

**PROBABILITY OF DEATH WHILE PENDING AN ADMINISTRATIVE
LAW JUDGE DETERMINATION**

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Introduction

Determining whether an individual is disabled under the definition in the Social Security Act often requires a complex analysis of the alleged physical or mental impairment to evaluate the extent of limitation for performing work that exists in the economy. All information needed to establish disability is not always provided at initial application, and, furthermore, the individual's impairment severity or functional limitations can change during the time needed to make determinations. This complex analysis must be repeated by the Administrative Law Judge (ALJ) on appeal when a claimant is not found disabled (or receives a less-than-fully-favorable decision)¹ at the initial determination by a disability examiner and medical consultant at a State Disability Determination Service (DDS), or upon reconsideration of the initial DDS determination.² Because of the frailty of many applicants for disability, those who await an ALJ determination will, as a group, experience higher mortality than the general population. This actuarial note presents the following for fiscal years 2006 through 2017:

- (1) The number of living applicants with claims pending an ALJ determination under the OASDI and SSI programs
- (2) The number of claimants who died while their case was pending an ALJ determination
- (3) The death rate on a consistent "age-sex-adjusted" basis for living claimants while their case was pending an ALJ determination
- (4) For comparison, the death rate for individuals of the same age and sex in:
 - a. The general population
 - b. The population of persons awarded disabled worker benefits who are in their first two years of benefit entitlement

There are two key findings. First, the death rate for individuals who are awaiting an ALJ determination has declined somewhat over the period from 2006 to 2017. Second, the death rate for this group, while it is two to three times as high as that for the general population, is only about one-fourth of the death rate for workers who have been awarded disabled worker benefits and are in their first two years of benefit entitlement.

The authors are grateful to staff of the Office of Hearings Operations (OHO) for providing microdata from the Case Processing Management System (CPMS) for cases that were pending an ALJ determination at the end of each fiscal year, 2005 through 2017. Claimants who died while their case was pending an ALJ determination in fiscal years 2006 through 2017 were identified by the Office of the Chief Actuary by querying the agency's master file of death information, the NUMIDENT.

¹ Applicants may appeal the date of onset of the disability established by the State Disability Determination Service (DDS) or other aspects of the claim unrelated to a disability.

² In addition to appeals following a final determination by the DDS, cases may be remanded to an ALJ by the Appeals Council or a federal court.

Numbers of Deaths Among Claimants Awaiting an ALJ Determination

Table 1 shows the numbers of OASDI and SSI claimants who died while awaiting an ALJ determination in each of fiscal years 2006 through 2017, obtained by matching individuals identified in the CPMS as having appealed for an ALJ determination to the death information recorded in the NUMIDENT. These numbers were stable at around 7,000 per year from 2006 through 2009, declined to under 6,000 for 2010, rose gradually to 9,714 for 2016, and dropped to 9,570 for 2017. These changes in the number of deaths can be explained by the changing numbers of disability claimants pending an ALJ determination over this period, as we will show.

Table 1.—Deaths While Pending an ALJ Determination, Fiscal Years 2006-17

FY	Total	Under 18	Age 18+
2006	6,931	28	6,903
2007	7,308	30	7,278
2008	7,147	30	7,117
2009	6,972	22	6,950
2010	5,940	20	5,920
2011	6,068	23	6,045
2012	6,380	18	6,362
2013	6,542	17	6,525
2014	7,611	26	7,585
2015	8,696	26	8,670
2016	9,714	27	9,687
2017	9,570	30	9,540

Claimants Pending an ALJ Determination

Table 2 shows the numbers of OASDI and SSI claimants with their case pending an ALJ determination at the end of each fiscal year 2005 through 2017. The total number of persons pending an ALJ determination at the end of each year in the first data column³ of Table 2 is slightly larger than the number of cases of living claimants pending shown in the second data column of Table 2, because in certain circumstances the case is not closed upon death of the applicant; benefits may be awarded to the family or estate of the claimant if the ALJ determines that the claimant had met the requirements for disability. Living claimants are the focus of our analysis, because they are the ones at risk for dying.

The numbers of living applicants with claims pending an ALJ determination are shown for those under age 18 and those age 18 and older in Table 2. Those under age 18 are mainly child disability applicants under the SSI program. Those age 18 and older include workers applying for DI disabled worker benefits, OASDI disabled widow or disabled adult child benefits, and SSI blind and disabled adult benefits. There is also a very small number of individuals appealing a matter unrelated to disability.

Due to the recent economic recession, the number of initial applications for all disability benefits rose sharply after 2007, reaching a peak in 2010. As a result, appeals to ALJ also rose, reaching a peak in 2011. The number of applicants with claims pending an ALJ determination began rising significantly in 2011, and continued rising through 2016, even while initial disability applications declined after 2010.

