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DISABILITY INCIDENCE RATES UNDER OASDI SYSTEM FOR DISABILITY ONSETS OCCURRING IN 1956-63

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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 1955-63, as represented in the awards made through 1965, 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 1955-65 (1955 being the first year that such awards were made). In this 11-year period, there were 2.1 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. There was a further increase in 1965, due partly to the effect of the 1965 Amendments, which changed the definition of disability from an expected "permanent" or "long-term duration" basis to an "expected duration of at least 12 months" basis. In addition, there were the minor effects of the 1964 Amendments, which permitted the "freezing" of the insured status in cases of delayed filing of claim for benefits.

Relatively few awards are made in the year of onset, because of the effects 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. About 55% of the awards are for onsets in the previous calendar year. This proportion

¹ The "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).

² The results of similar studies covering shorter periods were presented in Actuarial Notes No. 18 and No. 36.

³ As the law is written, this period seems 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.

decreases slowly for earlier years of onset (see Table 1). It should be noted, however, that until the enactment of legislation in 1964, 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 percentage was lower in 1965 than in 1963-64 due to the 1964 and 1965 Amendments, under which a large number of cases were awarded with retroactive onsets. 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 1966 by sex and age for each individual year of onset from 1956 to 1963. These data include a total of 1.4 million awards, or about 67% of the total awards that were made under the program through 1965 (as shown in Table 1).

It would not be 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. Particular attention was given to the 1965 experience

on awards, since there were changes in the definition of disability in that year.

The data for awards in 1964-65 for onsets after 1963 were not believed to be an adequate base for projection. Accordingly, this estimation procedure was utilized only for years of onset 1956-63. 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 1963 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 1961-63 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).

⁴ Benefit 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 the claim.

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 20% at the middle 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 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.

It should be kept in mind that there were changes in the definition of disability in 1965 and in the allowable retroactivity of the insured status determination in 1964. These changes would tend to have a stronger effect in the later years than in the early years. However, the effects of these changes are not believed to be large enough to increase greatly the overall level of the incidence rates. The rates presented in this note could, therefore, be regarded as being close to what the experience would have been if the definition of disability as it was amended in 1965 had been in effect since the beginning of the program.

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 appeared 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 1961, but thereafter remained relatively constant, showing a small increase in certain cases (notably for ages 60-64). 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.

Crude analysis of the aggregate data on awards in 1966-67 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
1965	55,679	136,109	38,164	12,949	6,216	4,092	14,529	267,738
1955-65	294,744	978,702	352,407	148,613	87,446	60,590	221,328	2,143,830

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
1965	21	51	14	5	2	2	5	100

¹ Less than ½%.

Table 2

DISABILITY DETERMINATION AWARDS BY AGE AT ONSET AND BY
YEAR OF ONSET, BY SEX, FOR AWARDS BEFORE 1966

Age at Onset ¹	Year of Onset							
	1956	1957	1958	1959	1960	1961	1962	1963
Men								
Under 25	819	663	674	711	843	863	843	737
25-29	2,158	2,462	2,371	2,411	3,300	3,323	3,264	2,922
30-34	2,856	3,454	3,690	4,014	5,436	5,464	5,414	4,843
35-39	3,432	4,449	4,923	5,554	8,148	8,475	8,577	7,833
40-44	4,776	5,781	6,705	7,777	11,580	12,195	12,801	12,020
45-49	8,393	9,912	11,116	13,072	17,814	18,465	18,979	18,050
50-54	15,890	19,536	22,884	25,287	29,019	30,368	30,770	29,558
55-59	24,720	29,725	34,111	38,611	42,486	44,948	47,082	45,993
60-64 ²	31,339	37,309	45,717	50,239	53,499	41,110	39,718	39,453
Total	94,383	113,291	132,191	147,676	172,125	165,211	167,448	161,409
Women								
Under 25	160	143	147	128	177	165	144	137
25-29	569	551	590	649	738	792	741	649
30-34	767	870	937	1,025	1,145	1,213	1,245	1,096
35-39	925	1,159	1,292	1,562	1,934	2,023	2,103	1,995
40-44	1,415	1,701	1,896	2,253	3,143	3,311	3,729	3,416
45-49	2,766	3,367	3,561	4,143	5,345	5,840	6,039	5,762
50-54	5,045	5,893	7,085	7,754	8,814	9,790	10,362	9,993
55-59	6,234	7,762	9,111	10,655	12,338	13,763	14,829	14,509
60-64 ²	2,703	3,495	4,864	5,595	6,950	7,895	8,507	9,005
Total	20,584	24,941	29,483	33,764	40,584	44,792	47,699	46,562

¹ Age on birthday in year of onset.

