24.07	23.99	23.99	23.91	23.80	23.55	23.17	33
24	25.66	25.19	24.80	24.20	23.73	23.63	23.58	23.47	23.30	23.00	22.69	34
25	24.97	24.62	24.27	23.71	23.26	23.19	23.11	22.96	22.76	22.48	22.18	35
26	24.44	24.13	23.81	23.27	22.78	22.67	22.61	22.49	22.27	21.95	21.62	36
27	24.13	23.82	23.52	22.99	22.54	22.42	22.32	22.14	21.86	21.48	21.07	37
28	23.70	23.43	23.15	22.63	22.16	21.98	21.80	21.62	21.31	20.94	20.51	38
29	23.24	22.98	22.68	22.13	21.69	21.46	21.28	21.03	20.72	20.35	19.94	39
30	22.74	22.49	22.23	21.70	21.25	20.99	20.74	20.45	20.14	19.73	19.34	40
31	22.50	22.21	21.98	21.45	20.95	20.68	20.36	20.02	19.63	19.21	18.75	41
32	21.99	21.72	21.48	20.96	20.43	20.15	19.83	19.46	19.07	18.63	18.13	42
33	21.40	21.18	20.97	20.46	19.96	19.64	19.31	18.95	18.52	18.04	17.50	43
34	21.00	20.81	20.59	20.07	19.56	19.21	18.82	18.39	17.90	17.39	16.85	44
35	20.45	20.28	20.04	19.52	18.98	18.62	18.22	17.79	17.27	16.73	16.19	45
36	19.96	19.78	19.55	19.01	18.50	18.11	17.67	17.20	16.67	16.11	15.53	46
37	19.50	19.28	19.03	18.51	17.98	17.53	17.07	16.58	16.04	15.47	14.86	47
38	18.97	18.75	18.49	17.98	17.44	16.97	16.47	15.94	15.37	14.80	14.19	48
39	18.35	18.20	17.96	17.41	16.86	16.36	15.87	15.31	14.73	14.13	13.50	49
40	17.87	17.67	17.41	16.84	16.28	15.77	15.22	14.66	14.07	13.44	12.80	50
41	17.25	17.08	16.77	16.21	15.62	15.09	14.57	14.01	13.40	12.76	12.10	51
42	16.59	16.45	16.16	15.62	15.05	14.50	13.95	13.35	12.72	12.07	11.39	52
43	16.03	15.87	15.55	14.99	14.41	13.85	13.26	12.64	12.01	11.34	10.67	53
44	15.48	15.27	14.96	14.40	13.80	13.25	12.63	12.00	11.32	10.64	9.95	54
45	14.82	14.64	14.32	13.76	13.15	12.57	11.94	11.29	10.61	9.92	9.21	55
46	14.11	13.95	13.62	13.04	12.44	11.84	11.20	10.54	9.87	9.17	8.46	56
47	13.47	13.35	12.98	12.40	11.77	11.17	10.53	9.85	9.15	8.43	7.71	57
48	12.76	12.64	12.28	11.69	11.08	10.45	9.80	9.12	8.40	7.68	6.94	58
49	12.21	12.05	11.64	11.04	10.40	9.76	9.07	8.38	7.66	6.92	6.16	59
50	12.27	11.83	11.25	10.57	9.86	9.16	8.44	7.69	6.93	6.15	5.36	60
51	11.33	11.00	10.47	9.79	9.09	8.40	7.67	6.92	6.14	5.36	4.54	61
52	10.63	10.30	9.75	9.07	8.35	7.64	6.90	6.13	5.35	4.53	3.69	62
53	9.92	9.60	9.03	8.33	7.61	6.89	6.13	5.35	4.53	3.69	2.82	63
54	9.30	8.93	8.33	7.62	6.88	6.12	5.35	4.53	3.70	2.82	1.92	64
55	9.02	8.46	7.75	6.98	6.19	5.39	4.57	3.71	2.84	1.92	0.98	65
56	8.15	7.63	6.94	6.16	5.36	4.55	3.71	2.83	1.93	0.98	—	66
57	7.43	6.88	6.17	5.37	4.55	3.70	2.83	1.93	0.98	—	—	67
58	6.70	6.12	5.37	4.55	3.70	2.83	1.92	0.98	—	—	—	68
59	5.97	5.34	4.56	3.71	2.83	1.93	0.98	—	—	—	—	69
60	5.22	4.53	3.72	2.84	1.93	0.98	—	—	—	—	—	70
61	4.38	3.67	2.83	1.93	0.98	—	—	—	—	—	—	71
62	3.56	2.80	1.92	0.98	—	—	—	—	—	—	—	72
63	2.68	1.89	0.98	—	—	—	—	—	—	—	—	73
64	1.82	0.97	—	—	—	—	—	—	—	—	—	74
65	0.94	—	—	—	—	—	—	—	—	—	—	75

- Notes:
1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Death or recovery are not considered beyond NRA.
  2. The value  $e_{[x]+t}$  at duration  $t$  represents the average number of future years a beneficiary will remain on the DI rolls for those originally entitled to disability benefits at entl age  $[x]$  who have not died or recovered as of attained age  $[x]+t$ . Values are based on continuance experience from **table 22A**, however, entitlement is not considered after conversion to old-age benefits.
  3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement.



**Table 24B.—Female Disabled Workers**  
**Expected Future Time on DI Rolls**  
(2011-15 Social Security DI disability experience)

Entl age	Completed duration of disability entitlement											Attained age
	0	1	2	3	4	5	6	7	8	9	10 or more	
16	22.92	22.29	22.07	21.64	21.01	21.03	22.04	22.78	23.53	23.96	24.35	26
17	23.72	23.09	22.73	22.20	21.62	21.73	22.54	23.19	23.80	24.23	24.56	27
18	24.64	24.00	23.52	22.91	22.39	22.58	23.14	23.66	24.10	24.52	24.73	28
19	25.68	25.04	24.45	23.81	23.36	23.53	23.88	24.24	24.48	24.73	24.79	29
20	26.62	26.02	25.42	24.78	24.32	24.39	24.54	24.69	24.79	24.77	24.66	30
21	26.91	26.33	25.78	25.13	24.62	24.62	24.72	24.84	24.81	24.68	24.42	31
22	27.01	26.47	25.99	25.37	24.90	24.80	24.84	24.86	24.65	24.39	24.08	32
23	26.85	26.36	25.91	25.28	24.82	24.71	24.63	24.56	24.32	24.03	23.67	33
24	26.44	25.98	25.61	24.98	24.50	24.39	24.26	24.13	23.90	23.56	23.22	34
25	25.86	25.49	25.09	24.50	24.05	23.96	23.80	23.67	23.46	23.16	22.75	35
26	25.39	25.02	24.70	24.15	23.69	23.55	23.37	23.19	22.93	22.64	22.29	36
27	25.10	24.76	24.48	23.95	23.48	23.28	23.07	22.78	22.50	22.14	21.77	37
28	24.72	24.43	24.14	23.58	23.08	22.81	22.58	22.32	21.97	21.64	21.24	38
29	24.42	24.10	23.78	23.21	22.72	22.49	22.25	21.91	21.54	21.13	20.69	39
30	24.08	23.76	23.46	22.90	22.40	22.12	21.81	21.45	21.05	20.61	20.13	40
31	23.67	23.37	23.07	22.49	21.98	21.62	21.26	20.88	20.48	20.06	19.55	41
32	23.23	22.93	22.68	22.11	21.55	21.17	20.79	20.37	19.95	19.50	18.94	42
33	22.81	22.48	22.23	21.67	21.12	20.71	20.30	19.85	19.40	18.87	18.32	43
34	22.38	22.08	21.77	21.18	20.62	20.20	19.77	19.33	18.83	18.26	17.68	44
35	21.87	21.61	21.31	20.74	20.16	19.72	19.26	18.78	18.22	17.63	17.02	45
36	21.27	21.01	20.76	20.19	19.61	19.12	18.64	18.12	17.59	16.98	16.35	46
37	20.77	20.53	20.23	19.63	19.06	18.58	18.07	17.51	16.93	16.31	15.67	47
38	20.33	20.06	19.74	19.16	18.56	18.06	17.48	16.91	16.29	15.64	14.97	48
39	19.73	19.45	19.11	18.54	17.92	17.40	16.81	16.23	15.60	14.96	14.26	49
40	19.13	18.84	18.51	17.94	17.32	16.79	16.19	15.59	14.93	14.24	13.53	50
41	18.53	18.25	17.92	17.32	16.69	16.12	15.51	14.88	14.22	13.51	12.78	51
42	17.97	17.71	17.37	16.75	16.11	15.53	14.89	14.21	13.49	12.77	12.03	52
43	17.36	17.08	16.73	16.10	15.44	14.83	14.16	13.47	12.76	12.03	11.26	53
44	16.61	16.37	15.99	15.38	14.72	14.10	13.42	12.72	12.01	11.25	10.48	54
45	16.13	15.84	15.41	14.76	14.08	13.43	12.74	12.02	11.27	10.49	9.70	55
46	15.41	15.12	14.70	14.05	13.35	12.68	11.98	11.24	10.48	9.69	8.89	56
47	14.71	14.40	13.97	13.31	12.62	11.95	11.21	10.45	9.68	8.88	8.08	57
48	13.98	13.69	13.25	12.60	11.89	11.19	10.44	9.67	8.88	8.07	7.25	58
49	13.33	13.03	12.54	11.87	11.16	10.43	9.68	8.88	8.09	7.26	6.41	59
50	13.26	12.70	12.03	11.28	10.50	9.72	8.93	8.11	7.27	6.42	5.55	60
51	12.23	11.79	11.18	10.44	9.66	8.88	8.07	7.25	6.41	5.55	4.68	61
52	11.52	11.06	10.43	9.67	8.88	8.09	7.26	6.42	5.56	4.68	3.79	62
53	10.73	10.25	9.60	8.84	8.04	7.24	6.41	5.56	4.68	3.79	2.88	63
54	9.99	9.47	8.80	8.03	7.21	6.40	5.55	4.68	3.79	2.88	1.94	64
55	9.55	8.88	8.11	7.28	6.43	5.58	4.70	3.80	2.89	1.95	0.99	65
56	8.63	8.01	7.25	6.42	5.56	4.69	3.80	2.89	1.95	0.99	—	66
57	7.81	7.16	6.39	5.55	4.68	3.80	2.88	1.95	0.99	—	—	67
58	7.02	6.34	5.54	4.67	3.78	2.88	1.94	0.99	—	—	—	68
59	6.20	5.49	4.67	3.78	2.88	1.95	0.99	—	—	—	—	69
60	5.37	4.62	3.78	2.88	1.94	0.99	—	—	—	—	—	70
61	4.48	3.72	2.86	1.94	0.99	—	—	—	—	—	—	71
62	3.62	2.82	1.93	0.98	—	—	—	—	—	—	—	72
63	2.73	1.91	0.98	—	—	—	—	—	—	—	—	73
64	1.84	0.97	—	—	—	—	—	—	—	—	—	74
65	0.95	—	—	—	—	—	—	—	—	—	—	75

Notes:

1. *Entl age* denotes age last birthday at entitlement to disability benefits. *Duration* measured in years since entitlement. *Attained age* calculated as sum of entl age and duration. Results do not include auxiliary beneficiaries payable under the DI program. Death or recovery are not considered beyond NRA.
2. The value  $e_{[x]+t}$  at duration  $t$  represents the average number of future years a beneficiary will remain on the DI rolls for those originally entitled to disability benefits at entl age  $[x]$  who have not died or recovered as of attained age  $[x]+t$ . Values are based on continuance experience from **table 22B**, however, entitlement is not considered after conversion to old-age benefits.
3. Select-and-ultimate table is read across the row for 0-10 years of entitlement, and down the last (ultimate) column for 10 or more years of entitlement.

**Table 25.—Disabled Workers**  
**Aggregate Probability of Death or Recovery and Expected Future Time on the Rolls,**  
**by Entitlement Age**  
(2011-15 Social Security DI disability experience)

Entl age	Male			Female		
	Probability of death or recovery	Future time on OASDI rolls	Future time on DI rolls	Probability of death or recovery	Future time on OASDI rolls	Future time on DI rolls
16	0.036859	24.32	19.30	0.029976	27.40	20.85
17	0.037520	24.73	19.95	0.036179	27.93	21.64
18	0.033335	24.98	20.10	0.033895	28.07	21.65
19	0.030194	25.04	19.98	0.028960	28.28	21.64
20	0.027371	25.23	20.08	0.026096	28.54	21.70
21	0.025608	25.12	19.84	0.024454	28.47	21.41
22	0.024777	24.88	19.51	0.023369	28.36	21.13
23	0.025605	24.48	19.06	0.023192	28.10	20.75
24	0.025928	24.01	18.54	0.023790	27.76	20.34
25	0.027384	23.43	17.90	0.024928	27.39	19.90
26	0.028458	23.02	17.48	0.025718	27.03	19.48
27	0.028917	22.72	17.14	0.025729	26.76	19.13
28	0.029388	22.36	16.77	0.025707	26.45	18.76
29	0.029965	21.95	16.35	0.025522	26.17	18.38
30	0.030749	21.57	15.94	0.025632	25.87	17.98
31	0.030271	21.32	15.62	0.025066	25.52	17.51
32	0.030805	20.94	15.18	0.025269	25.13	17.03
33	0.031536	20.57	14.74	0.025206	24.82	16.56
34	0.031955	20.26	14.36	0.025016	24.45	16.06
35	0.032603	19.89	13.92	0.025248	24.06	15.53
36	0.033110	19.61	13.56	0.025790	23.63	14.98
37	0.033554	19.25	13.16	0.026035	23.21	14.47
38	0.033606	18.94	12.78	0.026057	22.87	14.00
39	0.035116	18.62	12.41	0.026429	22.41	13.47
40	0.035372	18.29	12.00	0.026822	22.01	13.00
41	0.036383	17.94	11.59	0.027400	21.55	12.45
42	0.037683	17.57	11.17	0.027913	21.14	11.99
43	0.038850	17.23	10.80	0.028290	20.70	11.50
44	0.039536	16.92	10.45	0.029387	20.21	10.99
45	0.040501	16.54	10.05	0.029390	19.86	10.59
46	0.042283	16.15	9.63	0.030668	19.38	10.14
47	0.043651	15.80	9.24	0.031814	18.91	9.66
48	0.045677	15.35	8.75	0.033233	18.40	9.16
49	0.047472	14.95	8.31	0.034264	17.92	8.69
50	0.041408	15.27	8.32	0.029787	18.20	8.68
51	0.046525	14.56	7.61	0.034105	17.28	7.90
52	0.048093	14.15	7.10	0.034829	16.84	7.40
53	0.050290	13.73	6.60	0.036602	16.30	6.87
54	0.051671	13.31	6.12	0.038374	15.78	6.37
55	0.046376	13.38	5.88	0.034649	15.79	6.09
56	0.051480	12.77	5.29	0.038744	15.07	5.48
57	0.052974	12.39	4.82	0.040237	14.58	4.98
58	0.054927	12.01	4.34	0.042198	14.10	4.47
59	0.056530	11.66	3.85	0.043712	13.66	3.96
60	0.057374	11.27	3.35	0.045194	13.22	3.44
61	0.060648	10.92	2.86	0.048417	12.80	2.92
62	0.062744	10.62	2.38	0.051000	12.42	2.42
63	0.067518	10.36	1.90	0.056078	11.98	1.92
64	0.072915	10.12	1.42	0.061650	11.66	1.43
65	0.068376	10.85	0.94	0.059555	12.54	0.95

Notes:

1. *Entl age* denotes age last birthday at entitlement to disabled worker benefits.
2. *Probability of death or recovery* at entl age [x] represents the average probability of termination due to death or recovery within one year for disability beneficiaries who became entitled at that particular age. Values are derived from the average death probabilities shown in **table 11** and the average recovery probabilities shown in **table 18**.
3. *Future time on OASDI rolls* at entl age [x] represents the aggregate expected number of years on the combined DI and OASI rolls for disability beneficiaries who became entitled at that particular age. Values are exposure-weighted averages of expected future times across all durations from **tables 23A, 23B** and **9C**. Experience reflects continuing entitlement after NRA.
4. *Future time on DI rolls* at entl age [x] represents the aggregate expected number of years on the DI rolls for disability beneficiaries who became entitled at that particular age. Values are exposure-weighted averages of expected future times across all durations from **tables 24A** and **24B**. Experience does not reflect continuing entitlement after NRA.

**Table 26.—Disabled Workers**  
**Aggregate Probability of Death or Recovery and Expected Future Time on the Rolls,**  
**by Attained Age**

(2011-15 Social Security DI disability experience)

Attained age	Male			Female		
	Probability of death or recovery	Future time on OASDI rolls	Future time on DI rolls	Probability of death or recovery	Future time on OASDI rolls	Future time on DI rolls
16	0.019626	23.91	21.78	0.017089	26.10	22.92
17	0.014353	24.97	22.62	0.022004	27.03	23.59
18	0.016912	25.95	23.38	0.019938	28.00	24.27
19	0.016251	26.86	24.07	0.016339	28.91	24.89
20	0.014578	27.68	24.67	0.015723	29.73	25.42
21	0.017013	28.14	24.95	0.016675	30.13	25.59
22	0.021261	28.28	24.94	0.021416	30.31	25.57
23	0.025725	28.29	24.83	0.025286	30.44	25.51
24	0.029684	28.27	24.69	0.026865	30.51	25.41
25	0.033517	28.23	24.53	0.030581	30.52	25.25
26	0.033289	28.20	24.37	0.030077	30.53	25.08
27	0.034161	28.15	24.19	0.032108	30.51	24.89
28	0.033239	28.07	23.98	0.031750	30.49	24.69
29	0.032455	27.94	23.73	0.030448	30.46	24.48
30	0.031683	27.75	23.43	0.028791	30.37	24.21
31	0.030374	27.55	23.10	0.028533	30.22	23.89
32	0.029892	27.29	22.73	0.027541	30.03	23.53
33	0.029420	26.98	22.31	0.027370	29.81	23.14
34	0.029565	26.66	21.87	0.027478	29.57	22.73
35	0.028252	26.31	21.40	0.026817	29.32	22.31
36	0.028547	25.92	20.90	0.026277	29.02	21.84
37	0.028785	25.52	20.40	0.026510	28.69	21.35
38	0.028350	25.12	19.88	0.026099	28.36	20.85
39	0.029065	24.69	19.33	0.025894	28.01	20.33
40	0.028901	24.27	18.79	0.025779	27.63	19.78
41	0.028468	23.84	18.23	0.025782	27.23	19.21
42	0.028356	23.37	17.64	0.025491	26.83	18.63
43	0.028472	22.89	17.04	0.025086	26.41	18.04
44	0.028506	22.41	16.43	0.025390	25.95	17.41
45	0.029337	21.91	15.80	0.025001	25.50	16.78
46	0.030094	21.40	15.16	0.025371	25.02	16.12
47	0.031068	20.90	14.51	0.025279	24.54	15.45
48	0.030860	20.39	13.86	0.025341	24.03	14.76
49	0.031627	19.87	13.19	0.025318	23.51	14.06
50	0.031504	19.42	12.55	0.024473	23.07	13.39
51	0.031886	18.93	11.88	0.025021	22.54	12.66
52	0.032592	18.43	11.20	0.024586	22.02	11.93
53	0.033844	17.93	10.50	0.024999	21.47	11.17
54	0.034287	17.44	9.80	0.025229	20.92	10.41
55	0.034273	17.02	9.11	0.024656	20.42	9.65
56	0.035372	16.56	8.39	0.025260	19.87	8.85
57	0.036266	16.10	7.66	0.025673	19.32	8.05
58	0.037259	15.64	6.90	0.026045	18.76	7.22
59	0.038499	15.19	6.13	0.026773	18.19	6.39
60	0.039315	14.76	5.35	0.027576	17.63	5.53
61	0.040620	14.31	4.53	0.028721	17.05	4.66
62	0.041060	13.86	3.69	0.029526	16.48	3.77
63	0.041983	13.38	2.82	0.030777	15.90	2.87
64	0.043059	12.90	1.92	0.031524	15.34	1.94
65	0.039554	12.44	0.98	0.028631	14.79	0.99
66	0.043862	11.93	—	0.031667	14.21	—
67	0.046182	11.46	—	0.033318	13.66	—
68	0.048624	10.98	—	0.034728	13.12	—
69	0.052077	10.52	—	0.037341	12.57	—
70	0.055284	10.07	—	0.039491	12.04	—
71	0.058951	9.63	—	0.042134	11.51	—
72	0.062301	9.20	—	0.044962	11.00	—
73	0.067099	8.78	—	0.047548	10.49	—
74	0.071469	8.38	—	0.051148	9.99	—
75	0.075068	7.98	—	0.055271	9.50	—

Notes:

1. *Attained age* calculated as sum of entitlement age and duration.
2. *Probability of death or recovery* at attained age *x* represents the average probability of termination due to death or recovery within one year for disability beneficiaries who have attained that particular age. Values are derived from the average death probabilities shown in **table 12** and the average recovery probabilities shown in **table 19**. See **table 7C** for attained ages beyond age 75.
3. *Future time on OASDI rolls* at attained age *x* represents the aggregate expected number of years on the combined DI and OASI rolls for disability beneficiaries who have attained that particular age. Values are exposure-weighted averages of expected future times across all durations from **tables 23A** and **23B**. See **table 9C** for attained ages beyond age 75. Experience reflects continuing entitlement after NRA.
4. *Future time on DI rolls* at attained age *x* represents the aggregate expected number of years on the DI rolls for disability beneficiaries who have attained that particular age. Values are exposure-weighted averages of expected future times across all durations from **tables 24A** and **24B**. Experience does not reflect continuing entitlement after NRA.