³ The numbers of claimants in this column differ slightly from OHO published counts of cases pending for the following reasons: (1) these counts are for pending claimants as of the end of the 53rd work week in fiscal years where there was a 53rd week, while published OHO counts are for benefit cases pending as of the end of the 52nd work week for all years, and (2) these counts are for the number of claimants with an appeal, while OHO pending counts are the number of benefit cases under appeal, and in some cases an individual claimant may have more than one case under appeal.

Table 2.—Claimants Pending an ALJ Determination, End of Fiscal Years 2005-17

End of FY	Total	Number Alive at End of Year		
		Total	Under 18	Age 18+
2005	709,565	703,959	50,709	653,250
2006	709,085	703,203	47,791	655,412
2007	740,266	734,305	47,726	686,579
2008	754,061	748,270	47,362	700,908
2009	715,945	711,205	45,288	665,917
2010	698,480	694,739	45,742	648,997
2011	779,553	775,704	47,789	727,915
2012	808,869	805,133	50,883	754,250
2013	840,048	836,243	51,845	784,398
2014	968,869	963,673	54,086	909,587
2015	1,050,767	1,044,177	58,771	985,406
2016	1,110,938	1,103,157	66,626	1,036,531
2017	1,046,162	1,038,802	65,520	973,282

In order to compute death rates, we need the average population in each year that was “exposed” to the risk of dying while an ALJ determination was pending. Following standard actuarial practice, this exposure is approximated as the average number of living claimants pending at the beginning and the end of each year, plus one-half of the deaths occurring during the year. This exposure for fiscal years 2006 through 2017 is shown in Table 3.

Table 3.—Annualized Exposure While Pending an ALJ Determination, Fiscal Years 2006-17

FY	Total	Under 18	Age 18+
2006	707,047	49,264	657,783
2007	722,408	47,774	674,635
2008	744,861	47,559	697,302
2009	733,224	46,336	686,888
2010	705,942	45,525	660,417
2011	738,256	46,777	691,479
2012	793,609	49,345	744,264
2013	823,959	51,373	772,587
2014	903,764	52,979	850,786
2015	1,008,273	56,442	951,832
2016	1,078,524	62,712	1,015,812
2017	1,075,765	66,088	1,009,677

Death Rates for Claimants while an ALJ Determination is Pending

Table 4 presents the annual rates of death for living applicants with claims pending an ALJ determination during each fiscal year 2006 through 2017 for all ages combined, for those under age 18, and for those age 18 and older. For each age group, the death rates were standardized to the age-sex distribution of pending claimants in 2010. More specifically, the age-sex-specific death rates for each year are multiplied by the age-sex-specific exposure in the year 2010, summed together, and then divided by the total exposure in 2010. This adjustment makes it possible to observe the trend in the death rate for those awaiting an ALJ determination across all years, free from the distortion of a changing age-sex mix.

Table 4 shows that the age-sex-adjusted death rates for those pending an ALJ determination have been fairly stable between 2006 and 2017. They declined somewhat from 2007 to 2013, and then rose somewhat through 2016, but to a level below the death rates for 2006 through 2009. Hence we conclude that the increase since 2006 in the number of deaths among claimants with an ALJ determination pending is fully explained by the increase in the numbers of applicants with a case pending. The death rate is not higher at the end of the period 2006 through 2017 than at the beginning of this period, and is in fact slightly lower.

Table 4.—Annualized Age-Sex-Adjusted Death Rates For Those Pending an ALJ Determination, Fiscal Years 2006-17

FY	Total	Under 18	Age 18+
2006	0.978%	0.063%	1.041%
2007	1.004%	0.066%	1.068%
2008	0.951%	0.065%	1.012%
2009	0.948%	0.049%	1.010%
2010	0.851%	0.045%	0.906%
2011	0.836%	0.050%	0.890%
2012	0.816%	0.037%	0.869%
2013	0.803%	0.034%	0.856%
2014	0.835%	0.054%	0.889%
2015	0.846%	0.051%	0.900%
2016	0.878%	0.050%	0.935%
2017	0.864%	0.055%	0.919%

Comparison to Death Rates for the General Population

How does the trend in death rates for claimants with cases pending an ALJ determination compare to the trend in death rates over the same period for the population in general—that is, for the entire population residing in the Social Security coverage area?

Table 5 presents death rates experienced by the general population in the Social Security coverage area for fiscal years 2006 through 2017, consistent with estimates in the 2017 Trustees Reports. These rates are age-sex-adjusted to the age-sex distribution of claimants pending an ALJ determination in 2010 to facilitate comparison. Table 5 shows that death rates for the general population have declined over the period 2006 through 2017.

