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DISABILITY INCIDENCE RATES UNDER OASDI SYSTEM FOR DISABILITY ONSETS OCCURRING IN 1956-62

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An important cost factor in the Disability Insurance portion of the Old-Age, Survivors, and Disability Insurance system is the rate at which insured workers become disabled and qualify for monthly disability benefits or for the "disability freeze."¹ The rate of disability allowance (the proportion of the claims filed that is awarded benefits) is not significant from a cost standpoint; it depends upon how many non-qualifying claims are filed, which may be affected by extraneous factors.

This Actuarial Note presents the results of a study of disability incidence rates for disabilities that had an onset in 1955-62, as represented in the awards made through 1964, plus an estimate of the awards in subsequent years for such onsets.² The disability incidence rate for a given year is defined as the number of disability awards with onset in that year per 1,000 persons who possess the required insured status. In order to make a meaningful analysis properly taking into account the lags in filing and adjudicating claims, it is necessary to proceed on a "year of onset" basis rather than on a "year of award" basis. Even so, the resulting rates will have some limitations, as indicated later in this note.

Table 1 shows the number of disability determination awards by year of award and by year of onset for all awards in the period 1955-64 (1955

being the first year that such awards were made). In this 10-year period, there were 1.9 million awards. The annual number was approximately 175,000 in 1957-60, with a sharp increase thereafter which resulted from the elimination, by the 1960 Amendments, of the age-50 requirement for monthly benefits.

Preliminary data on disability determination awards in 1965 and 1966 indicate that there were about 250,000 such awards in 1965 and 275,000 in 1966. This represents a significant increase over the level prevailing in the 2 preceding years. These latter figures reflect the effect of the 1965 Amendments, which change the definition of disability from an expected "permanent" or "long-term duration" basis to an "expected duration of at least 12 months" basis, but it is believed that the vast majority of the increase is due to other factors.

Relatively few awards are made in the year of onset, because of the effect of the waiting period³ and of the lags in filing and adjudicating claims. In recent years, awards in the year of onset have been only slightly above 20% of all awards made in the year. Over 55% of the awards are for onsets in the previous calendar year. This proportion decreases slowly for earlier years of onset (see Table 1). It should be noted, however, that until the enactment of legislation in 1964,

¹The "disability freeze" provision results in the disabled worker having his insured status and his average monthly wage for benefit purposes maintained as they were when he became disabled. Since the enactment of the 1960 Amendments, which eliminated the requirement of age 50 for monthly benefits, virtually all persons who qualify for the "disability freeze" also qualify for monthly benefits (an exception being certain blind persons).

²The results of a similar study for onsets in 1956-61, as represented in awards made through 1962 were presented in Actuarial Note No. 18.

³The law states this period to be 6 months, but actually it is 7 to 8 months because the 6-month period is measured from the beginning of the calendar month following onset, and the beneficiary must live until the end of the calendar month following the 6-month period to receive his first benefit check.

any claims filed after June 1962 had a limitation on retroactivity insofar as determining the date of onset, and whether the person then had insured status (a maximum of 18 months).⁴ The movement of the awards toward the shorter durations is due to earlier filing by beneficiaries, especially those under age 50, who prior to the 1960 Amendments did not have an immediate financial incentive in the form of cash benefit payments for filing as soon as possible. Also, there has been more rapid adjudication of claims.

For purposes of analysis, it is not advisable to use data for years of onset that occurred before 1956, because for such years many of the disabilities would have terminated before 1955, when awards were first made. Table 2 shows the disability allowances made before 1965 by sex and age for each individual year of onset from 1956 to 1962. These data include a total of 1.2 million awards, or about 65% of the total awards that were made under the program through 1964 (as shown in Table 1).

It would not be a proper analysis to base disability incidence rates only on awards actually made up to a certain date. Obviously, for any particular year of onset, there will be additional cases in the awards of later years, particularly for the most recent years of onset. For each age-sex group, the number of awards by year of onset were estimated by plotting the cumulative awards made as of the end of each subsequent year for which data are available. The curve was then projected by graphic extrapolation to an ultimate asymptotic value.

The data for awards in 1962-64 for onsets after 1962 were not believed to be an adequate base for projection. Accordingly, this estimation procedure was utilized only for years of onset 1956-62. The resulting data are shown in Table 3, with a subdivision of the group aged 60-64, to obtain those aged 60-61 and those aged 62-64 (since, as discussed later, these two groups should be expected to be different). It may be noted that some cases are included as awards at age 65, since "age" means "age on birthday in year of onset"; it is possible for such a

person to have a qualifying disability onset in the early part of a calendar year if his 65th birthday is toward the end of the year.

