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# Notes and Brief Reports

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## Prevalence of Work Disability by State, 1976\*

Various surveys conducted by the Social Security Administration have provided national estimates of the prevalence of work disability among the adult population. In the 1972 survey, the most recent, approximately 7.4 million persons, or 7 percent of the civilian noninstitutionalized population aged 20–64, reported severe disability, defined as the inability to work at all or the inability to work regularly. About 15 million persons, or 14 percent of the population in this age range, reported some degree of disability.<sup>1</sup>

Because the 1976 Bureau of the Census Survey of Income and Education<sup>2</sup> contained a battery of disability questions similar to those used by the Social Security Administration surveys, estimates of work disability by State are now available for the first time. Table 1 presents, by geographic division and State, estimates of the number of disabled persons and of those severely disabled as well as disability prevalence rates under both measures. The prevalence rates were highest in the South under both measures.<sup>3</sup> The East South Central division had 178 self-identified disabled individuals per 1,000 persons aged 18–64; 110 per 1,000 were severely disabled. The South Atlantic and West South Central divisions, respectively, registered the next highest rates. New England had the lowest prevalence rates—112 disabled and 58 severely disabled persons per 1,000 population.<sup>4</sup>

West Virginia, Arkansas, Georgia, Mississippi, and

Kentucky—all Southern States—had the highest disability prevalence rates. In fact, the 14 States with the highest rates are located in the South. The only States in the three Southern geographic divisions that were not in the top ranking were Texas, Delaware, and Maryland—all States with strong nonsouthern characteristics. It has been hypothesized that the Southern region's higher proportion of blacks and/or persons living in rural areas causes it to register poorer health than the rest of the country.

Alaska, Hawaii, Nebraska, Connecticut, Colorado, and Maryland had the lowest prevalence rates nationally. Unlike the high-ranking States, which were concentrated in one geographic region, these States are distributed throughout all four regions.

When the prevalence of severe disability was measured, West Virginia, Mississippi, Georgia, Arkansas, and Kentucky again were the five highest-ranking States, though there was some shifting in the order. The 13 States with highest prevalence rates are in the South. States with a relatively low prevalence of severe disability included Alaska, Nebraska, Hawaii, Wyoming, and North Dakota. Other States had rates in close proximity to these figures.

For purposes of comparison, table 2 presents data derived from the Social Security Administration's 1-percent Continuous Work History Sample file on the number of insured workers, the number of disabled-worker beneficiaries, and the number of such beneficiaries per 1,000 insured workers.<sup>5</sup> Many similarities to the Census data are apparent. The prevalence rate was highest in West Virginia, Arkansas, and Mississippi; it was lowest in Alaska, Hawaii, North Dakota, and Minnesota. The prevalence of disabled-worker beneficiaries had a .90 correlation with the prevalence of self-identified disability among the general population and a .91 correlation with the prevalence of severe disability.

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<sup>5</sup> Geographic codes are from the 1975 employee-employer file. For more information on these files, see Warren Buckler and Creston Smith III, **The Continuous Work History Sample: Description and Contents**, paper prepared for presentation at the NBER Workshop on Policy Analysis With Social Security Research Files, March 15–17, 1978. For an extensive discussion, see Bureau of Economic Analysis, Department of Commerce, **Regional Work Force Characteristics and Migration Data**, 1976, chapters 4–6.

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<sup>1</sup> For more detailed information about the 1972 survey, see Kathryn H. Allan, "First Findings of the 1972 Survey of the Disabled: General Characteristics," **Social Security Bulletin**, October 1976. The data in this article may differ slightly from those published earlier because of recent Bureau of the Census data corrections.

<sup>2</sup> For a more complete description of the Census survey, see Bureau of the Census, **Microdata from the Survey of Income and Education**, January 1978.

<sup>3</sup> The Southern region includes the East South Central, South Atlantic, and West South Central divisions.

<sup>4</sup> For a discussion of the reliability of the estimates for the Census survey, see Bureau of Labor Statistics, **Marital and Family Status of Workers by State and Area** (Report 545), December 1978.

