

Industry and Disabling Conditions of Disabled Workers 1975-1976

Analysis of Social Security Disability Benefit Allowances to Workers during 1975-1976

SURVEILLANCE REPORT

INDUSTRY AND DISABLING CONDITIONS OF
DISABLED WORKERS 1975-1976

Analysis of Social Security Disability
Benefit Allowances to Workers During 1975-1976

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DISCLAIMER

The data used in this report were extracted and summarized from the Disabled Workers' File, Division of Disability Studies, Office of Research and Statistics, Social Security Administration. Methods for collection and abstraction were selected by the Social Security Administration. Mention of company name or product does not constitute endorsement by the National Institute for Occupational Safety and Health or the Social Security Administration.

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ABSTRACT

This report analyzes Social Security Administration data on workers who have received benefit allowances for disabilities. Age-adjusted proportional morbidity ratios are presented by race and sex for 121 industry rubrics and 67 disease condition rubrics for the primary cause of disability. The distribution of disability benefit allowances by the disease conditions causing disability of each industry is compared to the corresponding distribution for all workers combined. An industry is identified and recommended for further research if the distribution of disabilities for that industry by disease condition is found to differ from the corresponding distribution for all disabled workers for all industries.

PREFACE

The prevention of disability of workers is important to both the Social Security Administration (SSA) and the National Institute for Occupational Safety and Health (NIOSH). Both agencies have important capabilities and resources to apply to that goal. The administration of the SSA disability insurance program requires collection of data on various characteristics of its beneficiaries, including disabling condition, occupation, and industry. NIOSH has responsibility for conducting research to identify and control hazards in the work environment that result in disabilities. This report is one product of the collaboration of these agencies to achieve a common goal.

Previous reports (1,2) published jointly by the Public Health Service and the SSA described associations between occupations and disabling conditions for the period from 1959 to 1962 and 1969 to 1972, respectively. This report analyzes associations between industry of employment and disabling condition for the period 1975-76. This report also examines differences among industries in the types of diseases which cause disabilities.

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* Copies of these tables can be obtained by request from NIOSH.

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Locator for Microfiche Tables* by Industry and by Sex and Race
Social Security Disability Allowances 1975-1976

Industry (SIC)	Page in Microfiche Tables					
	White		Black		Other	
	Male	Female	Male	Female	Male	Female
Agriculture, forestry, & fishing (SIC 011-097)	6	350	621	875	1051	1213
Agricultural production - crops (SIC 010-019)	9	353	624	877	1053	1215
Agricultural services (SIC 071-078)	12	356	627	879	1055	1216
Agricultural production - livestock, forestry, fishing, & trapping (SIC 021-029,081-097)	15	358	629	880	1056	---
Agriculture, n.e.c. (SIC 011-097)	17	359	631	881	1057	---
Mining (SIC 100-149)	19	360	632	882	1058	---
Bituminous, lignite, & anthracite coal mining (SIC 110-121)	22	362	634	---	1060	---
Oil & gas extraction (SIC 130-138)	25	363	635	883	1061	---
Metal mining, & nonmetallic minerals, except fuels (SIC 100-109,140-149)	28	364	636	884	1062	---
Mining, n.e.c. (SIC 100-149)	31	365	637	---	1063	---
Construction (SIC 150-179)	34	366	638	885	1064	1217
General building contractors (SIC 152-154)	37	369	641	---	1067	---
Heavy construction contractors (SIC 161-162)	39	370	642	---	1068	---
Highway & street construction (SIC 161)	42	371	644	---	1069	---
Heavy construction, except highway (SIC 162)	44	372	645	---	1070	---
Special trade contractors (SIC 171-179)	46	373	647	893	1071	1220
Plumbing, heating, air conditioners (SIC 171)	49	375	650	---	1073	---
Painting, paper hanging, decorating (SIC 172)	52	376	652	---	1074	---
Electrical work (SIC 173)	55	377	654	887	1075	---
Masonry, stonework, & plastering (SIC 174)	58	378	655	888	1076	---
Carpentering & flooring (SIC 175)	60	379	657	889	1077	---
Roofing & sheet metal work (SIC 176)	63	380	659	---	1079	---
Other & miscellaneous special trade contractors (SIC 170,177-179)	65	381	660	890	1080	1218
Construction, n.e.c. (SIC 150-179)	68	383	662	891	1081	1219
Manufacturing (SIC 200-399)	71	386	665	894	1083	1221
Manufacturing - durable goods (SIC 240-259,330-399)	74	389	668	897	1086	1223
Lumber & wood products (SIC 240-249)	77	392	671	899	1088	1225
Logging camps & logging contractors (SIC 241)	80	394	674	900	1090	---

* Copies of these tables can be obtained by request from NIOSH.