**Table 27.—Disabled Workers**  
**Aggregate Probability of Death or Recovery and Expected Future Time on the Rolls,**  
**by Duration**

(2011-15 Social Security DI disability experience)

Duration	Male			Female		
	Probability of death or recovery	Future time on OASDI rolls	Future time on DI rolls	Probability of death or recovery	Future time on OASDI rolls	Future time on DI rolls
0	0.058457	17.94	10.67	0.045223	21.47	11.81
1	0.042789	18.19	10.64	0.034765	21.66	11.72
2	0.032356	18.19	10.57	0.025163	21.66	11.62
3	0.032173	17.95	10.40	0.024249	21.40	11.41
4	0.036655	17.67	10.27	0.028075	21.08	11.20
5	0.037385	17.43	10.24	0.027255	20.81	11.05
6	0.037418	17.16	10.26	0.027610	20.46	10.92
7	0.037405	16.83	10.17	0.027273	20.08	10.75
8	0.037902	16.51	10.10	0.027250	19.72	10.63
9	0.038692	16.24	10.13	0.027577	19.38	10.55
10	0.039678	15.99	10.21	0.027974	19.02	10.49
11	0.040343	15.69	10.36	0.028412	18.63	10.47
12	0.041085	15.39	10.30	0.029415	18.21	10.29
13	0.042811	15.05	10.18	0.030587	17.75	10.06
14	0.044168	14.67	10.01	0.031513	17.25	9.82
15	0.045831	14.28	9.83	0.033136	16.77	9.58
16	0.046959	13.92	9.78	0.034149	16.33	9.49
17	0.048717	13.61	9.59	0.035655	15.93	9.30
18	0.050319	13.37	9.42	0.037104	15.58	9.16
19	0.051674	13.19	9.30	0.038186	15.27	9.06
20	0.052701	13.03	9.19	0.039851	14.99	8.99
21	0.053368	12.88	9.08	0.041170	14.70	8.91
22	0.055146	12.71	8.93	0.043876	14.38	8.80
23	0.057916	12.50	8.76	0.046188	14.03	8.66
24	0.059751	12.29	8.57	0.049459	13.66	8.48
25	0.063536	12.09	8.33	0.052754	13.28	8.26
26	0.064864	11.93	8.11	0.056533	12.96	8.06
27	0.067573	11.82	7.88	0.059652	12.70	7.85
28	0.068402	11.76	7.67	0.062766	12.52	7.67
29	0.070808	11.68	7.46	0.065342	12.32	7.50
30	0.071896	11.52	7.24	0.069386	12.02	7.34
31	0.074358	11.30	7.03	0.073924	11.62	7.15
32	0.077134	11.03	6.76	0.077792	11.17	6.89
33	0.080503	10.72	6.43	0.082864	10.68	6.55
34	0.083486	10.40	6.03	0.088310	10.21	6.14
35	0.084315	10.14	5.62	0.093063	9.84	5.69
36	0.087217	9.94	5.22	0.096739	9.53	5.26
37	0.088022	9.74	4.81	0.101071	9.25	4.86
38	0.090021	9.53	4.38	0.102788	9.00	4.39
39	0.090319	9.33	3.94	0.105619	8.78	3.93
40	0.091133	9.14	3.49	0.107644	8.57	3.45

Notes:

1. *Duration* measured in years since entitlement to disabled worker benefits.
2. *Probability of death or recovery* at duration *t* represents the average probability of termination due to death or recovery during the (*t*+1) year of entitlement to benefits. Values are derived from the average death probabilities shown in **table 13** and the average recovery probabilities shown in **table 20**.
3. *Future time on OASDI rolls* at duration *t* represents the aggregate expected number of years on the combined DI and OASI rolls for disability beneficiaries who have not died or recovered after *t* years. Values are exposure-weighted averages of expected future times across all ages from **tables 23A, 23B and 9C**. Experience reflects continuing entitlement after NRA.
4. *Future time on DI rolls* at duration *t* represents the aggregate expected number of years on the DI rolls for disability beneficiaries who have not died or recovered after *t* years. Values are exposure-weighted averages of expected future times across all ages from **tables 24A and 24B**. Experience does not reflect continuing entitlement after NRA.

# **ANNUITY TABLES**



**Table 28A.—Male Disabled Workers  
Annual Life Annuity (excluding termination due to recovery prior to NRA)<sup>1</sup>**  
(2011-15 Social Security DI disability experience)

Entl age	Actuarial present value of \$1 annuity													
	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%		
16	39.999	35.383	31.532	28.297	25.559	23.226	21.225	19.497	17.995	16.684	15.531	14.512		
17	39.116	34.666	30.946	27.812	25.155	22.886	20.936	19.249	17.782	16.498	15.368	14.369		
18	38.260	33.970	30.373	27.338	24.758	22.551	20.650	19.004	17.570	16.313	15.205	14.224		
19	37.445	33.306	29.828	26.886	24.380	22.232	20.379	18.771	17.368	16.137	15.050	14.087		
20	36.818	32.806	29.426	26.560	24.114	22.014	20.198	18.621	17.242	16.030	14.960	14.009		
21	36.229	32.337	29.050	26.257	23.868	21.812	20.032	18.483	17.127	15.934	14.878	13.940		
22	35.468	31.715	28.539	25.833	23.514	21.515	19.781	18.268	16.943	15.774	14.739	13.819		
23	34.600	30.997	27.939	25.328	23.085	21.148	19.464	17.994	16.703	15.563	14.552	13.652		
24	33.793	30.329	27.382	24.861	22.690	20.811	19.175	17.744	16.486	15.373	14.385	13.504		
25	32.767	29.462	26.644	24.227	22.143	20.334	18.757	17.375	16.157	15.079	14.121	13.265		
26	31.888	28.725	26.022	23.698	21.689	19.943	18.417	17.078	15.896	14.848	13.915	13.081		
27	31.252	28.202	25.588	23.336	21.386	19.687	18.200	16.892	15.736	14.710	13.796	12.976		
28	30.534	27.603	25.086	22.912	21.025	19.378	17.934	16.662	15.536	14.535	13.641	12.839		
29	29.822	27.008	24.585	22.489	20.665	19.070	17.669	16.432	15.336	14.360	13.487	12.703		
30	29.069	26.372	24.045	22.027	20.267	18.725	17.368	16.169	15.104	14.154	13.303	12.539		
31	28.616	26.005	23.746	21.782	20.067	18.561	17.233	16.057	15.012	14.078	13.240	12.487		
32	27.979	25.470	23.294	21.398	19.738	18.278	16.989	15.845	14.826	13.915	13.097	12.360		
33	27.185	24.790	22.709	20.892	19.297	17.892	16.649	15.544	14.558	13.675	12.881	12.165		
34	26.620	24.316	22.308	20.551	19.006	17.643	16.434	15.358	14.396	13.533	12.756	12.054		
35	25.905	23.704	21.782	20.096	18.611	17.297	16.130	15.090	14.158	13.322	12.567	11.885		
36	25.321	23.208	21.359	19.733	18.298	17.026	15.894	14.883	13.977	13.162	12.425	11.758		
37	24.723	22.698	20.922	19.357	17.973	16.744	15.648	14.668	13.787	12.994	12.276	11.626		
38	24.126	22.187	20.482	18.977	17.643	16.455	15.395	14.445	13.590	12.819	12.120	11.486		
39	23.407	21.562	19.935	18.496	17.218	16.078	15.059	14.143	13.318	12.573	11.897	11.282		
40	22.930	21.156	19.589	18.200	16.964	15.860	14.870	13.979	13.176	12.449	11.788	11.187		
41	22.213	20.529	19.038	17.714	16.532	15.475	14.525	13.670	12.897	12.196	11.558	10.977		
42	21.519	19.921	18.502	17.239	16.110	15.098	14.187	13.365	12.621	11.946	11.330	10.769		
43	20.904	19.383	18.030	16.823	15.742	14.771	13.896	13.104	12.387	11.734	11.139	10.595		
44	20.392	18.938	17.642	16.483	15.443	14.501	13.661	12.896	12.201	11.567	10.989	10.460		
45	19.769	18.389	17.155	16.050	15.056	14.160	13.350	12.614	11.945	11.335	10.777	10.266		
46	19.062	17.761	16.596	15.549	14.607	13.755	12.983	12.281	11.642	11.058	10.523	10.032		
47	18.445	17.212	16.106	15.110	14.212	13.398	12.659	11.987	11.373	10.812	10.297	9.823		
48	17.721	16.564	15.523	14.584	13.735	12.965	12.264	11.626	11.042	10.506	10.015	9.562		
49	17.293	16.188	15.192	14.291	13.475	12.733	12.057	11.440	10.875	10.356	9.879	9.439		
50	17.742	16.627	15.620	14.708	13.880	13.126	12.438	11.809	11.232	10.701	10.213	9.762		
51	16.845	15.812	14.877	14.028	13.255	12.551	11.907	11.317	10.775	10.276	9.816	9.390		
52	16.284	15.308	14.423	13.618	12.885	12.214	11.601	11.037	10.518	10.040	9.599	9.190		
53	15.688	14.770	13.936	13.175	12.481	11.845	11.262	10.725	10.231	9.774	9.352	8.961		
54	15.309	14.434	13.636	12.908	12.241	11.630	11.068	10.550	10.073	9.631	9.222	8.842		
55	15.682	14.801	13.996	13.260	12.585	11.965	11.394	10.867	10.381	9.930	9.512	9.124		
56	14.897	14.082	13.336	12.652	12.024	11.446	10.913	10.420	9.964	9.541	9.148	8.782		
57	14.483	13.709	13.000	12.349	11.749	11.196	10.685	10.213	9.774	9.367	8.988	8.635		
58	14.070	13.336	12.663	12.043	11.472	10.944	10.455	10.002	9.582	9.190	8.825	8.485		
59	13.702	13.006	12.365	11.774	11.229	10.723	10.255	9.820	9.415	9.038	8.687	8.358		
60	13.392	12.729	12.117	11.551	11.028	10.542	10.092	9.673	9.282	8.918	8.577	8.258		
61	12.786	12.170	11.601	11.074	10.585	10.131	9.709	9.316	8.948	8.605	8.284	7.983		
62	12.276	11.702	11.170	10.677	10.219	9.792	9.395	9.024	8.677	8.353	8.048	7.763		
63	11.476	10.957	10.475	10.027	9.610	9.222	8.859	8.519	8.201	7.903	7.624	7.361		
64	10.730	10.261	9.824	9.418	9.038	8.684	8.353	8.043	7.751	7.478	7.221	6.979		
65	10.278	9.841	9.434	9.054	8.699	8.367	8.056	7.764	7.489	7.231	6.988	6.759		

<sup>1</sup>Present value of annual payments of \$1 made at the end of each year of disability entitlement and continuing beyond NRA. Entitlement ends upon death of the beneficiary (recovery termination is not considered prior to NRA). Payments are discounted to the beginning of the entitlement period using the stated annual effective interest rate, and continuance experience shown in tables 8A and 8C.

**Table 28B.—Male Disabled Workers  
Monthly Life Annuity (excluding termination due to recovery prior to NRA)<sup>1</sup>**  
(2011-15 Social Security DI disability experience)

Entl age	Actuarial present value of \$1 annuity														
	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%			
16	485.476	430.077	383.867	345.038	312.177	284.175	260.153	239.412	218.393	205.646	191.808	179.581			
17	474.879	421.480	376.827	339.220	307.326	280.093	256.688	236.446	218.834	203.421	189.858	177.861			
18	464.607	413.119	369.959	333.526	302.561	276.069	253.261	233.501	216.283	201.194	187.899	176.124			
19	454.831	405.159	363.419	328.103	298.025	272.242	250.002	230.704	213.862	199.082	186.042	174.480			
20	447.302	399.151	358.590	324.194	294.837	269.624	247.836	228.899	212.347	197.801	184.953	173.547			
21	440.235	393.522	354.076	320.551	291.878	267.203	245.844	227.248	210.969	196.644	183.974	172.714			
22	431.105	386.068	347.946	315.472	287.637	263.637	242.823	224.671	208.757	194.731	182.310	171.258			
23	420.695	377.442	340.740	309.403	282.487	259.232	239.027	221.377	205.877	192.197	180.066	169.258			
24	411.012	369.433	334.065	303.798	277.745	255.192	235.561	218.381	203.272	189.917	178.057	167.478			
25	398.692	359.028	325.207	296.198	271.175	249.469	230.541	213.949	199.332	186.393	174.888	164.612			
26	388.148	350.187	317.739	289.844	265.731	244.772	226.461	210.382	196.195	183.617	172.417	162.401			
27	380.519	343.906	312.536	285.507	262.092	241.702	223.854	208.155	194.281	181.964	170.981	161.147			
28	371.903	336.723	306.506	280.413	257.761	237.995	220.663	205.391	191.872	179.853	169.121	159.499			
29	363.351	329.578	300.500	275.333	253.439	234.296	217.479	202.635	189.474	177.755	167.276	157.869			
30	354.319	321.953	294.020	269.790	248.667	230.161	213.874	199.473	186.685	175.281	165.070	155.891			
31	348.885	317.541	290.427	266.855	246.262	228.187	212.250	198.135	185.581	174.369	164.316	155.269			
32	341.241	311.118	284.999	262.242	242.320	224.799	209.322	195.591	183.359	172.419	162.596	153.744			
33	331.711	302.967	277.985	256.169	237.031	220.166	205.241	191.977	180.142	169.541	160.009	151.407			
34	324.937	297.272	273.172	252.080	233.539	217.170	202.656	189.737	178.190	167.832	158.506	150.080			
35	316.346	289.925	266.854	246.618	228.792	213.022	199.015	186.524	175.342	165.295	156.237	148.041			
36	309.345	283.980	261.780	242.265	225.039	209.771	196.184	184.047	173.165	163.374	154.533	146.524			
37	302.169	277.864	256.541	237.756	221.141	206.384	193.229	181.457	170.886	161.359	152.746	144.932			
38	295.001	271.725	251.258	233.189	217.172	202.920	190.192	178.782	168.520	159.257	150.870	143.252			
39	286.377	264.221	244.696	227.419	212.074	198.394	186.153	175.163	165.261	156.310	148.194	140.812			
40	280.648	259.356	240.548	223.871	209.028	195.770	183.886	173.196	163.550	154.818	146.889	139.667			
41	272.048	251.833	233.936	218.032	203.849	191.155	179.755	169.484	160.200	151.784	144.129	137.149			
42	263.720	244.529	227.499	212.333	198.780	186.627	175.694	165.826	156.892	148.780	141.393	134.646			
43	256.334	238.076	221.837	207.345	194.367	182.707	172.198	162.696	154.080	146.244	139.098	132.563			
44	250.197	232.739	217.178	203.261	190.773	179.533	169.383	160.192	151.843	144.239	137.295	130.936			
45	242.719	226.146	211.339	198.069	186.138	175.377	165.644	156.814	148.781	141.454	134.752	128.607			
46	234.233	218.611	204.623	192.060	180.741	170.513	161.243	152.819	145.143	138.129	131.705	125.806			
47	226.829	212.028	198.746	186.792	176.000	166.230	157.360	149.286	141.917	135.173	128.987	123.300			
48	218.148	204.251	191.752	180.479	170.281	161.031	152.618	144.947	137.933	131.505	125.600	120.162			
49	213.012	199.738	187.773	176.959	167.158	158.250	150.135	142.722	135.934	129.703	123.971	118.686			
50	218.400	205.009	192.915	181.963	172.018	162.965	154.703	147.145	140.214	133.843	127.976	122.559			
51	207.636	195.226	183.993	173.800	164.525	156.066	148.333	141.245	134.735	128.742	123.214	118.103			
52	200.896	189.180	178.552	168.888	160.078	152.026	144.652	137.883	131.654	125.912	120.607	115.695			
53	193.750	182.725	172.703	163.570	155.229	147.592	140.585	134.141	128.203	122.720	117.647	112.944			
54	189.202	178.684	169.104	160.356	152.351	145.008	138.259	132.042	126.305	120.999	116.083	111.519			
55	193.681	183.089	173.423	164.580	156.474	149.027	142.171	135.846	130.001	124.588	119.567	114.900			
56	184.256	174.461	165.502	157.290	149.746	142.803	136.399	130.481	125.002	119.920	115.199	110.804			
57	179.287	169.993	161.473	153.648	146.447	139.806	133.670	127.991	122.725	117.833	113.282	109.039			
58	174.326	165.518	157.429	149.984	143.119	136.777	130.907	125.465	120.410	115.708	111.326	107.236			
59	169.918	161.555	153.857	146.759	140.201	134.132	128.505	123.279	118.417	113.888	109.660	105.709			
60	166.199	158.226	150.872	144.079	137.790	131.960	126.546	121.509	116.816	112.436	108.343	104.513			
61	158.927	151.526	144.686	138.355	132.483	127.028	121.954	117.225	112.812	108.687	104.826	101.208			
62	152.799	145.902	139.513	133.588	128.082	122.959	118.183	113.725	109.558	105.657	102.000	98.567			
63	143.205	136.965	131.175	125.793	120.782	116.109	111.747	107.667	103.846	100.264	96.900	93.738			
64	134.248	128.608	123.362	118.477	113.919	109.661	105.677	101.946	98.445	95.157	92.065	89.153			
65	128.821	123.570	118.677	114.111	109.844	105.851	102.109	98.597	95.298	92.195	89.272	86.516			

<sup>1</sup>Present value of monthly payments of \$1 made at the end of each month of disability entitlement and continuing beyond NRA. Entitlement ends upon death of the beneficiary (recovery termination is not considered prior to NRA). Payments are discounted to the beginning of the entitlement period using the stated annual effective interest rate, and continuance experience shown in **tables 8A and 8C**.