**Table 1.**—Number of persons aged 18-64 with work disability and number per 1,000 population, by degree of disability, geographic division, and State, 1976

[Numbers in thousands]

Geographic division and State	Total population	All disabled		Severely disabled	
		Number	Per 1,000 population	Number	Per 1,000 population
Total	123,797	16,444	133	9,288	75
New England	7,091	797	112	415	58
Maine	601	82	137	46	77
New Hampshire	474	54	113	26	55
Vermont	269	35	130	18	68
Massachusetts	3,382	365	108	196	58
Rhode Island	532	69	129	37	69
Connecticut	1,833	192	105	91	50
Middle Atlantic	21,813	2,575	118	1,531	70
New York	10,690	1,188	111	760	71
New Jersey	4,265	501	117	277	65
Pennsylvania	6,859	886	129	494	72
East North Central	23,594	2,999	127	1,631	69
Ohio	6,179	838	136	461	75
Indiana	3,045	374	123	198	65
Illinois	6,401	778	122	428	67
Michigan	5,340	704	132	405	76
Wisconsin	2,628	305	116	139	53
West North Central	9,385	1,138	121	566	60
Minnesota	2,210	268	121	119	54
Iowa	1,593	178	111	83	52
Missouri	2,710	375	138	219	81
North Dakota	346	39	113	17	49
South Dakota	374	44	119	19	52
Nebraska	858	83	97	36	42
Kansas	1,293	151	117	73	56
South Atlantic	19,788	3,003	152	1,820	92
Delaware	342	40	117	20	59
Maryland	2,419	265	109	146	60
Dist. of Col.	430	67	155	43	100
Virginia	2,998	388	129	228	76
West Virginia	1,059	226	213	154	146
North Carolina	3,233	505	156	289	89
South Carolina	1,635	257	157	161	99
Georgia	2,884	549	190	341	118
Florida	4,786	707	148	436	91
East South Central	7,749	1,377	178	854	110
Kentucky	1,937	361	187	216	111
Tennessee	2,472	428	173	265	107
Alabama	2,063	347	168	212	103
Mississippi	1,277	240	188	162	127
West South Central	11,980	1,760	147	966	81
Arkansas	1,203	236	196	137	113
Louisiana	2,104	360	171	226	107
Oklahoma	1,538	254	165	131	85
Texas	7,135	911	128	473	66
Mountain	5,630	708	126	343	61
Montana	431	60	140	28	66
Idaho	467	63	135	29	62
Wyoming	222	25	113	11	49
Colorado	1,531	166	108	79	51
New Mexico	657	86	131	52	79
Arizona	1,293	184	143	91	71
Utah	665	80	121	33	50
Nevada	364	43	118	20	55
Pacific	16,767	2,087	124	1,161	69
Washington	2,050	257	125	126	61
Oregon	1,346	185	138	86	64
California	12,666	1,583	125	921	73
Alaska	204	15	75	6	29
Hawaii	502	46	92	23	46

Source: Bureau of the Census, 1976 Survey of Income and Education.

**Table 2.**—Number of workers insured for disability and of disabled-worker beneficiaries and number of disabled workers per 1,000 insured, by geographic division and State, as of January 1, 1976

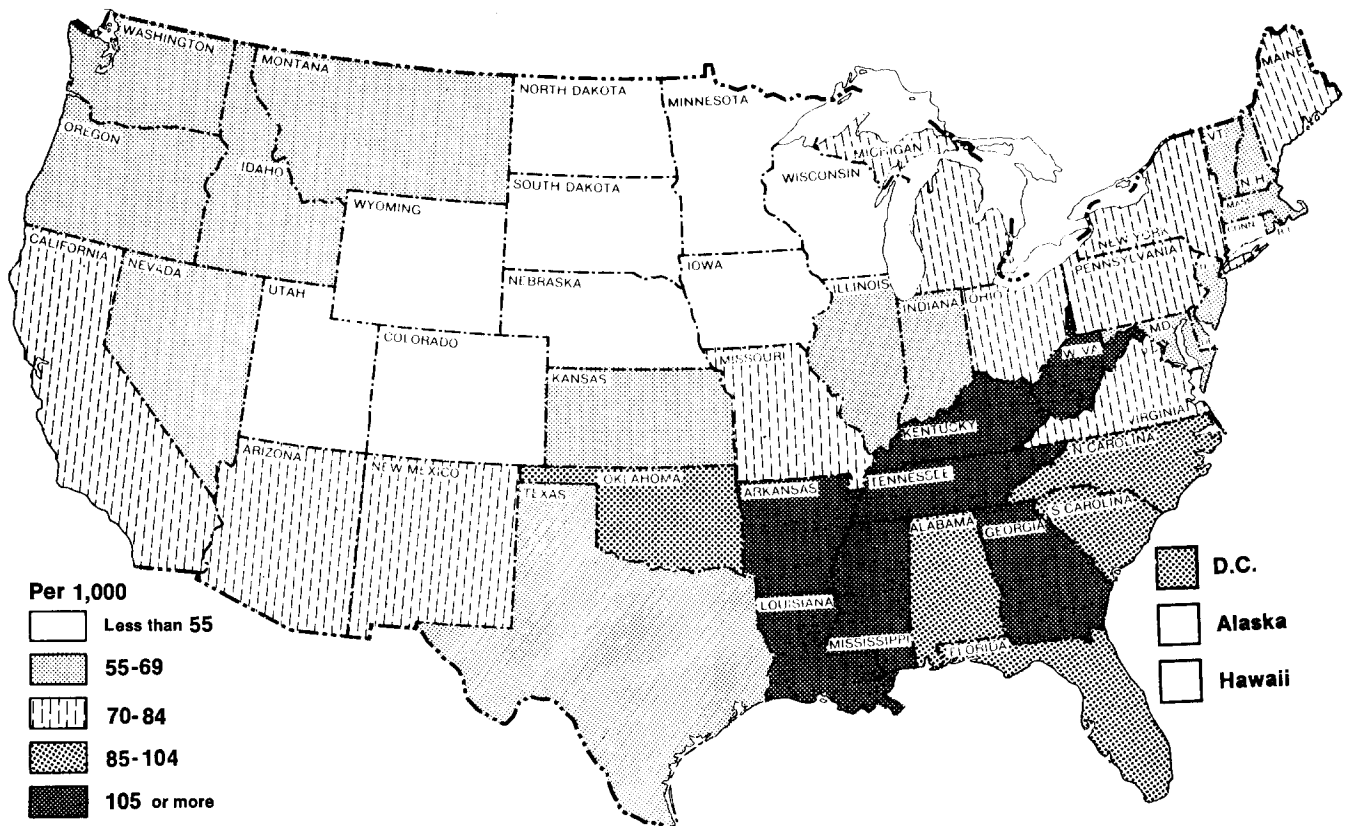
[Numbers in thousands]