Table 5.—Annualized Age-Sex-Adjusted Death Rates for General U.S. Population, Years 2006-17

Year	Total	Under 18	Age 18+
2006	0.356%	0.031%	0.379%
2007	0.349%	0.031%	0.371%
2008	0.346%	0.029%	0.368%
2009	0.343%	0.028%	0.365%
2010	0.334%	0.027%	0.355%
2011	0.335%	0.027%	0.356%
2012	0.333%	0.026%	0.354%
2013	0.333%	0.026%	0.355%
2014	0.335%	0.025%	0.357%
2015	0.327%	0.024%	0.348%
2016	0.324%	0.024%	0.345%
2017	0.321%	0.023%	0.341%

Table 6 presents the ratio of the adjusted death rates for claimants with cases pending an ALJ determination to the similarly adjusted death rates for the general population. Over the period 2006 through 2017, death rates for those pending an ALJ determination have consistently been about twice as large as the death rates for the general population in the under age18 group and about 2.5 to 2.7 times as large as the death rates for the general population for the age 18 and older group. Of course, death rates for claimants pending an ALJ determination would be expected to be higher than for the general population, because the pending claimants are alleging severe medically-determinable impairments which render them unable to engage in substantial gainful activity for a period of at least 12 months or until death.

Table 6.—Ratio of Annualized Age-Sex-Adjusted Death Rates: ALJ Pending to General U.S. Population, Years 2006-17^a

Year	Total	Under 18	Age 18+
2006	2.75	2.03	2.75
2007	2.88	2.17	2.88
2008	2.74	2.25	2.75
2009	2.76	1.76	2.77
2010	2.55	1.68	2.55
2011	2.50	1.87	2.50
2012	2.45	1.43	2.46
2013	2.41	1.33	2.41
2014	2.49	2.11	2.49
2015	2.59	2.12	2.59
2016	2.71	2.10	2.71
2017	2.69	2.38	2.69

^a For general population death rates, see <https://www.ssa.gov/OACT/HistEst/Death-Home.html>.

Comparison to Death Rates for Disabled Worker Beneficiaries in their First Two Years of Entitlement

Table 7 provides another comparison of the death rates for claimants with cases pending an ALJ determination, this time to the death rates for DI disabled worker beneficiaries who are in their first two years of entitlement. This comparison is appropriate because claimants pending an ALJ determination, if found disabled, would generally have been in their first two years of benefit entitlement while their claim was pending an ALJ determination.

For the disabled worker death rates in the first two years of entitlement, we use the average of death rates experienced over the period 2006 through 2010, which are published in Actuarial Study 123⁴. Again, these death rates are standardized to the age-sex distribution of claimants pending an ALJ determination in 2010, for comparability.

Table 7 shows that death rates for those awaiting an ALJ determination have been considerably lower on average than death rates for disabled worker beneficiaries who are within two years of initial entitlement—only about one-fourth as high as for the disabled worker beneficiaries. This difference is attributable to two factors. First, only about one-half of claimants pending an ALJ determination will be found disabled; those found not disabled will generally have less severe medical impairments than those found disabled, and thus will tend to have a lower probability of death. Second, disability claimants with the most severe impairments, and particularly those with terminal conditions, would likely have been found disabled at earlier stages of adjudication.

Table 7.—Ratio of Annualized Age-Sex Adjusted Death Rates: ALJ Pending Age 18+ in Years 2006-17 to DI Workers During First 2 Years of Entitlement in Years 2006-10 Combined^a

Year	Death Rate	Death Rate	Ratio
	ALJ Pending	Disabled Workers	
2006	1.041%	3.560%	0.29
2007	1.068%	3.560%	0.30
2008	1.012%	3.560%	0.28
2009	1.010%	3.560%	0.28
2010	0.906%	3.560%	0.25
2011	0.890%	3.560%	0.25
2012	0.869%	3.560%	0.24
2013	0.856%	3.560%	0.24
2014	0.889%	3.560%	0.25
2015	0.900%	3.560%	0.25
2016	0.935%	3.560%	0.26
2017	0.919%	3.560%	0.26

^a For disabled worker death rates see Table 10 at https://www.ssa.gov/OACT/NOTES/pdf_studies/study123.pdf

Conclusion

Between 2006 and 2017, the number of OASDI and SSI claimants with cases pending an ALJ determination increased as a result of the recent recession. With more claimants pending an ALJ determination, it is not surprising that the number of deaths among claimants pending an ALJ determination also increased. However, annual death rates among claimants with cases pending an ALJ determination have been fairly stable over the period 2006 through 2017, after adjusting for changes in the age-sex distribution of pending claimants. On this adjusted basis, death rates for this group are in fact somewhat lower for 2017 than for 2006.

Also, while death rates among claimants pending an ALJ determination are higher than death rates for the general population with the same age and sex, they are far lower than the death rates for disabled workers who are within two years of their benefit entitlement.

⁴ See https://www.ssa.gov/OACT/NOTES/pdf_studies/study123.pdf.