**Table 29A.—Female Disabled Workers  
Annual Life Annuity (excluding termination due to recovery prior to NRA)<sup>1</sup>**  
(2011-15 Social Security DI disability experience)

Entl age	Actuarial present value of \$1 annuity														
	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%			
16	41.974	36.810	32.555	29.020	26.061	23.563	21.440	19.622	18.054	16.693	15.504	14.459			
17	41.426	36.393	32.236	28.774	25.870	23.415	21.323	19.530	17.981	16.635	15.457	14.422			
18	40.904	35.997	31.934	28.544	25.693	23.279	21.218	19.448	17.918	16.586	15.420	14.393			
19	40.311	35.539	31.577	28.264	25.472	23.102	21.077	19.335	17.826	16.511	15.358	14.342			
20	39.801	35.149	31.278	28.033	25.293	22.962	20.968	19.248	17.757	16.456	15.315	14.307			
21	39.050	34.547	30.791	27.635	24.964	22.689	20.738	19.053	17.590	16.312	15.189	14.197			
22	38.336	33.975	30.328	27.258	24.654	22.431	20.521	18.869	17.433	16.176	15.071	14.093			
23	37.592	33.376	29.841	26.858	24.322	22.154	20.288	18.671	17.263	16.030	14.943	13.981			
24	36.894	32.814	29.386	26.486	24.016	21.899	20.074	18.491	17.110	15.898	14.829	13.882			
25	36.043	32.115	28.807	26.001	23.607	21.551	19.776	18.233	16.884	15.700	14.654	13.726			
26	35.216	31.436	28.243	25.529	23.209	21.212	19.485	17.981	16.665	15.507	14.484	13.574			
27	34.457	30.812	27.727	25.099	22.847	20.905	19.222	17.754	16.468	15.335	14.332	13.439			
28	33.724	30.212	27.231	24.685	22.500	20.612	18.972	17.540	16.283	15.174	14.190	13.315			
29	33.172	29.768	26.872	24.393	22.261	20.415	18.809	17.404	16.168	15.077	14.109	13.245			
30	32.630	29.331	26.517	24.105	22.024	20.219	18.646	17.268	16.055	14.981	14.027	13.175			
31	31.935	28.757	26.040	23.705	21.686	19.933	18.401	17.057	15.871	14.821	13.886	13.051			
32	31.316	28.248	25.618	23.353	21.391	19.683	18.188	16.874	15.714	14.684	13.766	12.945			
33	30.756	27.790	25.243	23.043	21.133	19.468	18.008	16.722	15.584	14.574	13.672	12.864			
34	30.105	27.249	24.791	22.663	20.812	19.194	17.774	16.520	15.410	14.422	13.539	12.747			
35	29.355	26.617	24.254	22.205	20.418	18.854	17.477	16.261	15.181	14.219	13.358	12.584			
36	28.769	26.130	23.848	21.863	20.129	18.608	17.267	16.080	15.025	14.083	13.239	12.480			
37	28.178	25.637	23.433	21.513	19.832	18.354	17.048	15.891	14.861	13.939	13.113	12.367			
38	27.592	25.146	23.020	21.163	19.534	18.099	16.830	15.702	14.696	13.796	12.987	12.257			
39	26.957	24.610	22.565	20.775	19.202	17.813	16.582	15.486	14.507	13.630	12.840	12.127			
40	26.314	24.064	22.099	20.375	18.855	17.512	16.319	15.255	14.303	13.449	12.679	11.983			
41	25.715	23.556	21.666	20.004	18.536	17.236	16.079	15.045	14.119	13.287	12.535	11.855			
42	25.159	23.085	21.264	19.660	18.241	16.980	15.857	14.852	13.950	13.137	12.403	11.737			
43	24.578	22.590	20.841	19.296	17.926	16.707	15.618	14.643	13.766	12.975	12.259	11.609			
44	23.789	21.903	20.240	18.768	17.460	16.293	15.250	14.313	13.469	12.706	12.015	11.387			
45	23.385	21.566	19.957	18.530	17.259	16.124	15.107	14.191	13.366	12.619	11.941	11.323			
46	22.750	21.015	19.478	18.111	16.892	15.800	14.820	13.936	13.138	12.414	11.757	11.157			
47	22.119	20.467	19.000	17.692	16.522	15.473	14.530	13.678	12.906	12.206	11.569	10.987			
48	21.432	19.864	18.468	17.222	16.105	15.100	14.195	13.377	12.634	11.960	11.344	10.782			
49	20.918	19.419	18.082	16.884	15.809	14.840	13.966	13.173	12.454	11.798	11.200	10.652			
50	21.302	19.803	18.462	17.259	16.177	15.200	14.317	13.515	12.785	12.120	11.512	10.954			
51	20.275	18.882	17.633	16.510	15.497	14.582	13.752	12.997	12.309	11.681	11.105	10.576			
52	19.763	18.434	17.240	16.164	15.192	14.311	13.511	12.782	12.117	11.508	10.949	10.436			
53	19.101	17.847	16.718	15.698	14.774	13.935	13.172	12.476	11.839	11.255	10.719	10.225			
54	18.553	17.363	16.289	15.317	14.435	13.633	12.901	12.232	11.619	11.057	10.539	10.061			
55	18.744	17.566	16.500	15.533	14.654	13.852	13.120	12.450	11.835	11.269	10.748	10.266			
56	17.898	16.802	15.807	14.903	14.080	13.327	12.639	12.007	11.426	10.891	10.398	9.941			
57	17.301	16.267	15.328	14.473	13.691	12.976	12.320	11.718	11.163	10.650	10.177	9.738			
58	16.775	15.799	14.910	14.098	13.355	12.673	12.047	11.471	10.939	10.447	9.992	9.570			
59	16.240	15.320	14.479	13.710	13.005	12.357	11.760	11.210	10.701	10.230	9.793	9.387			
60	15.738	14.869	14.073	13.344	12.673	12.056	11.487	10.961	10.474	10.022	9.602	9.212			
61	14.911	14.112	13.378	12.704	12.083	11.511	10.981	10.491	10.037	9.615	9.222	8.855			
62	14.261	13.519	12.837	12.208	11.628	11.092	10.596	10.135	9.707	9.309	8.938	8.591			
63	13.301	12.632	12.016	11.447	10.920	10.433	9.980	9.560	9.169	8.804	8.463	8.144			
64	12.460	11.855	11.296	10.778	10.299	9.854	9.440	9.054	8.695	8.359	8.045	7.750			
65	11.815	11.259	10.744	10.266	9.822	9.410	9.026	8.667	8.332	8.018	7.724	7.449			

<sup>1</sup>Present value of annual payments of \$1 made at the end of each year of disability entitlement and continuing beyond NRA. Entitlement ends upon death of the beneficiary (recovery termination is not considered prior to NRA). Payments are discounted to the beginning of the entitlement period using the stated annual effective interest rate, and continuance experience shown in **tables 8B and 8C**.

**Table 29B.—Female Disabled Workers  
Monthly Life Annuity (excluding termination due to recovery prior to NRA)<sup>1</sup>**  
(2011-15 Social Security DI disability experience)

Entl age	Actuarial present value of \$1 annuity														
	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%			
16	509.177	447.202	396.138	353.718	318.197	288.232	262.737	240.912	222.091	205.755	191.484	178.944			
17	502.600	442.197	392.306	350.765	315.909	286.428	261.338	239.809	221.218	205.060	190.929	178.498			
18	496.334	437.449	388.690	348.001	313.788	284.805	260.077	238.834	220.464	204.476	190.478	178.152			
19	489.225	431.949	384.405	344.640	311.131	282.692	258.385	237.469	219.355	203.571	189.734	177.536			
20	483.103	427.270	380.811	340.864	308.977	281.012	257.068	236.433	218.536	202.919	189.214	177.120			
21	474.087	420.045	374.965	337.089	305.038	277.731	254.310	234.092	216.531	201.188	187.706	175.795			
22	465.525	413.186	369.419	332.562	301.308	274.628	251.705	231.884	214.644	199.560	186.289	174.553			
23	456.597	405.991	363.569	327.762	297.336	271.311	248.910	229.509	212.608	197.802	184.759	173.211			
24	448.221	399.256	358.108	323.298	293.656	268.252	246.347	227.344	210.765	196.220	183.391	172.040			
25	438.005	390.866	351.156	318.745	288.751	264.078	242.763	224.243	208.059	193.842	181.286	170.144			
26	428.087	382.710	344.390	311.822	283.971	260.009	239.271	221.221	205.425	191.528	179.240	168.322			
27	418.975	375.232	338.201	306.658	279.625	256.321	236.117	218.501	203.062	189.459	177.416	166.703			
28	410.183	368.022	332.243	301.696	275.461	252.800	233.117	215.927	200.837	187.523	175.720	165.207			
29	403.558	362.696	327.936	298.191	272.592	250.437	231.158	214.294	199.466	186.367	174.738	164.369			
30	397.049	357.451	323.685	294.725	269.748	248.090	229.209	212.666	198.098	185.210	173.754	163.528			
31	388.712	350.566	317.957	289.927	265.701	244.651	226.268	210.132	195.901	183.292	172.070	162.040			
32	381.288	344.456	312.895	285.704	262.154	241.651	223.712	207.940	194.009	181.648	170.631	160.773			
33	374.569	338.968	308.387	281.981	259.062	239.069	221.545	206.111	192.457	180.323	169.496	159.794			
34	366.747	332.474	302.963	277.422	255.206	235.789	218.737	203.693	190.362	178.499	167.898	158.387			
35	357.748	324.891	296.530	271.928	250.484	231.702	215.179	200.576	187.615	176.063	165.726	156.440			
36	350.718	319.049	291.647	267.824	247.015	228.753	212.657	198.408	185.740	174.434	164.302	155.189			
37	343.629	313.128	286.673	263.622	243.443	225.701	210.034	196.140	183.769	172.710	162.787	153.851			
38	336.594	307.238	281.716	259.426	239.874	222.648	207.408	193.869	181.795	170.986	161.274	152.515			
39	328.970	300.805	276.259	254.773	235.885	219.210	204.431	191.278	179.529	168.994	159.515	150.955			
40	321.265	294.256	270.662	249.963	231.728	215.598	201.275	188.506	177.081	166.821	157.576	149.217			
41	314.070	288.156	265.465	245.513	227.898	212.286	198.396	185.991	174.874	164.875	155.852	147.683			
42	307.397	282.500	260.647	241.389	224.352	209.221	195.734	183.669	172.837	163.081	154.264	146.271			
43	300.427	276.561	255.562	237.015	220.572	205.939	192.872	181.161	170.631	161.131	152.533	144.728			
44	290.957	268.320	248.354	230.680	214.976	200.974	188.445	177.196	167.064	157.909	149.610	142.066			
45	286.114	264.270	244.960	227.828	212.574	198.946	186.730	175.742	165.830	156.859	148.716	141.303			
46	278.489	259.212	239.212	222.803	208.163	195.056	183.284	172.678	163.093	154.405	146.507	139.307			
47	270.923	251.089	233.471	217.770	203.731	191.137	179.804	169.575	160.315	151.908	144.254	137.266			
48	262.672	243.851	227.094	212.127	198.715	186.660	175.791	165.964	157.052	148.948	141.558	134.803			
49	256.511	238.514	222.454	208.077	195.167	183.540	173.037	163.524	154.882	147.011	139.824	133.244			
50	261.109	243.113	227.017	212.577	199.584	187.860	177.250	167.623	158.864	150.875	143.568	136.871			
51	248.792	232.066	217.071	203.588	191.430	180.436	170.468	161.406	153.146	145.598	138.686	132.339			
52	242.644	226.690	212.354	199.435	187.762	177.185	167.576	158.826	150.836	143.525	136.817	130.650			
53	234.704	219.648	206.087	193.840	182.749	172.679	163.514	155.151	147.503	140.491	134.049	128.116			
54	228.124	213.841	200.946	189.275	178.683	169.047	160.259	152.227	144.867	138.109	131.890	126.155			
55	230.422	216.274	203.473	191.862	181.305	171.681	162.890	154.839	147.452	140.658	134.397	128.614			
56	220.266	207.101	195.161	184.307	174.416	165.382	157.112	149.526	142.552	136.127	130.195	124.710			
57	213.097	200.690	189.413	179.138	169.754	161.167	153.291	146.053	139.386	133.235	127.547	122.278			
58	206.787	195.067	184.389	174.638	165.716	157.533	150.014	143.091	136.703	130.798	125.330	120.257			
59	200.375	189.321	179.226	169.989	161.519	153.735	146.568	139.957	133.847	128.190	122.942	118.066			
60	194.352	183.911	174.355	165.592	157.540	150.126	143.287	136.967	131.116	125.690	120.649	115.957			
61	184.427	174.823	166.012	157.915	150.459	143.579	137.221	131.335	125.875	120.802	116.081	111.681			
62	176.628	167.713	159.516	151.967	145.000	138.559	132.594	127.062	121.920	117.136	112.676	108.512			
63	165.101	157.066	149.661	142.825	136.502	130.645	125.209	120.157	115.454	111.068	106.973	103.143			
64	155.012	147.739	141.021	134.805	129.044	123.695	118.720	114.088	109.766	105.730	101.953	98.415			
65	147.269	140.585	134.396	128.657	123.327	118.369	113.749	109.438	105.410	101.641	98.109	94.794			

<sup>1</sup>Present value of monthly payments of \$1 made at the end of each month of disability entitlement and continuing beyond NRA. Entitlement ends upon death of the beneficiary (recovery termination is not considered prior to NRA). Payments are discounted to the beginning of the entitlement period using the stated annual effective interest rate, and continuance experience shown in **tables 8B and 8C**.

**Table 30A.—Male Disabled Workers  
Annual Life Annuity to Age 66<sup>1</sup>**  
(2011-15 Social Security DI disability experience)

Entl age	Actuarial present value of \$1 annuity														
	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%			
16	19.502	17.888	16.488	15.266	14.196	13.254	12.421	11.680	11.019	10.427	9.894	9.412			
17	20.400	18.700	17.222	15.932	14.800	13.803	12.921	12.137	11.437	10.809	10.245	9.735			
18	21.339	19.551	17.994	16.633	15.438	14.385	13.451	12.621	11.880	11.216	10.618	10.078			
19	22.380	20.498	18.856	17.419	16.155	15.040	14.051	13.171	12.385	11.680	11.046	10.472			
20	23.256	21.300	19.592	18.094	16.775	15.609	14.575	13.653	12.829	12.090	11.424	10.822			
21	23.791	21.802	20.062	18.532	17.183	15.989	14.928	13.981	13.134	12.373	11.687	11.067			
22	23.844	21.874	20.145	18.623	17.278	16.085	15.023	14.074	13.224	12.459	11.770	11.145			
23	23.567	21.649	19.962	18.473	17.154	15.983	14.938	14.003	13.164	12.408	11.726	11.107			
24	23.200	21.343	19.706	18.258	16.973	15.829	14.807	13.891	13.067	12.324	11.652	11.042			
25	22.612	20.835	19.266	17.874	16.636	15.531	14.542	13.654	12.855	12.132	11.478	10.883			
26	22.168	20.460	18.946	17.600	16.401	15.328	14.366	13.500	12.720	12.013	11.372	10.789			
27	21.915	20.255	18.780	17.466	16.292	15.241	14.295	13.443	12.674	11.976	11.342	10.765			
28	21.566	19.963	18.536	17.262	16.120	15.095	14.173	13.339	12.585	11.900	11.277	10.708			
29	21.180	19.639	18.262	17.030	15.924	14.929	14.031	13.219	12.482	11.812	11.201	10.643			
30	20.762	19.283	17.959	16.770	15.701	14.737	13.865	13.074	12.356	11.702	11.104	10.558			
31	20.574	19.137	17.847	16.686	15.640	14.694	13.836	13.058	12.349	11.703	11.111	10.569			
32	20.144	18.768	17.530	16.414	15.404	14.490	13.660	12.904	12.215	11.585	11.008	10.479			
33	19.627	18.318	17.136	16.068	15.100	14.221	13.421	12.692	12.025	11.415	10.855	10.340			
34	19.302	18.043	16.905	15.873	14.936	14.083	13.305	12.594	11.943	11.346	10.797	10.291			
35	18.827	17.631	16.546	15.560	14.662	13.894	13.094	12.408	11.779	11.201	10.668	10.177			
36	18.408	17.267	16.231	15.286	14.424	13.635	12.913	12.250	11.641	11.079	10.562	10.083			
37	18.007	16.921	15.931	15.027	14.200	13.441	12.745	12.104	11.514	10.969	10.466	10.000			
38	17.554	16.525	15.584	14.722	13.932	13.206	12.537	11.921	11.352	10.826	10.339	9.887			
39	17.004	16.036	15.149	14.334	13.585	12.894	12.258	11.669	11.125	10.621	10.153	9.718			
40	16.585	15.669	14.828	14.052	13.338	12.678	12.068	11.503	10.979	10.493	10.040	9.619			
41	16.042	15.185	14.394	13.665	12.990	12.366	11.788	11.250	10.751	10.287	9.854	9.450			
42	15.451	14.653	13.915	13.231	12.598	12.010	11.464	10.956	10.483	10.042	9.630	9.245			
43	14.957	14.211	13.519	12.877	12.281	11.726	11.209	10.727	10.277	9.856	9.462	9.094			
44	14.466	13.770	13.123	12.521	11.960	11.437	10.948	10.491	10.064	9.663	9.288	8.936			
45	13.865	13.223	12.625	12.067	11.545	11.057	10.601	10.173	9.772	9.395	9.041	8.708			
46	13.222	12.636	12.087	11.574	11.093	10.643	10.220	9.822	9.448	9.097	8.766	8.453			
47	12.646	12.109	11.605	11.131	10.687	10.269	9.876	9.506	9.157	8.828	8.517	8.223			
48	11.990	11.503	11.045	10.615	10.209	9.827	9.466	9.125	8.804	8.499	8.211	7.939			
49	11.495	11.050	10.630	10.234	9.860	9.507	9.172	8.856	8.556	8.272	8.002	7.746			
50	11.596	11.166	10.759	10.374	10.010	9.664	9.337	9.026	8.731	8.451	8.185	7.931			
51	10.714	10.339	9.982	9.644	9.323	9.018	8.728	8.452	8.190	7.939	7.701	7.474			
52	10.070	9.737	9.420	9.119	8.832	8.558	8.297	8.048	7.811	7.584	7.368	7.161			
53	9.402	9.110	8.831	8.565	8.311	8.068	7.836	7.614	7.402	7.198	7.004	6.817			
54	8.837	8.579	8.333	8.098	7.872	7.656	7.449	7.250	7.060	6.877	6.701	6.532			
55	8.612	8.377	8.152	7.935	7.727	7.528	7.336	7.151	6.974	6.803	6.639	6.480			
56	7.784	7.588	7.400	7.219	7.044	6.876	6.713	6.557	6.406	6.260	6.120	5.984			
57	7.111	6.947	6.789	6.636	6.488	6.346	6.208	6.075	5.946	5.821	5.700	5.584			
58	6.421	6.287	6.157	6.031	5.909	5.790	5.676	5.564	5.457	5.352	5.250	5.152			
59	5.729	5.622	5.517	5.416	5.317	5.221	5.128	5.038	4.949	4.864	4.780	4.699			
60	5.021	4.938	4.857	4.778	4.701	4.626	4.552	4.481	4.411	4.343	4.277	4.212			
61	4.209	4.149	4.090	4.032	3.976	3.921	3.867	3.814	3.763	3.712	3.663	3.615			
62	3.421	3.380	3.340	3.300	3.261	3.223	3.186	3.149	3.113	3.078	3.044	3.010			
63	2.569	2.544	2.520	2.496	2.472	2.449	2.426	2.403	2.381	2.359	2.338	2.317			
64	1.725	1.713	1.700	1.688	1.676	1.664	1.652	1.640	1.629	1.617	1.606	1.595			
65	0.884	0.880	0.875	0.871	0.867	0.863	0.858	0.854	0.850	0.846	0.842	0.838			

<sup>1</sup>Present value of annual payments of \$1 made at the end of each year of disability entitlement. Entitlement ends at termination due to death or recovery, or attainment of age 66 (NRA) of the beneficiary. Payments are discounted to the beginning of the entitlement period using the stated annual effective interest rate, and continuance experience shown in table 22A.