Geographic division and State	Number of insured workers	Disabled-worker beneficiaries	
		Number	Per 1,000 insured workers
Total	<sup>1</sup> 75,272	<sup>1</sup> 2,626	35
New England	4,369	125	29
Maine	346	12	36
New Hampshire	296	9	31
Vermont	167	6	39
Massachusetts	2,017	60	30
Rhode Island	364	11	31
Connecticut	1,179	27	23
Middle Atlantic	13,927	456	32
New York	6,886	218	32
New Jersey	2,644	86	33
Pennsylvania	4,397	152	34
East North Central	14,650	443	30
Ohio	3,666	123	33
Indiana	1,964	59	30
Illinois	4,100	98	24
Michigan	3,243	119	37
Wisconsin	1,677	44	26
West North Central	6,055	180	29
Minnesota	1,470	32	22
Iowa	1,020	30	29
Missouri	1,742	70	40
North Dakota	215	5	22
South Dakota	218	8	35
Nebraska	573	14	24
Kansas	817	21	25
South Atlantic	11,797	486	41
Delaware	238	7	29
Maryland	1,296	38	29
Dist. of Col.	380	11	28
Virginia	1,637	57	35
West Virginia	580	43	74
North Carolina	2,110	80	38
South Carolina	1,013	47	47
Georgia	1,801	83	46
Florida	2,742	120	44
East South Central	4,528	219	48
Kentucky	1,053	51	48
Tennessee	1,582	66	42
Alabama	1,169	60	51
Mississippi	724	42	58
West South Central	6,854	262	38
Arkansas	691	42	61
Louisiana	1,091	55	51
Oklahoma	898	38	42
Texas	4,174	126	30
Mountain	3,165	101	32
Montana	249	8	32
Idaho	274	9	33
Wyoming	142	3	23
Colorado	829	22	26
New Mexico	330	13	38
Arizona	727	29	39
Utah	390	10	26
Nevada	224	7	33
Pacific	9,927	354	36
Washington	1,244	42	34
Oregon	871	26	30
California	7,327	280	38
Alaska	188	1	7
Hawaii	297	5	17

<sup>1</sup> Excludes persons residing in U.S. territories and those with unknown residence.

Source: Social Security Administration, 1-percent Continuous Work History Sample.