² Includes 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 1956-63, ACTUAL AWARDS BEFORE
1966 AND ESTIMATED AWARDS AFTER 1965

Age at Onset ¹	Year of Onset							
	1956	1957	1958	1959	1960	1961	1962	1963
Men								
Under 25	820	675	700	755	915	965	985	960
25-29	2,160	2,480	2,550	2,590	3,550	3,720	3,600	3,500
30-34	2,860	3,480	3,780	4,160	5,630	5,940	5,800	5,400
35-39	3,440	4,490	5,020	5,720	8,390	8,850	9,100	8,800
40-44	4,790	5,900	6,920	8,040	12,060	13,200	13,800	14,200
45-49	8,420	10,200	11,250	13,250	18,500	19,380	19,800	20,130
50-54	15,930	19,800	23,120	25,750	29,380	31,120	32,000	32,700
55-59	24,725	29,800	34,300	39,130	42,900	45,620	48,700	49,900
60-64 ²	31,340	37,350	45,800	50,300	53,600	41,900	42,130	42,500
60-61	(14,535)	(16,200)	(18,950)	(19,800)	(22,600)	(22,700)	(23,700)	(25,200)
62-64 ²	(16,805)	(21,150)	(26,850)	(30,500)	(31,000)	(19,200)	(18,430)	(17,300)
Total	94,485	114,175	133,440	149,695	174,925	170,695	175,915	178,090
Women								
Under 25	160	147	151	131	188	178	176	174
25-29	570	575	625	713	805	880	875	874
30-34	770	930	1,030	1,140	1,230	1,310	1,330	1,320
35-39	930	1,320	1,460	1,780	2,090	2,180	2,510	2,540
40-44	1,430	1,850	2,050	2,460	3,360	3,640	3,980	4,000
45-49	2,785	3,540	3,760	4,380	5,770	6,400	6,920	6,940
50-54	5,060	6,130	7,450	8,000	9,400	10,600	11,550	12,100
55-59	6,240	7,850	9,250	10,800	13,000	14,500	15,700	15,800
60-64 ²	2,705	3,500	4,880	5,610	6,970	7,980	9,000	9,750
60-61	(2,160)	(2,600)	(3,490)	(4,030)	(5,020)	(5,980)	(6,700)	(7,400)
62-64 ²	(545)	(900)	(1,390)	(1,580)	(1,950)	(2,000)	(2,300)	(2,350)
Total	20,650	25,842	30,656	35,014	42,813	47,668	52,041	53,498

¹ Age on birthday in year of onset.

² Includes 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 1956-63, BASED ON ACTUAL AWARDS
BEFORE 1966 AND ESTIMATED AWARDS AFTER 1965
(rates per thousand)

Age at Onset ¹	Year of Onset							
	1956	1957	1958	1959	1960	1961	1962	1963
Men								
Under 25	1.1	.8	.6	.5	.6	.5	.5	.4
25-29	.7	.8	.8	.7	.9	.9	.8	.8
30-34	.7	.8	.8	.9	1.2	1.2	1.2	1.1
35-39	.8	1.0	1.1	1.2	1.7	1.7	1.7	1.7
40-44	1.2	1.4	1.6	1.8	2.5	2.7	2.7	2.7
45-49	2.3	2.6	2.8	3.1	4.1	4.2	4.2	4.2
50-54	5.2	6.1	6.8	7.1	7.6	7.7	7.8	7.8
55-59	10.4	11.8	12.9	13.8	13.9	14.0	14.4	14.4
60-64 ²	16.8	18.7	22.2	22.7	22.3	18.0	19.3	19.3
60-61	(16.3)	(17.0)	(20.8)	(20.1)	(21.2)	(21.1)	(21.9)	(22.4)
62-64 ²	(17.1)	(20.2)	(23.4)	(24.8)	(23.3)	(15.3)	(16.7)	(16.2)
Women								
Under 25	.2	.2	.2	.2	.3	.2	.2	.2
25-29	.3	.3	.4	.4	.5	.5	.5	.5
30-34	.5	.5	.6	.7	.7	.8	.8	.8
35-39	.6	.9	.9	1.1	1.2	1.2	1.4	1.4
40-44	1.0	1.2	1.3	1.5	1.9	1.9	2.0	2.0
45-49	1.9	2.2	2.2	2.5	3.1	3.3	3.4	3.3
50-54	4.1	4.4	5.0	5.0	5.4	5.8	6.1	6.1
55-59	7.0	7.9	8.5	9.0	9.9	10.3	10.4	9.8
60-64 ²	5.4	5.7	8.1	8.5	9.6	10.2	10.7	10.9
60-61	(7.4)	(7.3)	(10.3)	(10.6)	(12.1)	(13.5)	(13.8)	(14.1)
62-64 ²	(2.6)	(3.6)	(5.2)	(5.6)	(6.2)	(5.9)	(6.5)	(6.4)

¹ Age on birthday in year of onset.

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