**Table 30B.—Male Disabled Workers  
Monthly Life Annuity to Age 66<sup>1</sup>**  
(2011-15 Social Security DI disability experience)

Entl age	Actuarial present value of \$1 annuity														
	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%			
16	238.745	219.542	202.860	188.300	175.531	164.280	154.322	145.467	137.560	130.469	124.083	118.309			
17	249.434	229.207	211.613	196.238	182.741	170.840	160.301	150.927	142.554	135.045	128.283	122.172			
18	260.604	239.338	220.810	204.598	190.351	177.778	166.634	156.717	147.857	139.909	132.752	126.285			
19	272.990	250.611	231.081	213.966	198.906	185.601	173.798	163.288	153.891	145.460	137.867	131.004			
20	283.388	260.155	239.841	222.009	206.295	192.394	180.049	169.044	159.199	150.359	142.394	135.192			
21	289.718	266.101	245.408	227.209	211.144	196.909	184.250	172.952	162.833	153.739	145.538	138.118			
22	290.301	266.907	246.363	228.256	212.241	198.025	185.362	174.043	163.892	154.758	146.512	139.044			
23	286.937	264.170	244.129	226.425	210.733	196.776	184.322	173.171	163.154	154.128	145.970	138.572			
24	282.490	260.467	241.031	223.823	208.536	194.912	182.731	171.806	161.976	153.104	145.074	137.783			
25	275.415	254.356	235.725	219.188	204.466	191.317	179.537	168.952	159.411	150.788	142.970	135.862			
26	270.069	249.819	231.858	215.878	201.619	188.857	177.400	167.086	157.774	149.343	141.688	134.719			
27	266.986	247.317	229.828	214.233	200.285	187.775	176.525	166.377	157.200	148.878	141.312	134.414			
28	262.752	243.777	226.862	211.741	198.187	186.004	175.024	165.103	156.114	147.949	140.513	133.725			
29	258.084	239.843	223.540	208.930	195.804	183.979	173.299	163.630	154.853	146.866	139.581	132.921			
30	253.029	235.536	219.859	205.775	193.091	181.640	171.275	161.872	153.321	145.527	138.405	131.883			
31	250.717	233.727	218.463	204.717	192.308	181.080	170.898	161.642	153.210	145.510	138.464	132.002			
32	245.509	229.259	214.621	201.406	189.448	178.603	168.747	159.769	151.573	144.076	137.204	130.891			
33	239.279	223.821	209.859	197.222	185.761	175.342	165.852	157.190	149.268	142.007	135.339	129.204			
34	235.316	220.472	207.029	194.832	183.742	173.638	164.414	155.978	148.246	141.147	134.617	128.598			
35	229.582	215.481	202.678	191.030	180.413	170.717	161.846	153.715	146.247	139.377	133.045	127.199			
36	224.497	211.071	198.847	187.698	177.510	168.185	159.633	151.778	144.549	137.885	131.732	126.041			
37	219.636	206.862	195.201	184.537	174.769	165.805	157.567	149.982	142.988	136.528	130.551	125.014			
38	214.147	202.052	190.980	180.829	171.506	162.930	155.030	147.741	141.004	134.770	128.991	123.626			
39	207.505	196.141	185.709	176.118	167.289	159.147	151.629	144.676	138.236	132.264	126.717	121.558			
40	202.416	191.676	181.791	172.680	164.269	156.494	149.297	142.627	136.435	130.681	125.325	120.334			
41	195.851	185.810	176.541	167.975	160.046	152.699	145.882	139.548	133.655	128.167	123.048	118.269			
42	188.724	179.381	170.734	162.720	155.284	148.376	141.950	135.966	130.387	125.178	120.311	115.756			
43	182.729	174.014	165.924	158.407	151.412	144.898	138.823	133.152	127.852	122.894	118.250	113.896			
44	176.779	168.661	161.104	154.062	147.493	141.360	135.626	130.261	125.235	120.522	116.099	111.943			
45	169.509	162.038	155.063	148.547	142.451	136.744	131.396	126.380	121.669	117.242	113.077	109.156			
46	161.766	154.948	148.566	142.586	136.977	131.711	126.764	122.111	117.732	113.606	109.716	106.045			
47	154.793	148.556	142.701	137.199	132.024	127.154	122.566	118.241	114.160	110.306	106.664	103.219			
48	146.871	141.239	135.937	130.940	126.228	121.781	117.580	113.610	109.855	106.300	102.932	99.740			
49	140.849	135.713	130.863	126.280	121.946	117.844	113.960	110.279	106.789	103.477	100.332	97.344			
50	141.790	136.841	132.156	127.716	123.507	119.513	115.722	112.120	108.697	105.441	102.342	99.392			
51	131.205	126.898	122.808	118.921	115.225	111.709	108.362	105.174	102.135	99.238	96.474	93.835			
52	123.402	119.598	115.975	112.522	109.229	106.087	103.088	100.224	97.487	94.871	92.368	89.974			
53	115.313	111.990	108.816	105.782	102.880	100.104	97.447	94.902	92.464	90.128	87.878	85.738			
54	108.400	105.491	102.704	100.033	97.470	95.012	92.653	90.387	88.210	86.119	84.108	82.175			
55	105.376	102.737	100.202	97.764	95.419	93.164	90.994	88.904	86.891	84.953	83.084	81.283			
56	95.398	93.216	91.113	89.085	87.129	85.242	83.421	81.662	79.964	78.323	76.737	75.204			
57	87.189	85.378	83.628	81.935	80.297	78.711	77.177	75.692	74.253	72.859	71.508	70.199			
58	78.774	77.306	75.882	74.502	73.162	71.861	70.599	69.373	68.182	67.026	65.902	64.809			
59	70.305	69.147	68.020	66.923	65.856	64.818	63.806	62.821	61.862	60.928	60.017	59.129			
60	61.622	60.742	59.883	59.045	58.227	57.428	56.648	55.886	55.141	54.414	53.703	53.009			
61	51.773	51.151	50.543	49.948	49.364	48.793	48.234	47.686	47.149	46.622	46.107	45.601			
62	42.175	41.765	41.363	40.968	40.581	40.199	39.825	39.457	39.095	38.740	38.397	38.047			
63	31.881	31.647	31.415	31.188	30.963	30.742	30.524	30.309	30.098	29.889	29.683	29.480			
64	21.622	21.514	21.407	21.301	21.197	21.093	20.991	20.890	20.790	20.691	20.594	20.497			
65	11.246	11.216	11.187	11.158	11.129	11.100	11.072	11.043	11.015	10.988	10.960	10.933			

<sup>1</sup>Present value of monthly payments of \$1 made at the end of each month of disability entitlement. Entitlement ends at termination due to death or recovery, or attainment of age 66 (NRA) of the beneficiary. Payments are discounted to the beginning of the entitlement period using the stated annual effective interest rate, and continuance experience shown in table 22A.

**Table 31A.—Female Disabled Workers  
Annual Life Annuity to Age 66<sup>1</sup>**  
(2011-15 Social Security DI disability experience)

Entl age	Actuarial present value of \$1 annuity														
	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%			
16	20.491	18.736	17.218	15.897	14.744	13.730	12.837	12.044	11.339	10.708	10.142	9.631			
17	21.237	19.418	17.841	16.468	15.266	14.210	13.277	12.450	11.713	11.053	10.461	9.927			
18	22.083	20.190	18.546	17.113	15.857	14.751	13.774	12.907	12.134	11.442	10.821	10.260			
19	23.041	21.064	19.345	17.843	16.525	15.364	14.336	13.424	12.610	11.881	11.226	10.635			
20	23.920	21.870	20.084	18.521	17.147	15.936	14.862	13.908	13.056	12.293	11.606	10.987			
21	24.216	22.158	20.361	18.784	17.397	16.170	15.083	14.114	13.249	12.473	11.774	11.144			
22	24.338	22.290	20.497	18.922	17.532	16.303	15.210	14.236	13.364	12.581	11.876	11.239			
23	24.232	22.220	20.454	18.900	17.526	16.307	15.222	14.254	13.386	12.606	11.902	11.265			
24	23.901	21.948	20.230	18.714	17.371	16.177	15.113	14.161	13.307	12.538	11.843	11.213			
25	23.408	21.529	19.872	18.405	17.104	15.945	14.909	13.981	13.147	12.395	11.715	11.097			
26	23.020	21.204	19.599	18.176	16.909	15.779	14.767	13.859	13.041	12.303	11.633	11.026			
27	22.798	21.029	19.462	18.069	16.826	15.716	14.719	13.823	13.015	12.284	11.621	11.017			
28	22.493	20.781	19.259	17.903	16.691	15.605	14.629	13.750	12.955	12.235	11.581	10.985			
29	22.253	20.590	19.109	17.785	16.600	15.535	14.577	13.711	12.928	12.217	11.570	10.980			
30	21.981	20.369	18.930	17.641	16.484	15.443	14.503	13.653	12.882	12.182	11.543	10.960			
31	21.648	20.094	18.702	17.453	16.329	15.314	14.397	13.566	12.810	12.123	11.495	10.920			
32	21.280	19.784	18.442	17.233	16.143	15.158	14.265	13.453	12.715	12.041	11.425	10.861			
33	20.936	19.497	18.202	17.033	15.976	15.019	14.149	13.357	12.635	11.975	11.371	10.816			
34	20.584	19.202	17.954	16.826	15.803	14.874	14.028	13.256	12.551	11.906	11.313	10.769			
35	20.147	18.826	17.631	16.547	15.562	14.665	13.846	13.098	12.414	11.785	11.207	10.676			
36	19.632	18.378	17.240	16.206	15.263	14.403	13.616	12.895	12.234	11.626	11.066	10.550			
37	19.206	18.012	16.925	15.934	15.028	14.200	13.441	12.745	12.104	11.513	10.969	10.465			
38	18.831	17.692	16.651	15.700	14.830	14.031	13.297	12.622	12.000	11.426	10.895	10.403			
39	18.312	17.236	16.252	15.349	14.521	13.759	13.057	12.410	11.812	11.260	10.747	10.272			
40	17.789	16.775	15.845	14.990	14.203	13.477	12.807	12.188	11.615	11.084	10.590	10.132			
41	17.263	16.310	15.433	14.625	13.879	13.190	12.552	11.961	11.413	10.903	10.429	9.988			
42	16.775	15.879	15.052	14.287	13.580	12.924	12.316	11.751	11.226	10.737	10.281	9.855			
43	16.233	15.396	14.621	13.903	13.236	12.617	12.041	11.505	11.006	10.539	10.104	9.696			
44	15.564	14.791	14.073	13.406	12.786	12.208	11.669	11.166	10.697	10.257	9.845	9.459			
45	15.146	14.421	13.746	13.118	12.531	11.983	11.471	10.992	10.543	10.123	9.728	9.357			
46	14.490	13.825	13.204	12.624	12.081	11.572	11.096	10.649	10.229	9.835	9.463	9.114			
47	13.856	13.248	12.678	12.143	11.642	11.171	10.729	10.313	9.921	9.552	9.204	8.876			
48	13.192	12.638	12.118	11.630	11.170	10.737	10.329	9.944	9.581	9.238	8.914	8.608			
49	12.607	12.102	11.627	11.179	10.757	10.358	9.981	9.624	9.287	8.968	8.665	8.379			
50	12.583	12.102	11.648	11.219	10.813	10.428	10.064	9.718	9.391	9.080	8.785	8.504			
51	11.620	11.201	10.804	10.427	10.070	9.731	9.408	9.102	8.811	8.534	8.270	8.018			
52	10.970	10.597	10.242	9.905	9.583	9.278	8.986	8.709	8.444	8.192	7.950	7.720			
53	10.232	9.905	9.594	9.297	9.014	8.743	8.485	8.238	8.002	7.776	7.559	7.352			
54	9.542	9.258	8.986	8.726	8.477	8.238	8.010	7.791	7.581	7.380	7.187	7.001			
55	9.160	8.905	8.661	8.426	8.201	7.985	7.777	7.578	7.386	7.201	7.024	6.853			
56	8.286	8.073	7.869	7.673	7.484	7.301	7.126	6.957	6.794	6.636	6.484	6.338			
57	7.515	7.339	7.169	7.005	6.847	6.694	6.546	6.404	6.265	6.132	6.003	5.878			
58	6.763	6.620	6.481	6.347	6.217	6.091	5.969	5.850	5.735	5.624	5.516	5.411			
59	5.985	5.872	5.762	5.655	5.551	5.450	5.351	5.256	5.163	5.073	4.985	4.899			
60	5.191	5.105	5.020	4.938	4.858	4.780	4.704	4.629	4.557	4.486	4.417	4.349			
61	4.325	4.262	4.202	4.142	4.084	4.027	3.972	3.917	3.864	3.812	3.761	3.711			
62	3.496	3.454	3.413	3.372	3.333	3.294	3.255	3.218	3.181	3.145	3.109	3.074			
63	2.623	2.598	2.573	2.548	2.524	2.500	2.477	2.454	2.431	2.408	2.386	2.365			
64	1.760	1.747	1.734	1.722	1.709	1.697	1.685	1.673	1.661	1.650	1.638	1.627			
65	0.897	0.892	0.888	0.883	0.879	0.875	0.871	0.866	0.862	0.858	0.854	0.850			

<sup>1</sup>Present value of annual payments of \$1 made at the end of each year of disability entitlement. Entitlement ends at termination due to death or recovery, or attainment of age 66 (NRA) of the beneficiary. Payments are discounted to the beginning of the entitlement period using the stated annual effective interest rate, and continuance experience shown in **table 22B**.

**Table 31B.—Female Disabled Workers  
Monthly Life Annuity to Age 66<sup>1</sup>**  
(2011-15 Social Security DI disability experience)

Entl age	Actuarial present value of \$1 annuity														
	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%			
16	250.426	229.573	211.508	195.782	182.028	169.941	159.269	149.803	141.370	133.825	127.045	120.929			
17	259.290	237.678	218.923	202.574	188.255	175.657	164.524	154.643	145.835	137.951	130.865	124.471			
18	269.333	246.856	227.318	210.257	195.296	182.118	170.462	160.108	150.872	142.602	135.167	128.458			
19	280.705	257.246	236.815	218.949	203.258	189.421	177.170	166.278	156.557	147.847	140.014	132.945			
20	291.130	266.816	245.601	227.015	210.669	196.235	183.439	172.052	161.881	152.762	144.557	137.149			
21	294.606	270.198	248.856	230.122	213.614	199.014	186.052	174.503	164.174	154.904	146.557	139.014			
22	295.990	271.713	250.437	231.722	215.201	200.562	187.545	175.930	165.530	156.185	147.761	140.143			
23	294.654	270.815	249.873	231.412	215.080	200.582	187.668	176.125	165.774	156.462	148.057	140.448			
24	290.645	267.515	247.146	229.148	213.191	198.998	186.331	174.990	164.803	155.625	147.330	139.811			
25	284.697	262.451	242.810	225.415	209.958	196.180	183.860	172.810	162.868	153.896	145.776	138.405			
26	279.994	258.514	239.501	222.621	207.588	194.160	182.129	171.318	161.574	152.768	144.785	137.530			
27	277.269	256.358	237.804	221.291	206.553	193.361	181.518	170.857	161.232	152.519	144.610	137.413			
28	273.568	253.329	235.324	219.261	204.892	192.001	180.406	169.947	160.488	151.912	144.115	137.008			
29	270.626	250.983	233.464	217.796	203.748	191.119	179.735	169.447	160.127	151.662	143.954	136.919			
30	267.293	248.273	231.265	216.017	202.314	189.966	178.814	168.716	159.551	151.213	143.608	136.657			
31	263.249	244.916	228.479	213.707	200.398	188.380	177.501	167.631	158.655	150.474	143.001	136.159			
32	258.771	241.143	225.297	211.019	198.124	186.454	175.867	166.242	157.473	149.465	142.137	135.418			
33	254.582	237.635	222.359	208.560	196.069	184.736	174.434	165.047	156.478	148.639	141.454	134.853			
34	250.294	234.029	219.327	206.013	193.930	182.943	172.931	163.791	155.430	147.766	140.729	134.254			
35	244.994	229.464	215.389	202.609	190.983	180.385	170.707	161.852	153.735	146.281	139.423	133.103			
36	238.761	224.033	210.648	198.462	187.348	177.192	167.896	159.372	151.541	144.336	137.694	131.561			
37	233.589	219.572	206.797	195.136	184.473	174.706	165.745	157.510	149.928	142.937	136.481	130.508			
38	229.023	215.658	203.444	192.265	182.018	172.608	163.954	155.983	148.629	141.834	135.547	129.719			
39	222.733	210.133	198.586	187.989	178.249	169.282	161.016	153.384	146.327	139.793	133.734	128.107			
40	216.401	204.542	193.643	183.613	174.370	165.840	157.957	150.662	143.901	137.627	131.798	126.374			
41	210.028	198.897	188.638	179.172	170.424	162.330	154.832	147.876	141.414	135.406	129.810	124.593			
42	204.100	193.642	183.977	175.034	166.748	159.062	151.923	145.285	139.105	133.345	127.970	122.948			
43	197.533	187.779	178.739	170.349	162.556	155.307	148.558	142.266	136.395	130.910	125.780	120.977			
44	189.456	180.467	172.111	164.335	157.092	150.336	144.030	138.137	132.624	127.461	122.621	118.080			
45	184.339	175.927	168.084	160.766	153.930	147.538	141.555	135.951	130.695	125.762	121.128	116.769			
46	176.420	168.715	161.511	154.768	148.453	142.531	136.975	131.756	126.849	122.233	117.886	113.788			
47	168.758	161.720	155.120	148.925	143.107	137.636	132.489	127.641	123.073	118.764	114.697	110.854			
48	160.727	154.343	148.338	142.685	137.360	132.341	127.605	123.133	118.908	114.913	111.133	107.553			
49	153.618	147.817	142.345	137.179	132.299	127.686	123.322	119.191	115.277	111.568	108.049	104.709			
50	153.069	147.558	142.344	137.408	132.732	128.299	124.096	120.106	116.317	112.716	109.292	106.035			
51	141.526	136.739	132.196	127.881	123.783	119.886	116.180	112.652	109.293	106.093	103.041	100.131			
52	133.638	129.389	125.345	121.494	117.824	114.326	110.989	107.804	104.763	101.859	99.083	96.428			
53	124.714	121.016	117.486	114.113	110.889	107.808	104.860	102.038	99.337	96.750	94.270	91.893			
54	116.352	113.149	110.081	107.141	104.324	101.622	99.030	96.543	94.154	91.860	89.657	87.538			
55	111.488	108.637	105.898	103.267	100.737	98.304	95.964	93.711	91.543	89.455	87.444	85.506			
56	100.973	98.616	96.345	94.156	92.045	90.008	88.044	86.148	84.317	82.549	80.842	79.191			
57	91.641	89.704	87.832	86.022	84.272	82.578	80.939	79.353	77.817	76.330	74.889	73.492			
58	82.524	80.963	79.450	77.982	76.558	75.176	73.835	72.533	71.269	70.041	68.848	67.689			
59	73.070	71.852	70.667	69.514	68.392	67.300	66.237	65.201	64.193	63.211	62.254	61.322			
60	63.428	62.514	61.622	60.752	59.903	59.073	58.264	57.473	56.700	55.945	55.208	54.487			
61	52.977	52.338	51.711	51.098	50.497	49.909	49.333	48.768	48.215	47.673	47.142	46.622			
62	42.936	42.517	42.106	41.702	41.306	40.916	40.533	40.157	39.787	39.423	39.066	38.715			
63	32.406	32.167	31.931	31.698	31.469	31.244	31.021	30.802	30.585	30.372	30.162	29.955			
64	21.925	21.815	21.706	21.599	21.492	21.387	21.283	21.180	21.079	20.978	20.879	20.780			
65	11.327	11.297	11.268	11.238	11.209	11.180	11.152	11.123	11.095	11.067	11.039	11.012			

<sup>1</sup>Present value of monthly payments of \$1 made at the end of each month of disability entitlement. Entitlement ends at termination due to death or recovery, or attainment of age 66 (NRA) of the beneficiary. Payments are discounted to the beginning of the entitlement period using the stated annual effective interest rate, and continuance experience shown in table 22B.

# **APPENDIX**





## V. STUDY POPULATION AND METHODS

### A. Overview

This study is based on over 16.6 million records of Social Security Disability Insurance (DI) worker beneficiaries drawn from the administration's Master Beneficiary Record (MBR) in February 2019. The 5-year observation period covers January 1, 2011 through December 31, 2015. These records provide 34.8 million life-years of exposure for males and 31.6 million life-years of exposure for females. The primary variables of interest are: the reason for termination of benefits, the age at entitlement, the number of years since entitlement, and sex of the beneficiary.

The main reasons that disabled workers stop receiving disability benefits are:

- Conversion to old-age benefits;
- Death of the beneficiary; and
- Recovery—includes medical recovery or return to SGA.

There are a small number of terminations due to other reasons that are not explicitly examined. The table below provides the number of deaths and recoveries observed during the observation period. To a certain extent, this study traverses the activity of the OASI rolls by tracking deaths of former disabled workers who converted to old-age worker benefits either by choice or upon attaining normal retirement age.

**Number of Disabled Worker Terminations, by Reason**  
(January 2011-December 2015)

Reason	Male	Female	Total
Death	1,401,390	939,400	2,340,790
Recovery	133,275	121,957	255,232
Total	1,534,665	1,061,357	2,596,022

Source: MBR database as of February 2019. Refer to Table 5 in section IV for the number of conversions and terminations due to other reasons. The number of deaths and recoveries shown above will differ from those found in Table 5 due to differences in statistical methods used in tabulations. The number of deaths will be dramatically different as they include a substantial number from the OASI rolls.