Table 4 shows the estimated disability incidence rates by age and sex for years of onset from 1956 to 1962 separately. As would be anticipated, the rates rise steadily and significantly with advancing age, except that for women, in all calendar years, there is a sharp drop for those aged 62-64 as compared with those aged 60-61, and in 1960-62 the same thing occurs for men. The explanation for this exception is that the availability of actuarially-reduced old-age benefits beginning at age 62 (available for women in accordance with the 1956 Amendments and for men in accordance with the 1961 Amendments) results in many beneficiaries electing such benefits rather than attempting to obtain disability benefits, which require a waiting period of 7-8 months, involve significantly longer adjudication periods than old-age benefits, and include the possibility that the disability benefit might be denied. It may be noted, however, that individuals can receive the actuarially-reduced old-age benefits after the waiting period, while the disability claim is being adjudicated (with the difference in benefit amount being paid retroactively if the disability determination is approved).

The foregoing situation was changed by the 1965 Amendments, so that now old-age benefits (on a reduced basis) can be received during the waiting period by those disabled at ages 62-64. Any disability benefit subsequently awarded is reduced to take into account the previous period during which old-age benefits were received (including the waiting period).

The age-specific disability incidence rates for women are significantly lower than those for men. The differentials of the male rates over the female rates are as much as 100% at the youngest ages and at least 33% at the older ages.

Perhaps the most important aspect of the analysis is the trend in the age-specific disability incidence rates by year of onset. It should be

⁴Benefit payments are made retroactively at the most for 12 months before the date of filing the claim (the date of award not being relevant). For example, if the date of onset were February 17, 1958, and if the claim was not filed until October 20, 1960 - with

award in January 1961 - benefits would be payable beginning for October 1959. In this example, benefits would not be paid for the 13-month period September 1958 - September 1959 because of delay in filing a claim.

kept in mind, however, that because of the "projection" methodology necessarily used, the rates for the most recent years are subject to possible significant variations.

Any trends developing in regard to the disability incidence rates in the early years of operation of the program must be considered with caution, since increases therein are not necessarily indicative of truly higher disability experience. Some rise might be expected in the early years of operation as the persons covered by the system become more knowledgeable about the availability of the benefits. Individuals otherwise eligible who die before filing a claim cannot have a disability determination or award made. Thus, with all other factors being the same, if disability claims were not filed promptly in the early years (as the case has actually been), but rather more timely filing gradually occurred over the years, then the disability incidence rates would necessarily show a rising trend which would ultimately level off. However, this might not be as significant from a long-range cost standpoint as would at first seem to be the case.

If there are lags in filing claims, the disability incidence rates developed from the experience will be lower than the "true" rates based on prompt filing, but at the same time the disability termination rates (now under analysis but not studied here) would be lower than would be the case with prompt filing, when more short-duration cases would be included in the data.

The analysis of disability incidence rates by year of onset should be considered separately for ages at onset 50 and over and for younger ages at onset, because before the 1960 Amendments monthly benefits were not available until age 50. Under these circumstances, there ap-

peared to be less incentive for younger persons to file disability claims, since they could receive only the disability freeze, plus the possibility of deferred monthly benefits beginning at age 50.

The disability incidence rates rose significantly until 1960, but thereafter remained relatively constant, showing a small increase in certain cases (notably for women aged 60-61). For persons under age 50 at onset of disability, the incidence rates were generally significantly higher for onsets occurring after 1959 than for those of earlier years; it is believed that this differential is due primarily to the elimination of the age-50 requirement in the 1960 Amendments, as discussed previously.

It should be observed that the various rates and data analysed in this note pertain to the definition of disability that was in effect prior to the 1965 Amendments - i.e., a disability that was expected to be permanent or of long-term duration. The changes in the law in 1965 eliminated the "permanency" requirement, changing it to an expected duration of at least 12 months. For this reason, we should expect the incidences of disability to increase in future years. It is estimated that the effect of the change will be to increase the incidence rates by about 3%.