Number of severely disabled per 1,000 persons aged 18-64, by State, 1976



Despite the high correlation between the prevalence estimates from disparate sources, the number of self-identified severely disabled persons in the Census survey in the spring of 1976 was 9.3 million, compared with only 2.6 million disabled workers entitled to benefits on January 1, 1976. Various factors account for this large gap. Many persons who considered themselves severely disabled may not have had enough quarters of coverage to be eligible for disabled-worker benefits.<sup>6</sup> This factor especially affects women, who generally have less labor-force experience than men and also tend to interrupt their work careers to raise a family. In the summer of 1972, two-thirds of the self-identified severely disabled men were insured for disability, compared with one-fourth of the severely disabled women.<sup>7</sup> Some persons who consider themselves severely disabled do not meet the strict medical requirements mandated in the Social Security Act. Others may be insured and medi-

<sup>6</sup> Most workers must have worked in covered employment for at least 20 quarters in the 40 quarters preceding disablement. Workers disabled before age 31 need coverage in only half the quarters between attainment of age 21 and the onset of disability; workers disabled before reaching age 24 need coverage in half the quarters in the 3 years ending with the quarter in which disablement occurs. In both cases, a minimum of 6 quarters of coverage is required.

<sup>7</sup> Unpublished tables from *Survey of Disabled and Nondisabled Adults: 1972*, Office of Research and Statistics, Social Security Administration.

cally qualified but refrain from applying for benefits because they either are earning more in the marketplace or are ignorant of program provisions.

Earlier research performed in the Office of Research and Statistics has shown that changes in unemployment rates over a period of time affect the number of applications for disabled-worker benefits and the number of awards.<sup>8</sup> The availability of the Census data provided the opportunity to determine whether such an unemployment effect is present cross-sectionally as well. A simple regression was run with the number of self-identified severely disabled per 1,000 population as the dependent variable. The independent variables were the number of unemployed individuals per 1,000 persons in the labor force and a dummy for States in the three Southern geographic divisions. As table 3 shows, both independent variables were statistically significant and the simple, even crude, model explains approximately three-fifths of the variation between States. At the mean

<sup>8</sup> Mordechai E. Lando, "The Effect of Unemployment on Application for Disability Insurance," *1974 Business and Economic Statistics Section, Proceedings of the American Statistical Association*, 1975; John C. Hambor, *Unemployment and Disability: An Econometric Analysis With Time Series Data* (Staff Paper No. 20), Office of Research and Statistics, Social Security Administration, 1975; and Mordechai E. Lando and Timothy R. Hopkins, *Modeling Application for Disability Insurance*, paper presented at the Allied Social Sciences Association meetings, December 29, 1977.

**Table 3.—Regression results**

[Figures in parenthesis are *t* statistics]

Dependent variable	N	Constant	Independent variable			$\bar{R}^2$	
			Number of unemployed per 1,000 in labor force	Dummy for—			
				South	Sex		Race
(1) Severely disabled per 1,000 population aged 18–64.	51	36.97	0.2963 (2.91)	36.61 (7.94)	.....	0.58	
(2) Allowances in 1975 per 1,000 insured workers.....	51	3.30	.0417 (4.65)	1.80 (4.44)	.....	.44	
(3) Disabled-worker beneficiaries per 1,000 insured workers, Jan. 1, 1976.....	51	17.53	.1530 (2.68)	14.43 (5.58)	.....	.42	
(4) Allowances in 1975 per 1,000 insured workers.....	204	4.29	.0341 (4.35)	2.09 (5.91)	-2.12 (-6.34)	1.96 (5.87)	.38

of the distribution a 1-percent increase in the rate of unemployment leads to a 0.33-percent increase in the prevalence of self-identified severe disability.

These results were also used to test whether such an unemployment effect could be found to explain differences between States in the number of new disability allowances per 1,000 persons insured for disability (the flow) and in the number of persons entitled to disabled-worker benefits (the stock). Caution should be used in interpreting the results in lines 2 and 3 in table 3, however. Unlike the time-series analysis cited above and the results of equation 1, which were entirely dependent on the effect of unemployment on the disabled person, these equations may also reflect how the presence of unemployment in a State may affect the attitude toward allowing disabled workers to collect benefits. In other words, this is a reduced form that combines both demand and supply effects for disabled-worker benefits.

In equations 2 and 3, both the unemployment and South dummy variables were statistically significant.

One further step was attempted. The number of new allowances for each State in 1975 was distributed by sex and race, and equation 2 was rerun with two additional dummies for these variables. Once again, all the independent variables were statistically significant and the new dummies had the expected signs—that is, the number of new allowances per 1,000 insured persons was lower for women than men and higher for blacks than whites.

These cross-sectional results lend support to the earlier time-series findings that the level of unemployment affects the demand for disabled-worker benefits and further highlights some of the hidden costs of unemployment. It is increasingly clear that one way of reducing outlays from the disability insurance trust fund is simply to increase the demand for labor. Both cyclical and regional differences in the demand for labor will affect the number of persons who regard themselves as sufficiently disabled to apply for benefits and the number who ultimately receive them.