### B. Data Considerations

Death termination experience of the DI rolls is affected by several unique circumstances. Since experience begins with entitlement, deaths that occur during the 5-month waiting period prior to entitlement to DI benefits are outside the scope of this study. It is also true that a claimant may die in the first month of entitlement, or before final disposition of the disability claim—in which case only retroactive disability benefits may be payable. These cases are handled by counting the death, but crediting no exposure on the record.

Participants in this study may have multiple periods of disability under examination. There are instances, however, where very little time passes between periods of entitlement for reasons such as a failed work-attempt, an expedited reinstatement, or a successful appeal of an unfavorable CDR. So although a recovery termination has occurred, the beneficiary may be back on the rolls shortly thereafter. Also, it is not uncommon for beneficiaries with multiple periods of disability to become re-entitled under the same or a similar impairment. Although re-entering the rolls at a different entitlement age, such individuals may, in essence, recover from the same disability more than once.

### C. Data Selection

After various screenings and checks, data for up to five separate periods of disability were included for the following beneficiaries in the final overall sample:

- Workers entitled to disability benefits at some time during the observation period;
- Workers entitled to old-age benefits at some time during the observation period who are former disabled-worker beneficiaries with no break between DI and OASI entitlement.

In prior versions of this study, exclusions were made for persons from the Special Disability Workload (SDW)—SSI recipients who were potentially eligible for DI benefits due to previously unrecognized disability-insured status. The exclusions and adjustments are no longer needed as the processing of this workload was completed before the observation period of the current study.

### D. Methods

The availability of complete data on each person in the study (sex, date of birth, date of entitlement, date of decrement, and cause of decrement) allows for direct estimation of the *multiple-decrement probabilities*  $q^{(i)}$ , where  $i$  represents the cause of decrement. Each unit age interval  $(x, x + 1]$  represents one life-year of potential exposure. For each interval that an individual is under observation, the person enters the interval at age  $x + r$  ( $0 \leq r < 1$ ), and is scheduled to exit the interval at age  $x + s$  ( $0 < s \leq 1$ ). Note that  $r = 0$  except for instances where the beginning of the observation period falls within the age interval. Similarly  $s = 1$  except for instances where the end of the observation period falls within the interval. Clearly,  $s - r$  is the amount of time that the person is scheduled to be exposed to the risks of decrement. The total *scheduled exposure* for an interval is obtained by summing over all persons.<sup>27</sup>

<sup>27</sup>For a complete discussion, refer to *Survival Models and Their Estimation* (London 1988, second edition).

As an example of the above method, consider a disabled worker entering an interval at age  $x + r$ . The *scheduled ending age*,  $x + s$ , is established for the interval under the expectation that the person will either survive to the end ( $s = 1$ ), or exit the study due to the end of the observation period ( $s < 1$ ). Scheduled exposure is then credited as follows: if the person survives to the end of the interval, then exposure is credited from  $x + r$  to  $x + 1$ ; if the person dies or recovers during the interval, exposure is still credited from  $x + r$  to  $x + 1$ ;<sup>28</sup> if the observation period ends during the interval, then exposure is credited from  $x + r$  to  $x + s$ . A modification is made to the way exposure is calculated for determining recovery probabilities. Since recovery is no longer a consideration after converting to old-age benefits, exposure is credited only up until the month of the switch.

Multiple-decrement probabilities are calculated by dividing the observed number of deaths or recoveries in an interval by the aggregate scheduled exposure for that interval. As will be discussed later, *single-decrement (absolute) rates* can be derived from these probabilities by using a constant force assumption for the distribution of decrement within the interval.<sup>29</sup>

**E. Entitlement Age and Exposure**

This is a select-and-ultimate study with a 10-year select period implying that the risks of decrement for beneficiaries 10 or more years beyond entitlement are no longer a function of entitlement age, but a function of attained age only.

Rarely does entitlement to disability benefits occur on a beneficiary’s birthday. To facilitate exposure calculations, *insuring age* and the corresponding *insuring date of birth* may be substituted for the actual age at entitlement and the actual date of birth, respectively. This study uses an insuring age that is set at the beneficiary’s *age last birthday* as of entitlement. As an example:

- Date of entitlement:** February 1, 2015
- Date of birth:** July 10, 1970
- Actual age at entitlement:** 44 years, 206 days
- Insuring age:** 44 years
- Insuring date of birth:** February 1, 1971

Use of the integral insuring age at entitlement ensures that subsequent durations begin on the beneficiary’s birthday. This is true whether the participant enters the study during the observation period, or is already part of the entitlement group when the observation period opens.

<sup>28</sup>All persons are *expected* to survive to the end of the interval, even those who wind up dying or recovering at age  $x + t \leq x + s$ . The important point is that decrement was not expected so the scheduled ending age is set at  $x + 1$ .  
<sup>29</sup>For a complete discussion on multiple-decrement probabilities, the associated single-decrement rates, and construction of the select-and-ultimate multiple-decrement tables found in this study, the reader is referred to *Actuarial Mathematics* (Bowers et al. 1997).

**F. Duration and Graduation**

The unit intervals for which a beneficiary is under observation are called *durations*. For each entitlement age  $[x]$  and duration  $n$ , the quantity  $s - r$  represents the amount of exposure contributed to the observation interval  $([x] + n, [x] + n + 1)$ . For durations beyond the 10-year select period, exposure is credited to the appropriate attained age interval  $(x + n, x + n + 1)$ .

The select-and-ultimate multiple-decrement probabilities are graduated using the two-dimensional Whittaker-Henderson Type B method.<sup>30</sup> The horizontal and vertical smoothing coefficients were chosen to obtain some degree of smoothness within individual durations (columns) as well as within entitlement ages (rows), without deviating much from the original estimates.

**G. Continuance Tables**

Continuance Tables 8A-8C are constructed from select-and-ultimate death probabilities. The values  $l_{[x]}, l_{[x]+1}, \dots, l_{110}$  are first calculated for entitlement age  $[x] = 16$ , using a radix of 100,000. This step determines values for the ultimate period of the table and attained ages greater than 75. Values for entitlement ages  $[x] > 16$  are then derived from the ultimate values by working backwards. For example,  $l_{[x]}$  is determined from  $l_{x+10}$  using the survival probabilities of the select period for the given entitlement age. The value for  $l_{[x]+t}$  is the number of lives remaining from the original  $l_{[x]}$  who have attained age  $[x] + t$ . The number alive at any given entitlement or attained age is not an actual count of disability beneficiaries, but is the product of combining probabilities with an arbitrary radix.

Continuance tables for the decrement of recovery (15A-15B) and the combined decrements of death and recovery (22A-22C) are constructed in the same manner. Since recovery is no longer considered after attaining normal retirement age, Tables 15A-15B are truncated after attained age 65.<sup>31</sup>

The continuance tables are read across the row, or *select period*, for 0-10 years since entitlement, then down the last column, or *ultimate period* for 10 or more years since entitlement. The example below uses numbers from Table 8A for male disabled beneficiaries becoming entitled at age 50.

Completed years of entitlement	Number living	Probability of continuance	Attained age
0	78,815	1.000	50
1	75,453	.957	51
5	67,568	.857	55
10	58,051	.737	60
15	47,884	.608	65

<sup>30</sup>For details, refer to *Graduation: The Revision of Estimates* (London 1985).  
<sup>31</sup>For the observation period 2011-15, all disabled beneficiaries born 1945-49 are converted to old-age benefits at age 66. (Disability beneficiaries born 1944 or earlier will have converted before beginning of observation period.) See chart in section I.

### H. Expected Future Time on Rolls

Tables showing *expected future time on the rolls* are derived from the continuance functions described above using the basic actuarial principles found in any standard actuarial text on life contingencies. We also present in this study the results of aggregating over duration, by entitlement age (see Tables 11, 18, and 25) or attained age (see Tables 12, 19, and 26).

Expected future time for a specific *entitlement* age is an exposure-weighted average of the expected future time at each duration of that age. This differs from the expected future time for a specific *attained* age, which is an exposure-weighted average of the expected future time at various durations of various entitlement ages.

For example, expected future time for *entitlement* age 40 is a weighted average of the expected times across the select row and down the ultimate column. Each cell represents a different attained age. In contrast, expected future time for *attained* age 40 is a weighted average of the expected times for a 40-year-old at duration 0, a 39-year-old at duration 1,...and a 16-year-old at duration 24—all of whom are attained age 40.

### I. Probabilities and Absolute Rates

In this study we present probabilities of decrement for two of the several decrements affecting the disabled population—death and recovery. The symbol  $q^{(d)}$  represents the probability of death in the presence of the other decrements and is defined as follows:

$$q_x^{(d)} = \int_0^1 {}_tP_x^{(\tau)} \mu_{x+t}^{(d)} dt$$

where  $p^{(\tau)}$  is the probability of continuance under all decrements; and  $\mu^{(d)}$  is the force of mortality. The probability of recovery  $q^{(r)}$  is similarly defined.

For each cause of decrement in a multiple-decrement model, it is possible to associate a single-decrement rate that depends only on a particular cause of decrement. For example,  $q'^{(d)}$  represents the *single-decrement (absolute) rate* of death and is defined as follows:

$$q_x'^{(d)} = \int_0^1 {}_tP_x'^{(d)} \mu_{x+t}^{(d)} dt$$

where  $p'^{(d)}$  is the probability of *not dying*. In this representation, beneficiaries who decrement for causes other than death are “taken out” of the total number exposed. Observation stops at the point of non-death decrement resulting in total exposure which is somewhat less than that used in formulating death probabilities.

For example, the multiple-decrement probability  $q^{(d)}$  is calculated for each combination of entitlement age and duration by dividing the observed number of deaths by the exposure for that cell. Assuming a uniform distribution for each decrement over the age interval  $(x, x + 1)$ , the absolute rate of death  $q'^{(d)}$  can be calculated by dividing the observed number of deaths by the exposure for that cell reduced by one-half of the number of recoveries observed for that cell. The absolute rate of recovery  $q'^{(r)}$  is similarly defined.

This study uses an alternative method to calculate absolute rates. First, derive the total decrement probability:

$$q^{(\tau)} = q^{(d)} + q^{(r)}$$

Then derive the absolute rates using the assumption of constant force for each decrement over the age interval  $(x, x + 1)$ :

$$q'^{(d)} = 1 - [1 - q^{(\tau)}]^{q^{(d)}/q^{(\tau)}}$$

$$q'^{(r)} = 1 - [1 - q^{(\tau)}]^{q^{(r)}/q^{(\tau)}}$$

Absolute rates are presented on a “per thousand” basis.

### J. Annuity Tables

In general, a *life annuity* is a series of payments made at regular intervals (such as months or years) during the lifetime of the annuitant. Payments may be limited to a given number of years, or payable for the whole of life, and are made at the beginning (*due*) or end (*immediate*) of each period. Any standard actuarial text on life contingencies will explain the present value calculation of an annuity.

The table below illustrates the present value of lifetime combined DI and OASI benefits (considering only the possibility of death), as well as DI benefits to age 66 (NRA) for a male worker entitled to disability benefits at age 50. To simplify calculations, we assume no cost-of-living adjustments to benefits.

**Present Value of Future Benefits, Male Age 50**  
(3 percent annual interest rate)

<b>\$14,400 annual payment</b>	
Annuity value (Table 28A)	13.126
Life annuity	\$189,014
Annuity value (Table 30A)	9.664
Life annuity to age 66	\$139,162
<b>\$1,200 monthly payment</b>	
Annuity value (Table 28B)	162.965
Life annuity	\$195,558
Annuity value (Table 30B)	119.513
Life annuity to age 66	\$143,416

### **K. Adjusted Decrement Rates**

Shifts in the age, gender, and impairment composition of the DI rolls occur over time. To compare disability rates of termination due to death and recovery between different observation periods, we need to eliminate the distortions caused by these shifts. Gross rates are adjusted to provide a measure of the rate at which disabled individuals are dying or recovering that is independent of demographic and programmatic shifts.

As explained in section D of this appendix, *gross* decrement rates are calculated by dividing the observed number of terminations due to death or recovery in an interval by the aggregate exposure for that interval. *Adjusted* decrement rates for a group of beneficiaries in a particular observation period are calculated by dividing the adjusted number of terminations due to death or recovery by the aggregate exposure for that group in the *standard* DI beneficiary population. “Adjusted decrements” represent the number that would occur in a group if the exposure had the same age-sex-duration-specific profile as the exposure of the standard population, and are computed by multiplying the age-sex-duration-specific decrement rates of the particular observation period by the age-sex-duration-specific exposures of the standard population. The resulting adjusted decrements are summed across durations (or over entitlement ages) and divided by the corresponding exposure of the standard population to get duration-adjusted (or age-adjusted) rates.

The following tables compare the adjusted death and recovery rates for various age and duration groupings, over the 20-year period 1996-2015. Results are split into four different 5-year observation periods. The standard DI beneficiary exposure population used in the calculations corresponds to the 2011-15 observation period.

**Tables K1-K3** show adjusted death rates by various entitlement age, attained age, and duration groupings. In general, DI disabled worker death rates have steadily declined over all observation periods. The overall death rate of roughly 46 deaths per thousand as measured over the period 1996-2000 has fallen to 35 per thousand by 2011-15. There was a decline from each observation period to the next with about half of the decline occurring in observation period 2006-10. Over the entire 20-year period, the overall mortality rate fell by 11 per thousand for males, and 8 per thousand for females. The reasons for mortality improvement among disabled workers have been discussed in detail in this and the prior actuarial studies dedicated to the specific observation periods. Main factors include a greater proportion of musculoskeletal and mental impairments, advancement in medical treatments, and broader use of vocational factors in disability determinations.

**Tables K4-K6** show adjusted recovery rates by various entitlement age, attained age, and duration groupings. Chance of recovery is not applicable beyond normal retirement age, at which time disabled workers are converted to old-age benefits. As detailed throughout the prior studies, changes in recovery experience can be less intuitive than changes in mortality experience since rates are largely affected by exogenous variables. The overall recovery rate spiked to 9.6 recoveries per thousand in 1996-00 before settling back to 6.6 in 2001-05. This was followed by a drop to 5.2 in 2006-10 and remained at 5.2 in 2011-15. The erratic pattern is, in part, due to a spike in recoveries from eliminating DA&A impairments in the 1996-00 period, followed by constraints in special funding needed to complete CDRs in the 2006-10 period.

**Table K1.—Adjusted DI Disabled Worker DEATH Rates  
Comparison by Entitlement Age**  
(Deaths per 1000 beneficiaries)

Entl Age	Observation Period			
	1996-00	2001-05	2006-10	2011-15
<b>Male</b>				
16-19	10.11	10.61	10.25	10.80
20-24	12.22	13.07	12.90	12.86
25-29	18.21	18.56	18.18	18.19
30-34	24.27	23.18	22.09	22.15
35-39	30.04	28.94	26.44	26.39
40-44	38.41	36.42	32.54	32.03
45-49	48.72	46.26	41.27	39.77
50-54	58.02	53.84	47.63	44.87
55-59	68.37	62.41	54.39	50.77
60+	86.55	79.64	67.80	61.47
Total	51.71	48.28	42.59	40.26
<b>Female</b>				
16-19	8.51	8.31	7.97	8.05
20-24	10.20	10.14	9.74	9.81
25-29	13.20	12.97	12.78	13.25
30-34	15.79	15.48	14.89	15.47
35-39	20.04	19.06	17.83	18.59
40-44	25.88	24.56	22.40	22.62
45-49	34.13	31.84	28.76	28.10
50-54	40.98	38.36	33.77	32.17
55-59	51.11	48.09	41.62	38.19
60+	67.58	66.33	54.83	49.44
Total	37.40	35.61	31.26	29.70
<b>Total</b>				
16-19	9.57	9.82	9.38	9.73
20-24	11.53	12.02	11.67	11.65
25-29	16.36	16.36	15.85	16.01
30-34	21.00	19.97	18.85	19.02
35-39	25.96	24.55	22.40	22.60
40-44	33.01	30.87	27.61	27.32
45-49	42.14	39.28	35.04	33.81
50-54	50.31	46.37	40.79	38.47
55-59	61.08	55.98	48.53	44.87
60+	79.39	74.28	62.40	56.31
Total	45.69	42.59	37.33	35.23

**Table K2.—Adjusted DI Disabled Worker DEATH Rates  
Comparison by Attained Age**  
(Deaths per 1000 beneficiaries)

Attained Age	Observation Period			
	1996-00	2001-05	2006-10	2011-15
<b>Male</b>				
16-19	16.81	10.97	9.14	9.20
20-24	15.23	10.74	9.55	8.56
25-29	16.81	12.81	10.86	9.50
30-34	21.16	15.42	13.29	11.55
35-39	22.50	18.35	16.15	14.05
40-44	25.80	22.56	20.07	17.71
45-49	30.82	28.66	25.61	23.23
50-54	36.89	33.75	31.92	28.90
55-59	44.40	39.15	36.24	34.34
60-64	53.21	46.14	41.85	40.06
65-69	60.85	54.94	48.64	45.30
70-74	80.11	73.08	64.72	62.00
75-79	104.49	99.69	88.49	84.80
80-84	140.59	136.75	124.48	119.54
85+	194.40	205.34	195.57	193.25
Total	52.05	47.18	42.74	40.26
<b>Female</b>				
16-19	12.91	9.45	8.93	8.13
20-24	13.40	9.97	8.30	8.36
25-29	13.30	10.88	9.28	9.03
30-34	14.53	12.02	11.00	10.44
35-39	16.29	14.28	12.90	12.09
40-44	19.54	17.50	15.65	14.62
45-49	23.77	21.04	19.33	17.74
50-54	27.87	24.53	22.12	20.78
55-59	32.17	28.42	25.25	23.55
60-64	38.23	33.10	30.14	28.41
65-69	42.83	39.13	34.01	32.61
70-74	54.42	52.28	46.51	44.33
75-79	70.30	72.35	66.03	63.11
80-84	98.24	101.92	96.42	93.51
85+	167.19	188.61	168.60	169.29
Total	37.53	34.78	31.25	29.70
<b>Total</b>				
16-19	15.27	10.35	9.05	8.75
20-24	14.50	10.41	9.03	8.48
25-29	15.38	11.93	10.14	9.30
30-34	18.46	13.86	12.17	11.03
35-39	19.95	16.50	14.56	13.08
40-44	23.18	20.27	17.94	16.17
45-49	27.82	25.18	22.61	20.53
50-54	32.96	29.53	27.23	24.93
55-59	39.20	34.30	31.10	29.15
60-64	47.29	40.51	36.54	34.63
65-69	54.04	48.43	42.12	39.43
70-74	70.03	64.70	56.81	53.75
75-79	89.57	88.03	78.81	74.80
80-84	119.65	119.99	111.50	107.48
85+	179.92	195.96	180.35	180.35
Total	45.97	41.72	37.44	35.23

**Table K3.—Adjusted DI Disabled Worker DEATH Rates Comparison by Duration**  
(Deaths per 1000 beneficiaries)

Duration	Observation Period			
	1996-00	2001-05	2006-10	2011-15
<b>Male</b>				
0	89.35	69.58	59.03	55.22
1	49.25	43.24	39.68	36.89
2	38.98	34.66	32.02	29.62
3	35.95	32.74	30.08	27.86
4	35.16	32.30	29.18	27.34
5	35.36	33.65	29.63	28.42
6	36.58	34.24	30.50	29.15
7	37.98	35.62	31.66	29.95
8	40.03	36.57	32.88	31.10
9	41.44	37.71	34.50	32.43
0-9	44.85	39.56	35.37	33.19
10-19	50.89	46.26	41.57	39.78
20-29	67.57	65.49	60.37	57.31
30+	77.19	87.00	85.97	83.98
Total	50.77	46.73	42.43	40.26
<b>Female</b>				
0	66.82	52.24	45.16	42.16
1	38.59	33.94	31.49	28.99
2	27.83	25.88	23.80	22.55
3	24.22	22.87	21.03	20.07
4	22.87	22.06	19.93	19.29
5	23.10	21.96	19.53	19.08
6	23.65	22.68	19.92	19.77
7	24.40	23.44	20.81	20.18
8	25.78	23.89	21.56	20.68
9	26.70	24.47	22.38	21.37
0-9	31.16	27.90	25.07	23.85
10-19	34.26	31.87	28.53	27.31
20-29	50.04	51.49	48.40	45.96
30+	83.64	94.51	91.89	91.83
Total	36.01	34.02	31.00	29.70
<b>Total</b>				
0	79.31	61.61	52.68	49.05
1	44.52	38.93	35.86	33.16
2	34.06	30.56	28.15	26.30
3	30.83	28.11	25.80	24.21
4	29.85	27.47	24.80	23.55
5	30.12	28.16	24.83	23.99
6	31.11	28.83	25.45	24.64
7	32.28	29.95	26.44	25.19
8	34.09	30.72	27.39	26.00
9	35.36	31.68	28.59	27.00
0-9	38.94	34.15	30.50	28.74
10-19	44.37	40.08	35.48	33.61
20-29	60.00	59.83	55.55	52.24
30+	82.51	90.55	88.35	87.25
Total	44.72	41.12	37.18	35.23