Crude analysis of the data for 1963 onsets included in 1963-64 awards indicate that the disability incidence rates therefor are very close to those for 1960-62 onsets. However, the aggregate data on awards in 1965-66 seems to indicate that, disregarding the relatively small effect of the changes in the 1965 Amendments, the disability incidence rates for 1964 and after are apparently significantly above the 1960-63 level.

Table 1

DISABILITY DETERMINATION AWARDS BY YEAR OF AWARD AND BY YEAR OF ONSET

Year of Award, t	Year of Onset							Total
	Year t	Year t-1	Year t-2	Year t-3	Year t-4	Year t-5	Before Year t-5	
Number of Awards								
1955	913	8,228	7,715	6,530	5,897	5,244	22,694	57,221
1956	859	21,011	28,108	23,390	16,269	12,520	47,666	149,823
1957	6,007	51,716	32,629	18,200	12,747	8,879	34,825	165,003
1958	17,760	71,352	34,679	15,088	10,096	7,467	28,034	184,476
1959	22,290	83,401	29,983	11,635	6,607	5,057	19,979	178,952
1960	22,179	93,842	30,188	12,559	5,450	3,449	11,752	179,419
1961	27,247	125,185	40,302	16,475	9,217	5,055	17,579	241,060
1962	46,767	140,931	50,124	17,414	9,203	5,743	16,252	286,434
1963	48,616	125,736	30,790	9,554	4,069	2,076	3,388	224,229
1964	46,427	121,191	29,725	4,819	1,675	1,008	4,630	209,475
1955-64	239,065	842,593	314,243	135,664	81,230	56,498	206,799	1,876,092
Percentage Distribution of Awards by Year of Onset								
1955	2%	14%	13%	11%	10%	9%	40%	100%
1956	1	14	19	16	11	8	32	100
1957	4	31	20	11	8	5	21	100
1958	10	39	19	8	5	4	15	100
1959	12	47	17	7	4	3	11	100
1960	12	52	17	7	3	2	7	100
1961	11	52	17	7	4	2	7	100
1962	16	49	17	6	3	2	6	100
1963	22	56	14	4	2	1	2	100
1964	22	58	14	2	1	¹	2	100

¹Less than 1/2%.

Table 2

DISABILITY DETERMINATION AWARDS BY AGE AT ONSET AND BY YEAR OF ONSET,
BY SEX, FOR AWARDS BEFORE 1965

Age at Onset ¹	Year of Onset						
	1956	1957	1958	1959	1960	1961	1962
Men							
Under 25	786	630	642	682	807	814	761
25-29	2,054	2,346	2,259	2,313	3,166	3,171	2,959
30-34	2,752	3,335	3,579	3,874	5,232	5,184	4,966
35-39	3,323	4,337	4,784	5,385	7,854	8,118	7,872
40-44	4,653	5,642	6,554	7,581	11,280	11,739	11,875
45-49	8,274	9,765	10,933	12,796	17,400	17,892	17,663
50-54	15,785	19,359	22,674	24,985	28,496	29,511	29,016
55-59	24,677	29,632	33,923	38,321	41,873	43,848	44,670
60-64 ²	31,334	37,297	45,700	50,197	53,378	40,786	38,712
Total	93,638	112,343	131,048	146,134	169,486	161,063	158,494
Women							
Under 25	150	136	141	115	165	145	129
25-29	516	506	551	571	668	716	650
30-34	691	784	856	947	1,055	1,093	1,084
35-39	858	1,069	1,202	1,465	1,824	1,839	1,843
40-44	1,319	1,611	1,795	2,112	2,947	3,067	3,304
45-49	2,666	3,244	3,436	3,937	5,073	5,484	5,330
50-54	4,965	5,754	6,917	7,557	8,472	9,347	9,413
55-59	6,213	7,710	9,018	10,500	12,002	13,219	13,690
60-64 ²	2,701	3,495	4,862	5,587	6,925	7,814	8,261
Total	20,079	24,309	28,778	32,791	39,131	42,724	43,704

¹Age on birthday in year of onset.²Includes the limited number of cases of persons who attain age 65 in the year of onset.