**Table K4.—Adjusted DI Disabled Worker RECOVERY Rates Comparison by Entitlement Age**  
(Recoveries per 1000 beneficiaries)

Entl Age	Observation Period			
	1996-00	2001-05	2006-10	2011-15
<b>Male</b>				
16-19	32.80	18.26	21.17	20.93
20-24	23.07	13.77	11.46	12.91
25-29	21.87	13.23	9.80	10.68
30-34	20.23	12.44	8.94	8.95
35-39	16.83	10.50	7.67	7.27
40-44	12.09	8.05	5.96	5.63
45-49	7.33	5.41	4.37	4.24
50-54	3.58	2.97	2.57	2.49
55-59	1.64	1.53	1.43	1.44
60-NRA	0.48	0.80	0.48	0.58
Total	10.29	6.64	5.19	5.24
<b>Female</b>				
16-19	32.34	19.49	21.09	22.96
20-24	21.66	14.90	12.23	14.20
25-29	19.22	14.08	10.78	12.29
30-34	17.07	12.38	9.44	9.76
35-39	13.82	10.42	7.83	7.36
40-44	9.86	8.00	5.92	5.41
45-49	6.18	5.30	4.20	3.86
50-54	3.03	3.03	2.58	2.37
55-59	1.47	1.57	1.49	1.45
60-NRA	0.41	0.53	0.52	0.60
Total	8.57	6.61	5.21	5.21
<b>Total</b>				
16-19	32.64	18.69	21.14	21.72
20-24	22.58	14.17	11.76	13.43
25-29	20.89	13.57	10.22	11.39
30-34	19.00	12.41	9.17	9.34
35-39	15.59	10.46	7.74	7.31
40-44	11.12	8.03	5.94	5.52
45-49	6.81	5.36	4.29	4.04
50-54	3.33	3.00	2.57	2.43
55-59	1.56	1.55	1.46	1.44
60-NRA	0.46	0.67	0.50	0.59
Total	9.57	6.62	5.20	5.23

**Table K5.—Adjusted DI Disabled Worker RECOVERY Rates Comparison by Attained Age**  
(Recoveries per 1000 beneficiaries)

Attained Age	Observation Period			
	1996-00	2001-05	2006-10	2011-15
<b>Male</b>				
16-19	10.18	5.44	8.17	7.27
20-24	35.35	18.68	14.87	15.94
25-29	41.52	27.06	20.13	23.78
30-34	33.40	23.76	16.72	18.58
35-39	25.57	18.03	13.61	14.57
40-44	18.63	13.24	10.37	10.82
45-49	12.17	8.78	7.20	7.47
50-54	6.07	4.61	3.97	4.02
55-59	2.55	2.23	2.06	2.06
60-NRA	1.01	1.11	1.07	1.07
Total	8.68	6.18	4.96	5.24
<b>Female</b>				
16-19	9.86	5.63	6.44	9.14
20-24	27.13	15.90	12.14	15.15
25-29	30.77	20.95	16.58	22.00
30-34	24.37	18.54	14.17	17.43
35-39	19.17	15.31	12.01	14.20
40-44	14.85	12.27	9.98	10.86
45-49	10.67	9.00	7.24	7.53
50-54	5.53	5.23	4.31	4.10
55-59	2.43	2.65	2.44	2.16
60-NRA	0.92	1.17	1.17	1.11
Total	7.08	5.91	4.87	5.21
<b>Total</b>				
16-19	10.05	5.52	7.45	8.06
20-24	32.06	17.50	13.73	15.62
25-29	37.12	24.27	18.52	23.01
30-34	29.70	21.34	15.47	18.04
35-39	22.94	16.79	12.82	14.38
40-44	17.05	12.80	10.18	10.84
45-49	11.53	8.88	7.22	7.50
50-54	5.84	4.89	4.13	4.06
55-59	2.50	2.42	2.24	2.11
60-NRA	0.97	1.14	1.12	1.09
Total	8.01	6.05	4.91	5.23

**Table K6.—Adjusted DI Disabled Worker RECOVERY Rates Comparison by Duration**  
(Recoveries per 1000 beneficiaries)

Duration	Observation Period			
	1996-00	2001-05	2006-10	2011-15
<b>Male</b>				
0	4.11	3.72	2.87	3.23
1	9.32	6.75	5.79	5.90
2	7.86	4.33	2.90	2.73
3	11.06	6.88	3.48	4.31
4	17.44	12.46	8.51	9.31
5	16.13	11.09	8.21	8.97
6	13.55	9.52	7.84	8.27
7	11.18	8.69	7.38	7.45
8	9.66	7.98	6.84	6.80
9	8.43	7.43	6.35	6.26
0-9	10.65	7.61	5.69	6.03
10-19	5.05	4.95	4.55	4.56
20-29	1.42	2.09	1.47	1.80
30+	0.42	1.18	0.43	0.44
Total	8.45	6.43	4.99	5.24
<b>Female</b>				
0	3.19	2.81	2.52	3.06
1	7.02	5.71	5.36	5.78
2	5.36	3.82	2.78	2.62
3	8.09	6.06	3.03	4.17
4	13.68	11.09	7.64	8.78
5	12.58	10.14	7.50	8.17
6	10.92	8.90	7.40	7.84
7	9.50	8.33	7.07	7.09
8	8.55	8.08	6.71	6.57
9	7.69	7.57	6.28	6.21
0-9	8.39	6.95	5.35	5.79
10-19	4.74	5.03	4.74	4.62
20-29	1.69	2.38	1.88	2.00
30+	0.32	0.87	0.48	0.47
Total	7.01	6.13	4.93	5.21
<b>Total</b>				
0	3.71	3.28	2.71	3.15
1	8.32	6.26	5.59	5.84
2	6.78	4.08	2.84	2.68
3	9.79	6.49	3.26	4.25
4	15.84	11.81	8.08	9.06
5	14.62	10.65	7.86	8.59
6	12.43	9.23	7.62	8.06
7	10.46	8.52	7.22	7.27
8	9.19	8.03	6.78	6.68
9	8.11	7.49	6.31	6.23
0-9	9.68	7.29	5.52	5.92
10-19	4.88	4.96	4.63	4.59
20-29	1.50	2.18	1.61	1.88
30+	0.41	1.15	0.45	0.45
Total	7.84	6.28	4.95	5.23

**L. Processing Time**

Becoming entitled to benefits under the DI program requires an individual to file a claim. Benefits become payable once SSA determines that the claimant satisfies the definition of disability and all other requirements. The amount of time it takes to establish disability entitlement varies for any number of reasons. So a significant lag may exist between the first month of entitlement and first month of payment. An allowance is a determination by the DDS, OHO, OAO, or Federal District Court that the claimant meets the medical definition of disability under the Social Security Act. Based on data from administrative records, we can measure the average processing time from the date of filing to the date of disposition of the claim. Obviously, the process time lengthens as the claimant appeals unfavorable determinations and moves through the levels of review—Reconsideration, Hearings, Appeals Council, and finally Federal Court.

**Table L** shows the average processing time in months for an allowance by the various levels of review. Data are also split by claims filed for DI-only (Title II) benefits as well as concurrent entitlement to DI and SSI (Title XVI) benefits. Results are based on longitudinal claim data for filing cohorts 2009-18, which are tracked from initial filing through level of allowance. As shown, there can be a significant number of claims still awaiting final adjudication to either allow or deny benefits. As pending claims are cleared, the average processing time for allowances will ultimately exceed the values in the table. Processing times vary with factors such as claim volume, work flow, and size of backlogs.

**Table L.—DI Disabled Worker Average Processing Time for Allowance, by Level of Review**

Year of Filing	Allowances	Claims Pending	Process Time (In months)		
			Total	DI-only	DI-SSI
<b>Initial determinations</b>					
2009	652,216	-	5.49	5.16	6.02
2010	653,094	-	5.46	5.16	5.99
2011	617,959	-	5.20	4.95	5.67
2012	598,531	-	5.25	4.98	5.76
2013	555,279	-	5.23	4.96	5.76
2014	528,173	-	5.34	5.05	5.97
2015	490,086	-	5.34	5.04	6.02
2016	469,656	-	5.33	5.04	6.01
2017	446,177	-	5.23	4.99	5.78
2018	413,809	29,799	5.04	4.86	5.47
<b>Reconsiderations</b>					
2009	58,593	-	11.34	11.01	11.71
2010	57,501	-	10.88	10.61	11.22
2011	59,471	-	10.65	10.46	10.90
2012	57,938	-	10.67	10.52	10.88
2013	52,215	-	10.65	10.50	10.86
2014	51,976	-	10.98	10.79	11.27
2015	50,050	-	10.65	10.37	11.11
2016	47,411	-	10.38	10.13	10.81
2017	43,423	-	10.26	10.07	10.57
2018	30,968	55,067	9.09	8.95	9.35
<b>OHO</b>					
2009	293,942	-	21.26	20.16	22.30
2010	304,340	-	21.02	20.09	22.00
2011	292,509	-	21.62	20.82	22.49
2012	272,664	854	24.03	23.39	24.76
2013	251,028	1,906	27.34	26.99	27.79
2014	230,343	3,462	29.27	28.96	29.70
2015	198,258	5,168	28.89	28.62	29.30
2016	172,626	20,269	26.63	26.43	26.95
2017	97,151	134,752	21.34	21.15	21.66
2018	11,832	216,924	13.52	13.27	14.08
<b>OAO   Court</b>					
2009	1,452	-	38.17	37.77	38.44
2010	1,482	-	37.52	37.39	37.62
2011	1,338	-	38.38	38.69	38.12
2012	1,213	4,761	40.21	40.19	40.23
2013	1,258	5,007	41.99	41.24	42.71
2014	1,046	5,906	42.07	41.78	42.40
2015	670	13,241	38.61	37.98	39.27
2016	190	35,395	32.53	32.48	32.60
2017	33	23,339	22.55	21.95	23.73
2018	5	1,699	13.75	12.67	17.00



### ***M. Basis for Decision***

In the 5-step sequential process of disability determination, medical evidence is assessed in Step 3. When a claimant has a severe medically determinable impairment that satisfies all the criteria in a listing of *Listing of Impairments* (and meets the duration requirement), the impairment is said to *meet the listings* and benefits are allowed with no further evaluation; if the claimant has impairments not included in the listings, but are considered medically equivalent to listed impairments, the impairments are said to *equal the listings* and benefits are allowed.

Claimants not allowed at Step 3 still have impairments that are severe, but not severe enough to consider them disabled purely on medical grounds. Such claimants are evaluated further in Steps 4 and 5. Step 4 assesses *residual functional capacity (RFC)* to see if past relevant work can be performed. If not, then Step 5 assesses the RFC along with vocational factors—age, education, and work experience—to determine whether claimants can perform work in jobs other than those previously held. These *medical-vocational* guidelines are used to determine whether any employment is possible. If not, then disability benefits are allowed.

**Table M1** shows the total number of allowances by basis for decision for the various levels of review. The splits provide a guideline for the magnitude of allowances that occur at the various steps of adjudication. **Table M2** shows the percent distribution of Table M1. Note that administrative sources may be incomplete for roughly 2% of total allowances.

**Table M3** shows the total number of allowances by basis of decision for the various impairment categories. This split highlights the differences that exist between meets, equals, and med-voc decisions for various disorders. For example, musculoskeletal, cardiovascular, and nutritional impairments tend to show a much larger percentage of med-voc decisions than would malignant cancers or infectious diseases. **Table M4** shows the percent distribution of Table M3.

As with the distributions shown in appendix section L, results are based on longitudinal claim data for filing cohorts 2009-18, which are tracked from initial filing through level of allowance. For more recent years, there are a significant number of claims still awaiting final adjudication to either allow or deny benefits. Many of the pending claims that will ultimately be allowed will fall under the med-voc category, which is the most subjective part of the disability adjudication process.

**Table M1.—DI Disabled Worker Allowances,  
by Basis for Decision**

Year of Filing	Total	Meets	Equals	Med-Voc	Unknown
<b>Initial determinations</b>					
2009	652,216	236,240	50,434	340,049	25,493
2010	653,094	227,521	49,604	351,896	24,073
2011	617,959	210,028	45,811	343,336	18,784
2012	598,531	200,714	44,090	337,806	15,921
2013	555,279	190,588	39,545	308,155	16,991
2014	528,173	186,384	36,550	287,496	17,743
2015	490,086	182,154	32,521	260,022	15,389
2016	469,656	183,659	30,453	240,060	15,484
2017	446,177	182,527	28,194	220,036	15,420
2018	413,809	176,782	26,590	200,885	9,552
<b>Reconsiderations</b>					
2009	58,593	13,405	5,070	39,331	787
2010	57,501	12,213	5,044	39,327	917
2011	59,471	11,813	5,098	41,316	1,244
2012	57,938	10,954	4,815	41,355	814
2013	52,215	9,605	4,180	37,725	705
2014	51,976	9,787	3,797	37,495	897
2015	50,050	9,324	3,748	36,036	942
2016	47,411	9,504	3,381	33,653	873
2017	43,423	9,094	3,204	30,481	644
2018	30,968	6,793	2,230	21,655	290
<b>OHO</b>					
2009	293,942	36,965	8,770	246,194	2,013
2010	304,340	35,596	9,005	257,266	2,473
2011	292,509	33,862	9,265	246,794	2,588
2012	272,664	30,993	8,843	230,508	2,320
2013	251,028	28,222	7,880	213,489	1,437
2014	230,343	24,020	6,061	199,192	1,070
2015	198,258	18,894	3,946	174,802	616
2016	172,626	15,260	2,985	153,937	444
2017	97,151	8,579	1,434	86,949	189
2018	11,832	1,227	204	10,365	36
<b>OAO Court</b>					
2009	1,452	351	93	754	254
2010	1,482	389	109	722	262
2011	1,338	313	107	644	274
2012	1,213	281	92	587	253
2013	1,258	318	93	666	181
2014	1,046	255	102	570	119
2015	670	186	56	375	53
2016	190	61	20	108	1
2017	33	10	4	19	0
2018	5	2	0	3	0
<b>Total</b>					
2009	1,006,203	286,961	64,367	626,328	28,547
2010	1,016,417	275,719	63,762	649,211	27,725
2011	971,277	256,016	60,281	632,090	22,890
2012	930,346	242,942	57,840	610,256	19,308
2013	859,780	228,733	51,698	560,035	19,314
2014	811,538	220,446	46,510	524,753	19,829
2015	739,064	210,558	40,271	471,235	17,000
2016	689,883	208,484	36,839	427,758	16,802
2017	586,784	200,210	32,836	337,485	16,253
2018	456,614	184,804	29,024	232,908	9,878

**Table M2.—DI Disabled Worker Allowances,  
by Basis for Decision (Percentage)**

Year of Filing	Percentage distribution				
	Total	Meets	Equals	Med-Voc	Unknown
<b>Initial determinations</b>					
2009	100.0	36.2	7.7	52.1	3.9
2010	100.0	34.8	7.6	53.9	3.7
2011	100.0	34.0	7.4	55.6	3.0
2012	100.0	33.5	7.4	56.4	2.7
2013	100.0	34.3	7.1	55.5	3.1
2014	100.0	35.3	6.9	54.4	3.4
2015	100.0	37.2	6.6	53.1	3.1
2016	100.0	39.1	6.5	51.1	3.3
2017	100.0	40.9	6.3	49.3	3.5
2018	100.0	42.7	6.4	48.5	2.3
<b>Reconsiderations</b>					
2009	100.0	22.9	8.7	67.1	1.3
2010	100.0	21.2	8.8	68.4	1.6
2011	100.0	19.9	8.6	69.5	2.1
2012	100.0	18.9	8.3	71.4	1.4
2013	100.0	18.4	8.0	72.2	1.4
2014	100.0	18.8	7.3	72.1	1.7
2015	100.0	18.6	7.5	72.0	1.9
2016	100.0	20.0	7.1	71.0	1.8
2017	100.0	20.9	7.4	70.2	1.5
2018	100.0	21.9	7.2	69.9	0.9
<b>OHO</b>					
2009	100.0	12.6	3.0	83.8	0.7
2010	100.0	11.7	3.0	84.5	0.8
2011	100.0	11.6	3.2	84.4	0.9
2012	100.0	11.4	3.2	84.5	0.9
2013	100.0	11.2	3.1	85.0	0.6
2014	100.0	10.4	2.6	86.5	0.5
2015	100.0	9.5	2.0	88.2	0.3
2016	100.0	8.8	1.7	89.2	0.3
2017	100.0	8.8	1.5	89.5	0.2
2018	100.0	10.4	1.7	87.6	0.3
<b>OAO Court</b>					
2009	100.0	24.2	6.4	51.9	17.5
2010	100.0	26.2	7.4	48.7	17.7
2011	100.0	23.4	8.0	48.1	20.5
2012	100.0	23.2	7.6	48.4	20.9
2013	100.0	25.3	7.4	52.9	14.4
2014	100.0	24.4	9.8	54.5	11.4
2015	100.0	27.8	8.4	56.0	7.9
2016	100.0	32.1	10.5	56.8	0.5
2017	100.0	30.3	12.1	57.6	0.0
2018	100.0	40.0	0.0	60.0	0.0
<b>Total</b>					
2009	100.0	28.5	6.4	62.2	2.8
2010	100.0	27.1	6.3	63.9	2.7
2011	100.0	26.4	6.2	65.1	2.4
2012	100.0	26.1	6.2	65.6	2.1
2013	100.0	26.6	6.0	65.1	2.2
2014	100.0	27.2	5.7	64.7	2.4
2015	100.0	28.5	5.4	63.8	2.3
2016	100.0	30.2	5.3	62.0	2.4
2017	100.0	34.1	5.6	57.5	2.8
2018	100.0	40.5	6.4	51.0	2.2

Table M3.—DI Disabled Worker Allowances, by Diagnostic Group and Basis for Decision

Impairment category	Basis for decision	Year of Filing									
		2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Musculo-skeletal	Meets	7,589	10,673	13,070	14,179	16,019	17,715	19,319	19,953	20,852	20,589
	Equals	5,091	6,135	7,137	7,814	9,581	10,908	12,095	12,392	12,906	12,509
	MedVoc	124,675	182,290	229,187	249,678	273,154	283,741	301,142	301,036	296,821	275,663
	Unknown	878	1,915	2,779	3,045	3,438	3,659	3,990	4,757	4,881	4,345
	Total	138,233	201,013	252,173	274,716	302,192	316,023	336,546	338,138	335,460	313,106
Mental disorders	Meets	30,209	35,095	37,358	37,270	42,891	46,517	52,970	59,676	70,380	81,427
	Equals	1,464	1,951	2,189	2,499	3,068	3,570	4,079	4,628	5,196	5,636
	MedVoc	22,739	34,717	46,799	54,274	63,621	72,629	86,949	97,227	108,135	110,687
	Unknown	6,094	10,098	9,307	8,849	10,372	9,473	9,138	10,842	13,754	15,110
	Total	60,506	81,861	95,653	102,892	119,952	132,189	153,136	172,373	197,465	212,860
Cardio-vascular	Meets	17,493	18,196	19,225	19,901	19,974	19,878	20,829	21,424	22,119	21,834
	Equals	4,585	5,053	5,539	5,831	6,506	6,915	7,894	8,176	8,473	8,431
	MedVoc	32,130	42,327	51,567	57,401	63,115	68,133	72,901	75,336	77,185	74,304
	Unknown	318	512	663	714	846	873	885	1,033	1,244	1,154
	Total	54,526	66,088	76,994	83,847	90,441	95,799	102,509	105,969	109,021	105,723
Cancer	Meets	66,765	69,204	70,745	71,715	71,716	72,682	74,610	74,974	76,099	74,460
	Equals	5,361	5,449	6,104	6,814	8,020	8,942	9,600	9,493	10,539	10,930
	MedVoc	6,425	9,186	10,948	11,933	12,799	13,237	14,192	14,249	14,065	13,373
	Unknown	206	325	393	399	453	503	450	449	608	515
	Total	78,757	84,164	88,190	90,861	92,988	95,364	98,852	99,165	101,311	99,278
Nervous system	Meets	22,091	23,715	24,560	24,795	25,969	26,767	28,057	28,994	31,594	32,385
	Equals	3,705	4,281	4,730	5,269	5,870	6,435	7,536	7,712	7,897	7,701
	MedVoc	15,587	23,420	29,226	31,568	34,797	36,497	39,247	40,547	41,840	40,562
	Unknown	969	1,370	1,454	1,408	1,632	1,633	1,575	1,917	2,386	2,547
	Total	42,352	52,786	59,970	63,040	68,268	71,332	76,415	79,170	83,717	83,195
Injuries	Meets	5,234	6,224	6,569	5,980	6,235	6,687	7,284	8,011	8,765	9,835
	Equals	1,182	1,387	1,507	1,599	1,751	1,932	2,259	2,573	2,572	2,865
	MedVoc	8,510	11,796	14,736	14,825	16,904	18,612	21,332	23,829	26,649	28,479
	Unknown	200	319	355	369	417	453	476	633	735	767
	Total	15,126	19,726	23,167	22,773	25,307	27,684	31,351	35,046	38,721	41,946
Respiratory	Meets	8,835	9,755	9,266	9,059	9,717	10,263	10,746	12,080	12,987	13,423
	Equals	3,266	3,469	3,843	4,040	4,465	4,665	4,928	5,367	5,384	5,444
	MedVoc	9,275	12,315	15,475	17,255	19,264	20,722	21,898	23,067	22,916	21,503
	Unknown	144	225	271	336	388	371	414	488	490	540
	Total	21,520	25,764	28,855	30,690	33,834	36,021	37,986	41,002	41,777	40,910
Genitourinary	Meets	15,128	15,435	15,142	15,110	14,660	14,324	14,486	15,125	15,709	15,715
	Equals	689	816	923	1,021	1,100	1,187	1,220	1,352	1,477	1,414
	MedVoc	1,820	2,534	3,320	3,667	4,000	4,230	4,405	4,359	4,239	3,887
	Unknown	150	190	204	221	240	231	230	217	284	270
	Total	17,787	18,975	19,589	20,019	20,000	19,972	20,341	21,053	21,709	21,286
Nutritional/metabolic	Meets	1,205	1,483	1,675	1,789	2,207	2,318	2,475	2,650	3,164	3,189
	Equals	804	978	1,204	1,310	1,724	1,978	2,351	2,345	2,554	2,662
	MedVoc	5,414	8,949	12,913	15,380	19,551	22,526	25,493	27,698	30,495	30,530
	Unknown	115	218	277	337	426	470	495	638	845	780
	Total	7,538	11,628	16,069	18,816	23,908	27,292	30,814	33,331	37,058	37,161
Other	Meets	10,255	10,430	10,874	10,760	11,058	11,582	12,166	13,129	14,050	14,104
	Equals	2,877	3,317	3,663	4,074	4,425	5,166	5,878	6,243	6,764	6,775
	MedVoc	6,333	9,951	13,587	15,254	17,548	19,708	22,697	24,742	26,866	27,340
	Unknown	804	1,081	1,099	1,322	1,617	1,648	1,655	1,916	2,498	2,519
	Total	20,269	24,779	29,223	31,410	34,648	38,104	42,396	46,030	50,178	50,738
Total	Meets	184,804	200,210	208,484	210,558	220,446	228,733	242,942	256,016	275,719	286,961
	Equals	29,024	32,836	36,839	40,271	46,510	51,698	57,840	60,281	63,762	64,367
	MedVoc	232,908	337,485	427,758	471,235	524,753	560,035	610,256	632,090	649,211	626,328
	Unknown	9,878	16,253	16,802	17,000	19,829	19,314	19,308	22,890	27,725	28,547
	Total	456,614	586,784	689,883	739,064	811,538	859,780	930,346	971,277	1,016,417	1,006,203
Pending claims.....	303,489	158,091	55,664	18,409	9,368	6,913	5,615	-	-	-	

**Table M4.—DI Disabled Worker Distribution of Allowances, by Diagnostic Group and Basis for Decision (Percentage)**

Impairment category	Basis for decision	Year of Filing									
		2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Musculo-skeletal	Meets	5.5	5.3	5.2	5.2	5.3	5.6	5.7	5.9	6.2	6.6
	Equals	3.7	3.1	2.8	2.8	3.2	3.5	3.6	3.7	3.8	4.0
	MedVoc	90.2	90.7	90.9	90.9	90.4	89.8	89.5	89.0	88.5	88.0
	Unknown	0.6	0.9	1.1	1.1	1.1	1.1	1.2	1.4	1.5	1.4
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mental disorders	Meets	49.9	42.9	39.1	36.2	35.8	35.2	34.6	34.6	35.6	38.3
	Equals	2.4	2.4	2.3	2.4	2.6	2.7	2.7	2.7	2.6	2.6
	MedVoc	37.6	42.4	48.9	52.7	53.0	54.9	56.8	56.4	54.8	52.0
	Unknown	10.1	12.3	9.7	8.7	8.6	7.2	5.9	6.3	7.0	7.1
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cardio-vascular	Meets	32.1	27.5	25.0	23.7	22.1	20.7	20.3	20.2	20.3	20.7
	Equals	8.4	7.6	7.2	7.0	7.2	7.2	7.7	7.7	7.8	8.0
	MedVoc	58.9	64.0	67.0	68.5	69.8	71.1	71.1	71.1	70.8	70.3
	Unknown	0.6	0.9	0.8	0.8	0.9	1.0	0.9	1.0	1.1	1.0
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cancer	Meets	84.8	82.2	80.2	78.9	77.1	76.2	75.5	75.6	75.1	75.0
	Equals	6.8	6.5	6.9	7.5	8.6	9.4	9.7	9.6	10.4	11.0
	MedVoc	8.2	10.9	12.4	13.1	13.8	13.9	14.4	14.4	13.9	13.5
	Unknown	0.2	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.6	0.5
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nervous system	Meets	52.2	44.9	41.0	39.3	38.0	37.5	36.7	36.6	37.7	38.9
	Equals	8.7	8.1	7.9	8.4	8.6	9.0	9.9	9.7	9.4	9.3
	MedVoc	36.8	44.4	48.7	50.1	51.0	51.2	51.4	51.2	50.0	48.8
	Unknown	2.3	2.6	2.4	2.2	2.4	2.3	2.0	2.5	2.9	3.0
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Injuries	Meets	34.6	31.6	28.4	26.3	24.6	24.2	23.2	22.9	22.6	23.4
	Equals	7.8	7.0	6.5	7.0	6.9	7.0	7.2	7.3	6.6	6.8
	MedVoc	56.3	59.8	63.6	65.1	66.8	67.2	68.0	68.0	68.8	67.9
	Unknown	1.3	1.6	1.5	1.6	1.7	1.6	1.6	1.8	2.0	1.9
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Respiratory	Meets	41.1	37.9	32.1	29.5	28.7	28.5	28.3	29.5	31.1	32.8
	Equals	15.2	13.5	13.3	13.2	13.2	13.0	13.0	13.1	12.9	13.3
	MedVoc	43.1	47.8	53.6	56.2	56.9	57.5	57.6	56.3	54.9	52.6
	Unknown	0.6	0.8	1.0	1.1	1.2	1.0	1.1	1.1	1.1	1.3
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Genitourinary	Meets	85.1	81.3	77.3	75.5	73.3	71.7	71.2	71.8	72.4	73.8
	Equals	3.9	4.3	4.7	5.1	5.5	5.9	6.0	6.4	6.8	6.6
	MedVoc	10.2	13.4	16.9	18.3	20.0	21.2	21.7	20.7	19.5	18.3
	Unknown	0.8	1.0	1.1	1.1	1.2	1.2	1.1	1.1	1.3	1.3
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nutritional/metabolic	Meets	16.0	12.8	10.4	9.5	9.2	8.5	8.0	8.0	8.5	8.6
	Equals	10.7	8.4	7.5	7.0	7.2	7.2	7.6	7.0	6.9	7.2
	MedVoc	71.8	77.0	80.4	81.7	81.8	82.5	82.7	83.1	82.3	82.2
	Unknown	1.5	1.8	1.7	1.8	1.8	1.8	1.7	1.9	1.3	2.0
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Other	Meets	50.6	42.1	37.2	34.3	31.9	30.4	28.7	28.5	28.0	27.8
	Equals	14.2	13.4	12.5	13.0	12.8	13.6	13.9	13.6	13.5	13.4
	MedVoc	31.3	40.2	46.5	48.6	50.6	51.7	53.5	53.8	53.5	53.9
	Unknown	3.9	4.3	3.8	4.1	4.7	4.3	3.9	4.1	5.0	4.9
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total	Meets	40.5	34.1	30.2	28.5	27.2	26.6	26.1	26.4	27.1	28.5
	Equals	6.4	5.6	5.3	5.4	5.7	6.0	6.2	6.2	6.3	6.4
	MedVoc	51.0	57.5	62.0	63.8	64.7	65.1	65.6	65.1	63.9	62.2
	Unknown	2.1	2.8	2.5	2.3	2.4	2.3	2.1	2.3	2.7	2.9
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**N. Average Monthly Benefit**

**Table N** shows the average monthly benefit for disabled workers in current-payment status for the various impairment categories. The mix of beneficiaries for any particular category can change from year to year as new beneficiaries are awarded and

current beneficiaries are terminated, which can cause variation in the average benefit paid. However, the average amount generally increases year-over-year due to the annual cost-of-living adjustment. *Other* category includes blood, congenital, digestive, infectious, and skin impairments.

**Table N.—DI Disabled Worker Average Monthly Benefit, by Diagnostic Group**

Impairment category	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Male</b>											
Musculoskeletal	\$1,503	\$1,459	\$1,429	\$1,424	\$1,425	\$1,404	\$1,387	\$1,367	\$1,318	\$1,317	\$1,318
Mental disorders	1,105	1,077	1,058	1,058	1,063	1,052	1,042	1,027	991	992	995
Cardiovascular	1,495	1,453	1,425	1,423	1,428	1,411	1,399	1,384	1,338	1,341	1,347
Cancer	1,625	1,571	1,531	1,519	1,518	1,495	1,481	1,465	1,409	1,410	1,415
Nervous system	1,414	1,372	1,343	1,338	1,339	1,319	1,303	1,283	1,235	1,232	1,231
Injuries	1,362	1,322	1,294	1,290	1,293	1,272	1,255	1,235	1,189	1,185	1,182
Respiratory	1,468	1,425	1,396	1,393	1,398	1,380	1,370	1,356	1,313	1,318	1,323
Genitourinary	1,412	1,370	1,338	1,332	1,336	1,316	1,302	1,283	1,237	1,233	1,230
Nutritional	1,371	1,336	1,312	1,312	1,316	1,300	1,288	1,272	1,230	1,230	1,232
Other	1,325	1,288	1,264	1,261	1,264	1,246	1,232	1,212	1,168	1,165	1,164
<b>Total</b>	<b>\$1,360</b>	<b>\$1,320</b>	<b>\$1,293</b>	<b>\$1,289</b>	<b>\$1,290</b>	<b>\$1,271</b>	<b>\$1,256</b>	<b>\$1,237</b>	<b>\$1,191</b>	<b>\$1,189</b>	<b>\$1,191</b>
<b>Female</b>											
Musculoskeletal	\$1,143	\$1,106	\$1,080	\$1,073	\$1,070	\$1,049	\$1,030	\$1,008	\$966	\$960	\$953
Mental disorders	1,012	982	961	956	954	937	920	901	865	862	860
Cardiovascular	1,133	1,094	1,067	1,059	1,054	1,034	1,015	994	952	945	937
Cancer	1,283	1,236	1,198	1,184	1,179	1,154	1,134	1,114	1,067	1,060	1,057
Nervous system	1,181	1,144	1,116	1,109	1,104	1,082	1,062	1,038	996	989	983
Injuries	1,119	1,083	1,056	1,049	1,046	1,025	1,007	986	946	940	933
Respiratory	1,075	1,039	1,014	1,008	1,006	988	973	955	918	913	910
Genitourinary	1,148	1,110	1,083	1,074	1,072	1,052	1,035	1,014	971	965	959
Nutritional	1,049	1,015	993	986	981	961	941	919	880	873	866
Other	1,108	1,074	1,051	1,044	1,042	1,023	1,007	987	948	942	938
<b>Total</b>	<b>\$1,104</b>	<b>\$1,069</b>	<b>\$1,043</b>	<b>\$1,036</b>	<b>\$1,032</b>	<b>\$1,011</b>	<b>\$993</b>	<b>\$972</b>	<b>\$931</b>	<b>\$925</b>	<b>\$920</b>
<b>Total</b>											
Musculoskeletal	\$1,317	\$1,278	\$1,251	\$1,246	\$1,245	\$1,225	\$1,208	\$1,187	\$1,142	\$1,138	\$1,136
Mental disorders	1,058	1,029	1,009	1,007	1,008	994	982	965	930	928	930
Cardiovascular	1,365	1,325	1,299	1,296	1,298	1,281	1,268	1,251	1,207	1,207	1,209
Cancer	1,438	1,389	1,351	1,338	1,336	1,313	1,297	1,280	1,230	1,227	1,227
Nervous system	1,290	1,251	1,224	1,218	1,217	1,196	1,179	1,157	1,113	1,108	1,104
Injuries	1,280	1,242	1,215	1,210	1,211	1,191	1,174	1,154	1,111	1,106	1,103
Respiratory	1,254	1,216	1,191	1,188	1,190	1,174	1,163	1,148	1,108	1,109	1,110
Genitourinary	1,304	1,264	1,234	1,227	1,229	1,209	1,194	1,174	1,130	1,125	1,121
Nutritional	1,201	1,167	1,143	1,140	1,139	1,121	1,105	1,084	1,042	1,036	1,030
Other	1,223	1,188	1,165	1,161	1,163	1,145	1,131	1,112	1,071	1,067	1,065
<b>Total</b>	<b>\$1,234</b>	<b>\$1,197</b>	<b>\$1,171</b>	<b>\$1,166</b>	<b>\$1,165</b>	<b>\$1,146</b>	<b>\$1,130</b>	<b>\$1,111</b>	<b>\$1,068</b>	<b>\$1,064</b>	<b>\$1,063</b>



## VI. TUTORIAL

In this section, we explain probabilities, continuance tables, and the select-and-ultimate (S&U) structure of the data, where *entitlement age* denotes age last birthday at entitlement to disability benefits, *duration* is the number of completed years of disability entitlement, and *attained age* is the sum of entitlement age and duration.

### **Probability of Death (Refer to Table 7A)**

A male disabled worker who became entitled to DI benefits at age 50—denoted as *male [50]*—has probability .042661 of dying in the first year on the rolls. The probability of not dying in the first year is  $(1 - .042661) = .957339$ . Similarly, we find the following probabilities in table 7A by *duration*:

*Male [50]* after 5 years entitled has probability .027369 of death in year 6 after attaining age 55  
*Male [50]* after 10 years entitled has probability .035000 of death in year 11 after attaining age 60  
*Male [50]* after 15 years entitled has probability .038128 of death in year 16 after attaining age 65

We refer to the values in the last column of S&U tables as *ultimate* because at high durations we assume the chance of dying is not affected by an incremental increase in duration. In the ultimate period, beneficiaries of the same attained age will have the same probability of death within the next year:

*Male [30]* after 30 years entitled has probability .035000 of death in year 31 after attaining age 60  
*Male [40]* after 20 years entitled has probability .035000 of death in year 21 after attaining age 60  
*Male [50]* after 10 years entitled has probability .035000 of death in year 11 after attaining age 60

Before duration 10 however, the probability of dying within the next year does depend on the entitlement age and duration, so we find the probability of death in the *select* part of the S&U table:

*Male [54]* after 6 years entitled has probability .035121 of death in year 7 after attaining age 60  
*Male [56]* after 4 years entitled has probability .032384 of death in year 5 after attaining age 60  
*Male [58]* after 2 years entitled has probability .035829 of death in year 3 after attaining age 60

### **Benefit Continuance Table (Refer to Table 8A)**

We can also calculate the probability that a disabled beneficiary will remain entitled for a certain number of years using table 7A. However, this calculation becomes tedious after several iterations:

Probability *male [50]* remains entitled 1 year =  $(1 - .042661) = \underline{.957339}$   
 Probability *male [50]* remains entitled 3 years =  $(1 - .042661) \times (1 - .031050) \times (1 - .026100) = \underline{.903403}$   
 Probability *male [50]* entitled for 5 years will remain entitled another 10 years =  
 $(1 - .027369) \times (1 - .028038) \times (1 - .030147) \times (1 - .030453) \times (1 - .033520) \times (1 - .035000) \times$   
 $(1 - .036142) \times (1 - .037453) \times (1 - .039538) \times (1 - .040737) = \underline{.708672}$

The values, however, are easily calculated using table 8A. Note that the numbers in this table are not actual counts of beneficiaries, but rather an assumed number living at the beginning of each duration corresponding to the probabilities derived from table 7A and an initial arbitrary value of 100,000 (called the *radix*) at entitlement age 16, duration 0. Differences in the precision of the following probabilities as compared with those derived directly from table 7A are due to rounding the number of lives to integer values in constructing table 8A:

Probability *male [50]* remains entitled 1 year =  $75,453 / 78,815 = \underline{.957343}$   
 Probability *male [50]* remains entitled 3 years =  $71,202 / 78,815 = \underline{.903407}$   
 Probability *male [50]* entitled for 5 years will remain entitled another 10 years =  $47,884 / 67,568 = \underline{.708679}$

In this section, we explain *expectation* and the differences in the interpretation of the numbers for death, recovery, and combined experience.

***Expected Future Time on Combined OASDI Rolls (Refer to Table 9A—Death Experience Only)***

In table 9A, we measure how long a beneficiary may remain on the combined OASDI rolls before dying. We do not consider recovery. In this context, we expect a *male [50]* who just became entitled to DI to remain entitled for 19.48 years if he does not die. If he lives 10 years and is on the DI rolls at attained age 60 then we expect him to remain entitled for another 14.79 years. If he lives 30 years and is on the OASI rolls at attained age 80 then we expect him to remain entitled for another 6.13 years (table 9C). Note that table 9A only shows how long we expect a beneficiary *to live* and remain entitled. It does not reflect the chance of recovering.

***Expected Future Time on DI Rolls (Refer to Table 16A—Recovery Experience Only)***

In table 16A, we measure how long a beneficiary may remain on the DI rolls before recovering or switching to old-age benefits. We do not consider death. In this context, we expect a *male [50]* who just became entitled to DI to remain entitled for 15.64 years if he does not recover. If he has not recovered after 10 years and is on the DI rolls at attained age 60 then we expect him to remain entitled for another 5.98 years. Note that similar to table 9A, table 16A only shows how long we expect a beneficiary *to not recover* and remain entitled. It does not reflect the chance of dying. In order to measure the *total* amount of time we expect a beneficiary to remain on the rolls, we must consider both death and recovery.

***Expected Future Time on Combined OASDI Rolls (Refer to Table 23A—Combined Experience)***

In table 23A, we measure how long a beneficiary may remain on the combined OASDI rolls considering both death and recovery. In this context, we expect a *male [50]* to remain entitled for 18.96 years. If after 10 years he is still on the DI rolls at attained age 60 then we expect him to remain entitled for another 14.73 years. After a DI beneficiary converts to OASI benefits at NRA, we no longer track the occurrence of recovery, however, we continue to track the occurrence of death.

***Expected Future Time on DI Rolls (Refer to Table 24A—Combined Experience)***

In table 24A, we measure how long a beneficiary may remain on the DI rolls. Observation stops once the beneficiary dies, recovers, or switches to OASI benefits. In this context, we expect a *male [50]* to remain on the DI rolls for 12.27 years. Similarly, we expect a *male [60]* who has been on the DI rolls for two years and is attained age 62 to remain on the DI rolls for another 3.72 years.