Table 3

ESTIMATED DISABILITY DETERMINATION AWARDS BY AGE AT ONSET AND SEX, FOR ONSETS
IN 1956-62, ACTUAL AWARDS BEFORE 1965 AND ESTIMATED AWARDS AFTER 1964

Age at Onset ¹	Year of Onset						
	1956	1957	1958	1959	1960	1961	1962
Men							
Under 25	790	635	660	730	870	920	950
25-29	2,055	2,350	2,290	2,360	3,220	3,330	3,300
30-34	2,760	3,350	3,610	3,900	5,340	5,350	5,330
35-39	3,330	4,350	4,810	5,450	7,980	8,250	8,400
40-44	4,660	5,660	6,580	7,650	11,400	12,000	12,500
45-49	8,280	9,800	10,970	12,900	17,550	18,300	18,600
50-54	15,800	19,400	22,750	25,100	28,750	30,000	30,300
55-59	24,680	29,650	34,000	38,500	42,100	44,250	45,900
60-64 ²	31,335	37,300	45,750	50,300	53,550	41,100	39,500
60-61	(14,530)	(16,170)	(18,900)	(19,800)	(22,500)	(22,200)	(22,850)
62-64 ²	(16,805)	(21,130)	(26,850)	(30,500)	(21,050)	(18,900)	(16,650)
Total	93,690	112,495	131,420	146,890	170,760	163,500	164,780
Women							
Under 25	150	140	150	127	177	168	174
25-29	520	515	560	610	710	790	810
30-34	700	800	870	970	1,100	1,160	1,200
35-39	865	1,080	1,230	1,500	1,880	1,940	2,020
40-44	1,325	1,620	1,820	2,160	3,020	3,180	3,570
45-49	2,670	3,250	3,470	4,000	5,180	5,720	5,700
50-54	4,970	5,780	6,960	7,650	8,580	9,650	9,960
55-59	6,220	7,730	9,060	10,630	12,170	13,480	14,380
60-64 ²	2,705	3,500	4,870	5,600	6,950	7,860	8,400
60-61	(2,160)	(2,600)	(3,480)	(4,020)	(5,000)	(5,860)	(6,260)
62-64 ²	(545)	(900)	(1,390)	(1,580)	(1,950)	(2,000)	(2,140)
Total	20,125	24,415	28,990	33,247	39,767	43,948	46,214

¹Age on birthday in year of onset.

²Includes the limited number of cases of persons who attain age 65 in the year of onset.

Table 4

ESTIMATED DISABILITY INCIDENCE RATES BY AGE AT ONSET AND SEX, FOR ONSETS
 IN 1956-62, BASED ON ACTUAL AWARDS BEFORE 1965 AND
 ESTIMATED AWARDS AFTER 1964
 (rates per thousand)

Age at Onset ¹	Year of Onset						
	1956	1957	1958	1959	1960	1961	1962
Men							
Under 25	1.0	.7	.5	.5	.5	.5	.5
25-29	.7	.8	.7	.7	.9	.8	.7
30-34	.6	.7	.8	.8	1.1	1.1	1.1
35-39	.8	1.0	1.0	1.1	1.6	1.6	1.6
40-44	1.1	1.3	1.5	1.7	2.4	2.4	2.4
45-49	2.2	2.5	2.7	3.0	3.9	4.0	3.9
50-54	5.2	6.0	6.7	6.9	7.4	7.4	7.3
55-59	10.4	11.8	12.8	13.6	13.7	13.6	13.6
60-64 ²	16.8	18.6	22.2	22.7	22.3	17.6	18.1
60-61	(16.3)	(17.0)	(20.7)	(20.1)	(21.1)	(20.6)	(21.1)
62-64 ²	(17.1)	(20.2)	(23.4)	(24.8)	(15.8)	(15.1)	(15.1)
Women							
Under 25	.2	.2	.2	.2	.2	.2	.2
25-29	.3	.3	.3	.3	.4	.4	.5
30-34	.4	.5	.5	.6	.7	.7	.7
35-39	.6	.7	.8	.9	1.1	1.1	1.1
40-44	.9	1.1	1.1	1.3	1.7	1.7	1.8
45-49	1.8	2.1	2.1	2.3	2.8	2.9	2.8
50-54	4.0	4.2	4.7	4.7	5.0	5.3	5.2
55-59	7.0	7.8	8.3	8.8	9.3	9.5	9.5
60-64 ²	5.4	5.7	8.0	8.5	9.6	10.0	10.0
60-61	(7.4)	(7.3)	(10.3)	(10.6)	(12.0)	(13.2)	(12.9)
62-64 ²	(2.6)	(4.3)	(5.2)	(5.6)	(6.2)	(5.9)	(6.0)

¹Age on birthday in year of onset.

²Includes the limited amount of experience before age 65 for persons who attain age 65 in the year of onset.