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In this section, we explain *absolute rates* and address the issue of designing a single decrement model that is restricted to a particular cause of decrement in a multiple-decrement environment. In such a model, one decrement does not “compete” with other decrements in the sense that all other decrements are “removed” once they are observed. We will clarify this concept in the examples that follow. In table 10, we isolate death as a particular cause of decrement. In table 17, we isolate recovery as a particular cause of decrement.

***Absolute Death Rate per Thousand Entitled (Refer to Table 10A)***

The probabilities in table 7A are calculated by dividing the total number of deaths observed in an entitlement-age-and-duration “cell” by the total exposure for that cell. In the single-decrement model, we subtract the exposure from all the beneficiaries who recover in that same cell—if they recover then they are no longer exposed to the decrement of death. Note that by reducing the amount of exposure for that cell, the probability of death is calculated to be slightly higher.

In actuarial mathematics, we avoid calling this re-calculated value a “probability” because some of the persons providing exposure exit before the end of a duration for a different decrement. So we express this quantity as a *rate per thousand per year*. Dividing the number of deaths by the reduced exposure and multiplying by 1000 gives us an *absolute death rate*. In the first year of entitlement, a *male [50]* has an absolute rate of 42.723 deaths per 1000 beneficiaries as found in table 10A, which is slightly higher than 1000 times the probability shown in table 7A.



**Absolute Recovery Rate per Thousand Entitled (Refer to Table 17A)**

Similarly, the probabilities in table 14A are calculated by dividing the total number of recoveries by the total exposure for a particular cell. In the single-decrement model, we adjust for the beneficiaries who die in a particular cell. Dividing the number of recoveries by the reduced exposure and multiplying by 1000 gives us an *absolute recovery rate*. In the first year of entitlement, a *male [50]* has an absolute rate of 2.902 recoveries per 1000 beneficiaries as found in table 17A. Again, this is slightly higher than 1000 times the probability shown in table 14A.

In the next 3 sections, we explain the grouping methods used to aggregate data by entitlement age, attained age, and duration.

**Aggregate Probability of Death and Expected Future Time, by Entitlement Age (Select Age, Refer to Table 11)**

In this aggregation, we calculate the probability of death by summing the number of deaths across all durations for each *entitlement age* and divide by the total exposure for that age. For example, tabulations show that for males entl age 50 there are 54,775 total deaths and 1,413,092.99 total life-years of exposure in the observation period 2011-15:

Age-duration Cell	Deaths	Life-years Exposure
<i>Male [50], Dur 0</i>	4,367	104,560.36
<i>Male [50], Dur 1</i>	3,278	107,053.96
<i>Male [50], Dur 2</i>	2,748	106,223.93
.	.	.
.	.	.
.	.	.
<i>Male [50], Dur 10+</i>	28,445	529,923.87
Total	54,775	1,413,092.99

The aggregate probability of death within the next year is:

$$54,775 / 1,413,092.99 = .038762$$

This value is calculated for each entitlement age 16-65. The series is then graduated—for example, the above value is adjusted to be .038766—and the results are shown in table 11.

The aggregate future time is a weighted-average of all the individual expected future times found in table 9A. Each expected time is weighted by the total life-years of exposure for that cell. For example:

Age-duration Cell	Expected Future Time	Life-years Exposure
<i>Male [50], Dur 0</i>	19.48	104,560.36
<i>Male [50], Dur 1</i>	19.33	107,053.96
<i>Male [50], Dur 2</i>	18.93	106,223.93
.	.	.
.	.	.
.	.	.
<i>Male [50], Dur 47</i>	2.43	60.09
<i>Male [50], Dur 48</i>	2.30	43.98
Total		1,413,092.99

Multiply (expected time) x (exposure) and sum to get total exposure-weighted future time 21,866,663.38 and the aggregate expected future time for male entitlement age 50 is:

$$21,866,663.38 / 1,413,092.99 = \underline{15.47}$$

This value is calculated for each entitlement age 16-65. The results are shown in table 11. Similar calculations are performed for table 18 and table 25.

**Aggregate Probability of Death and Expected Future Lifetime, by Attained Age (Refer to Table 12)**

In this aggregation, we calculate the probability of death by summing the number of deaths across all durations for each *attained age* and divide by the total exposure for that age. For example, tabulations show that for males attained age 50 there are 20,480 total deaths and 776,237.95 total life-years of exposure in the observation period 2011-15:

Age-duration Cell	Deaths	Life-years Exposure
Male [50], Dur 0	4,367	104,560.36
Male [49], Dur 1	2,313	55,742.15
Male [48], Dur 2	1,656	53,572.43
.	.	.
.	.	.
.	.	.
Male [17], Dur 33	12	342.41
Male [16], Dur 34	2	59.72
Total	20,480	776,237.95

The aggregate probability of death within the next year is:

$$20,480 / 776,237.95 = .026384$$

This value is calculated for each attained age 16-75. The series is then graduated—in this case, the above value remains .026384 after graduation—and the results are shown in table 12.

The aggregate future time is a weighted-average of all the individual expected future times found in table 9A. Each expected time is weighted by the total life-years of exposure for that cell. For example:

Age-duration Cell	Expected Future Time	Life-years Exposure
Male [50], Dur 0	19.48	104,560.36
Male [49], Dur 1	19.26	55,742.15
Male [48], Dur 2	19.56	53,572.43
.	.	.
.	.	.
.	.	.
Male [17], Dur 33	20.31	342.41
Male [16], Dur 34	20.31	59.72
Total		776,237.95

Multiply (expected time) x (exposure) and sum to get total exposure-weighted future time 15,509,712.34 and the aggregate expected future time for male attained age 50 is:

$$15,509,712.34 / 776,237.95 = \underline{19.98}$$

This value is calculated for each attained age 16-75. The results are shown in table 12. Similar calculations are performed for table 19 and table 26.

**Aggregate Probability of Death and Expected Future Lifetime, by Duration (Refer to Table 13)**

In this aggregation, we calculate the probability of death by summing the number of deaths for each *duration* and divide by the total exposure for that duration. For example, tabulations show that for males in the first year of entitlement (duration 0) there are 123,545 total deaths and 2,237,197.59 total life-years of exposure in the observation period 2011-15:

Age-duration Cell	Deaths	Life-years Exposure
<i>Male [16], Dur 0</i>	1	12.75
<i>Male [17], Dur 0</i>	1	206.75
<i>Male [18], Dur 0</i>	6	1,102.99
.	.	.
.	.	.
.	.	.
<i>Male [64], Dur 0</i>	4,961	48,099.31
<i>Male [65], Dur 0</i>	2,377	21,388.83
Total	123,545	2,237,197.59

The aggregate probability of death within the next year is:

$$123,545 / 2,237,197.59 = .055223$$

This value is calculated for each duration 0-40. The series is then graduated—for example, the above value is adjusted to be .055222—and the results are shown in table 13.

The aggregate future time is a weighted-average of all the individual expected future times found in table 9A. Each expected time is weighted by the total life-years of exposure for that cell. For example:

Age-duration Cell	Expected Future Time	Life-years Exposure
<i>Male [16], Dur 0</i>	46.07	12.75
<i>Male [17], Dur 0</i>	44.98	206.75
<i>Male [18], Dur 0</i>	43.91	1,102.99
.	.	.
.	.	.
.	.	.
<i>Male [64], Dur 0</i>	11.74	48,099.31
<i>Male [65], Dur 0</i>	11.25	21,388.83
Total		2,237,197.59

Multiply (expected time) x (exposure) and sum to get total exposure-weighted future time 42,843,144.26 and the aggregate expected future time for male duration 0 is:

$$42,843,144.26 / 2,237,197.59 = \underline{19.15}$$

This value is calculated for each duration 0-40. The results are shown in table 13. Similar calculations are performed for table 20 and table 27.

**Annuity Values (Refer to Tables 28-31)**

Once entitled to Social Security DI benefits, the beneficiary receives monthly cash payments as long as he remains entitled. To calculate the present value of future benefits (PVFB), we discount a stream of future cash payments using an assumed interest rate to account for the time-value of money. In addition, we discount for *survivorship* to account for the condition that the beneficiary must remain entitled or “survive” to the next payment.

The following illustration shows the value of a disability benefit payable to age 66 (NRA). The value found in table 30A for a male entitled at age 58 assuming 3% annual interest rate and continuance experience shown in table 22A is calculated as shown below. We simplify the mathematics by using a hypothetical annual payment (instead of monthly), and annual interest and continuance factors. For example, instead of a monthly DI benefit of \$1500, we assume the beneficiary receives an annual benefit of \$18,000 at the end of each duration up until he attains age 66:

Duration	Age	Annual Payment (End of duration)	Interest Factor	Continuance Factor	Actuarial Present Value	Present Value Future Benefits
0	58	\$18,000	.970874	.937312	.910011	\$16,380.21
1	59	18,000	.942596	.896751	.845274	15,214.93
2	60	18,000	.915142	.864303	.790959	14,237.27
3	61	18,000	.888487	.833380	.740448	13,328.06
4	62	18,000	.862609	.801695	.691549	12,447.88
5	63	18,000	.837484	.771013	.645711	11,622.81
6	64	18,000	.813091	.740653	.602219	10,839.94
7	65	18,000	.789409	.714750	.564231	10,156.15
8	66	no payment	-	-	-	-
Total					5.790402	\$104,227.25

The *interest factor* represents the amount of money that, if invested at 3% annual interest, will grow to \$1 by the end of the stated duration. Discounting for interest is the first part of the PVFB calculation—the present value of the annual payment made at the end of duration 0 (discounting for interest only) is:

$$\begin{aligned}
 PV &= \$18,000 \times (.970874) \\
 &= \$17,475.73
 \end{aligned}$$

The *continuance (survivorship) factor* is derived from table 22A and represents the probability that the beneficiary makes it to the next payment by neither dying nor recovering. For example, the probability of making it to the first payment is:

$$23,340 / 24,901 = .937312$$

The present value of the annual payment made at the end of duration 0 (discounting for interest and survivorship) is called the *actuarial present value*, and is calculated as:

$$\begin{aligned}
 APV &= \$18,000 \times (.970874 \times .937312) \\
 &= \$18,000 \times (.910011) \\
 &= \$16,380.21
 \end{aligned}$$

This dollar amount is shown in the last column of the above table. The PVFB is the sum of the APV over all durations = \$104,227.25. Shown in the second-to-last column is the series of APV factors = (interest factor) x (survivorship factor). Summing these factors over all durations gives the annuity value shown in table 30A, which is easily used to calculate PVFB directly:

$$\begin{aligned}
 PVFB &= \$18,000 \times 5.790 \\
 &= \$104,220
 \end{aligned}$$

## VII. GLOSSARY

**AC** — Appeals Council  
**ALJ** — Administrative law judge  
**CDR** — Continuing disability review  
**COLA** — Cost of living adjustment  
**DA&A** — Drug addiction and alcoholism  
**DDS** — Disability Determination Services  
**DI** — Disability Insurance  
**EPE** — Extended period of eligibility  
**NRA** — Normal retirement age  
**OASI** — Old-Age and Survivors Insurance  
**OAO** — Office of Appellate Operations (formerly ODAR)  
**OHO** — Office of Hearings Operations (formerly ODAR)  
**RFC** — Residual functional capacity  
**SGA** — Substantial gainful activity  
**SSA** — Social Security Administration  
**SSI** — Supplemental Security Income  
**TWP** — Trial work period

**Administrative Law Judge.** An official of the Social Security Administration’s Office of Hearings Operations (OHO) who is specially qualified to hold hearings and make independent decisions regarding eligibility for SSA programs on the basis of all evidence and testimony. ALJs conduct impartial hearings and issue decisions to claimants who have appealed previous determinations by SSA.

**Allowance (or denial).** A determination by the Disability Determination Services, OHO, OAO, or federal district court that a claimant meets (or does not meet) the medical definition of disability under the Social Security Act.

**Appeals Council.** The organization within OAO that makes the final decision in the administrative review process. The council is the last line of appeal within SSA for partially favorable or unfavorable decisions. A claimant’s next recourse would be the federal court system.

**Auxiliary benefits.** Monthly benefits payable to a spouse or child of a retired or disabled worker, or to a survivor of a deceased worker.

**Award.** An administrative determination that an individual is entitled to receive a specified type of OASDI benefit. Awards can represent not only new entrants to the benefit rolls but also for persons already on the rolls who become entitled to a different type of benefit. Awards usually result in the immediate payment of benefits, although payments may be deferred or withheld depending on the individual’s particular circumstances.

**Baby-boom.** The period following the end of World War II, from 1946 through 1964, marked by unusually high birth rates.

**Beneficiary.** A person who has been awarded benefits on the basis of his or her own or another’s earnings record. The benefits may be either in current-payment status or withheld.

**Code of Federal Regulations.** A record of the general and permanent rules published in the Federal Register by executive departments and agencies of the Federal government. The second volume (parts 400-499) of this three-volume publication includes sections under Title 20, Chapter III, which cover OASDI, SSI, and all other regulations issued by the Social Security Administration.

**Concurrent claim/benefit.** A claim for both Title II (Social Security) and Title XVI (Supplemental Security Income) benefits. Since SSI provides “assistance of last resort”—taking into account all income and resources that an individual has—concurrent beneficiaries must include Title II cash benefits as part of income when determining the amount of Title XVI benefits to be received.

**Continuing Disability Review.** An evaluation to determine if a disability beneficiary is still eligible for cash benefits. Payment of benefits will end if medical or other evidence shows the beneficiary is no longer disabled under the standards set in the Social Security Act. The frequency of reviews varies by the severity of impairment or can be “triggered” by work activity.

**Current-payment status.** Status of a beneficiary to whom a benefit is being paid for a given month.

**Diagnostic group.** Classification of impairments, by body system, which identifies the medical condition(s) underlying a disability. Before 1985, the coding of primary and secondary diagnoses for Social Security claimants was in accordance with the *International Classification of Diseases: 9<sup>th</sup> Revision* using 4-digit ICD-9 codes. In 1985, SSA implemented a revised impairment coding system using 3 digits followed by a zero. Although not identical, the new codes closely parallel the major ICD-9 categories.

**Disability conversion.** Automatic conversion of a disabled worker beneficiary to retired-worker status upon attainment of normal retirement age.

**Disability Determination Services.** The state agency responsible for developing medical evidence and rendering the initial determination and reconsideration on whether a claimant is disabled or a beneficiary continues to be disabled within the meaning of the Social Security Act.

**Disability incidence rate.** The proportion of workers in a given year, insured for but not receiving disability benefits, who apply for and are awarded disability benefits. Gross incidence rates are calculated as the ratio of the total number of awards for a given year to the total exposure for that year. Age-adjusted incidence rates are calculated as the ratio of the total number of adjusted awards for a given year to the total exposure for the standardizing year. For example, mul-

tipling single-year-of-age incidence rates in 2015 by the exposure for those same ages in, say, 2000 would give adjusted awards. The age-adjusted incidence rate for 2015 is then calculated as the total number of adjusted awards divided by the total exposure for 2000.

Gross rates are not directly comparable over time because of the year-to-year differences in the age and sex composition of the underlying insured population. We adjust gross rates to factor out these effects allowing for a “cleaner” comparison of rates from year to year.

**Disability termination rate.** The proportion of disabled-worker beneficiaries in a given year whose disability benefits terminate because of the individual’s death or recovery.

**Drug Addiction and Alcoholism.** Beginning in 1997, if shown to be material to the determination of disability, drug addiction or alcoholism will prevent entitlement to benefits or cause removal from the rolls.

**Exposure.** In general, exposure is a measure of the amount of time that a cohort of individuals are exposed to the possibility of an event, such as disability, death, or recovery. The quantity of measurement is called “life-years”. There are different methods of calculating life-years of exposure. With regard to incidence of disability, we measure the amount of time that a cohort of workers (who are not already disabled) are exposed to the possibility of becoming disabled over the course of a year. Alternatively, this quantity can be considered the average number of disability-insured workers for the year who are not already receiving benefits.

With regard to the select-and-ultimate tables for death or recovery probabilities presented in this study, exposure depends on how long beneficiaries are “scheduled” to be on the disability rolls during a specific period of time (called the “observation period”). There are various ways to calculate this quantity as well and the reader is referred to the appendix for details.

**Federal court review.** When an individual disagrees with SSA’s final decision in the administrative review process, they may request judicial review by filing a civil action in a federal district court.

**Hearing.** The level following reconsideration in the administrative review process. The hearing is a *de novo* procedure at which the claimant and/or representative may appear in person, submit new evidence, give testimony, and present witnesses.

**Initial determination.** The first decision made in determining entitlement to benefits. The field office makes the decision on nonmedical factors such as insured status or substantial gainful activity. If nonmedical factors are met, DDS adjudicators make the decision on the medical factors.

**Listing of Impairments.** Describes, for each major body system, impairments which are considered severe enough to

prevent a person from doing any gainful activity. Most of the listed impairments are permanent or expected to result in death, or a specific statement of duration is made. For all others, the evidence must show that the impairment is expected to last at least 12 months.

**Maximum family benefit .** The maximum monthly amount that can be paid on a worker’s earnings record. Whenever the total of the individual monthly benefits payable to all beneficiaries entitled on one earnings record exceeds the maximum, each auxiliary benefit is proportionately reduced to bring the total within the maximum.

**Normal retirement age.** The age at which a person may first become entitled to unreduced retirement benefits (see chart on page 1).

**Pre-effectuation review.** A comprehensive on-going program under which a prescribed percentage of determinations involving the issue of disability are evaluated prior to their effectuation, even though there is no request for review. The Social Security Act requires that each year at least 50% of all Title II and Title XVI adult allowances at the DDSs be reviewed.

**Processing time.** The amount of time it takes to establish disability allowance (or denial) measured from the date of filing to the date of final disposition of the claim.

**Recession.** A period of adverse economic conditions; in particular, two or more successive calendar quarters of negative growth in GDP. The Great Recession is defined as the period of economic conditions from December 2007 through June 2009 which included the financial crisis of 2007-08 and U.S. subprime mortgage crisis of 2007-09.

**Reconsideration.** An independent reexamination at the DDS of all evidence on record related to a case. It is based on the evidence submitted for the initial determination and any further evidence or information that the claimant submits. Adjudicators making a reconsideration determination are different from those who made the initial determination.

**Recovery.** The termination of disability benefits because of medical improvement related to the ability to work or a successful reentry to the workforce.

**Replacement rate.** The ratio of the total amount of (annualized) cash benefits received during the first year of entitlement to the total earnings of the beneficiary in the immediately preceding year. This ratio measures the fraction of prior earnings that are replaced by current benefits.

**Residual Functional Capacity.** A measurement of the amount of activity an individual can perform in spite of physical or mental limitations. Disability adjudicators assess the extent that the impairment(s) prevent the claimant from performing particular work activities, and use RFC to determine the types of work that can be performed despite impairments.

**Retroactive benefits.** Benefits that are paid for months that have already passed. For disability cases, the retroactive period can include up to 12 months prior to filing for benefits; and can also include any number of months between application and award.

**Social Security Act.** Provisions of the law governing most operations of the Social Security program. Title II of the Act authorized the Old-Age, Survivors, and Disability Insurance program. Title XVI of the Act authorized the Supplemental Security Income (SSI) program.

**Statutory blindness.** Central visual acuity of 20/200 or less in the better eye with the use of a correcting lens or tunnel vision of 20 degrees or less.

**Supplemental Security Income.** A federal program for low-income aged, blind, and disabled individuals who meet income and resource requirements, as well as other criteria.

SSI is funded by general tax revenues, not Social Security taxes.

**Vocational factors.** When it is determined that a claimant cannot perform past relevant work based on residual functional capacity alone, adjudicators further consider vocational factors of age, education, and work experience to determine the claimant's ability to adjust to other work that exists in significant numbers in the economy.

**Workers' Compensation offset.** A reduction in the monthly benefits for a disabled-worker family when the monthly DI cash benefit amount plus the State or Federal workers' compensation benefit amount or other Federal, State, or local disability benefits (excluding VA or needs-based benefits or benefits based on Federal, State, or local covered employment) exceeds 80 percent of the worker's *average current earnings* before the onset of disability. The offset is imposed for any month in which individuals are entitled to both DI benefits and other applicable benefits.