Locator for Microfiche Tables* (Cont'd)

Industry (SIC)	Page in Microfiche Tables					
	White		Black		Other	
	Male	Female	Male	Female	Male	Female
Sawmills & planing mills (SIC 242)	83	395	676	901	1091	1226
Other, miscellaneous, n.e.c. lumber & wood products (SIC 240, 243-245,249)	86	396	678	902	1092	---
Furniture & fixtures (SIC 250-259)	89	398	680	903	1093	1227
Primary metal industries (SIC 331-339)	91	400	682	904	1094	1252
Blast furnace & basic steel products (SIC 331)	94	403	685	905	1095	---
Iron & steel foundries (SIC 332)	97	404	687	906	1096	1228
Nonferrous metal industries (SIC 333-336)	100	406	690	907	1097	---
Other & n.e.c. primary metal industries (SIC 330,339)	102	407	691	908	1098	---
Fabricated metal products (SIC 340-349)	105	409	693	909	1099	1229
Machinery, except electrical (SIC 350-359)	108	411	695	910	1100	1230
Electric & electronic equipment (SIC 360-369)	111	413	697	911	1101	1231
Transportation equipment (SIC 370-379)	114	416	699	913	1102	1253
Motor vehicles & equipment (SIC 371)	117	419	702	915	1104	1232
Aircraft & parts (SIC 372)	120	421	704	917	1105	1233
Ship & boat building & repairing (SIC 373)	123	423	706	918	1106	1234
Other & n.e.c. transportation equipment (SIC 370,374-379)	126	424	708	919	1107	----
Instruments & related products (SIC 380-387)	128	425	709	920	1108	----
Miscellaneous manufacturing industries (SIC 390-399)	130	427	710	921	1109	1235
Manufacturing - nondurable goods (SIC 200-239,260-319)	132	429	712	923	1110	1254
Food & kindred products (SIC 200-209)	135	432	715	926	1112	1256
Meat products (SIC 201)	138	435	718	928	1114	1236
Dairy products (SIC 202)	141	438	720	---	1115	---
Bakery products (SIC 205)	143	440	721	930	1116	1237
Beverages (SIC 208)	146	442	723	931	1117	1238
Other & miscellaneous food & kindred products (SIC 200,203, 204,206,207,209)	148	443	725	932	1118	1239
Tobacco manufactures (SIC 210-219)	151	446	727	934	1120	1241

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Locator for Microfiche Tables* (Cont'd)

Industry (SIC)	Page in Microfiche Tables					
	White		Black		Other	
	Male	Female	Male	Female	Male	Female
Textile mill products (SIC 220-229)	153	448	728	935	1121	1242
Apparel & other textile products (SIC 230-239)	156	451	730	937	1122	1243
Paper & allied products (SIC 260-269)	159	454	732	940	1123	1245
Printing & publishing (SIC 270-279)	162	456	734	941	1124	---
Chemicals & allied products (SIC 280-289)	165	459	736	943	1125	1246
Petroleum & coal products (SIC 290-299)	168	462	738	944	1126	---
Rubber & miscellaneous plastics products (SIC 300-307)	171	464	739	945	1127	1247
Leather & leather products (SIC 310-319)	174	466	741	946	1128	1248
Stone, clay, & glass products (SIC 320-329)	176	468	742	947	1129	1249
Manufacturing, n.e.c. (SIC 200-399)	179	470	744	948	1130	1250
Transportation & public utilities (SIC 400-497)	182	473	747	951	1132	1258
Railroad transportation (SIC 400-409)	185	476	750	953	1134	1259
Local & interurban passenger transit (SIC 410-419)	188	477	752	954	1135	1260
Trucking & warehousing (SIC 420-429)	191	479	754	955	1136	1266
Trucking, local & long distance, trucking terminal facilities (SIC 421,422,423)	194	481	757	956	1138	---
Public warehousing (SIC 422)	197	483	760	957	1140	1261
U.S. Postal Service (SIC 430-439)	199	484	762	958	1141	---
Water transportation (SIC 440-449)	201	486	763	959	1142	---
Transportation by air (SIC 450-459)	204	488	765	---	1143	1262
Pipe lines, except natural gas & electric, gas, & sanitary services (SIC 460,490)	206	490	766	960	1144	1263
Transportation services (SIC 470-479)	209	492	768	961	1145	1264
Communication (SIC 480-489)	211	493	769	962	1146	1265
Transportation & public utilities, n.e.c. (SIC 400-497)	214	496	771	964	1147	---
Wholesale trade (SIC 500-519)	217	498	773	965	1148	1267
Wholesale trade - durable goods (SIC 500-509)	220	501	775	966	1149	1268
Wholesale trade - nondurable goods (SIC 510-519)	223	503	777	967	1150	1269
Wholesale trade, n.e.c. (SIC 500-519)	226	505	779	968	1151	1270
Retail trade (SIC 520-599)	229	507	781	969	1152	1271

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Locator for Microfiche Tables* (Cont'd)

Industry (SIC)	Page in Microfiche Tables					
	White		Black		Other	
	Male	Female	Male	Female	Male	Female
General merchandise stores (SIC 530-539)	232	510	784	972	1155	1273
Food stores (SIC 540-549)	234	513	786	974	1156	1274
Grocery stores (SIC 541)	237	516	788	975	1157	1275
Other & miscellaneous food stores (SIC 542-549)	240	519	790	976	1158	1276
Automotive dealers & service stations (SIC 550-559)	243	521	792	977	1159	1277
New & used car dealers, used car dealers (SIC 551,552)	246	523	794	978	1161	1278
Gasoline service stations (SIC 554)	249	525	795	979	1162	1279
Other, Miscellaneous, & n.e.c. automotive dealers & service stations (SIC 550,553,556,557,559)	252	527	797	980	1164	---
Furniture & home furnishings stores (SIC 547-579)	255	529	799	981	1165	---
Eating & drinking places (SIC 580-589)	258	531	801	982	1166	1280
Other, miscellaneous, & n.e.c. retail trade (SIC 520,560-569,590-591)	261	534	804	985	1168	1282
Finance, insurance, & real estate (SIC 600-679)	264	537	807	988	1170	1283
Banking (SIC 600-609)	267	540	809	990	1171	1284
Insurance carriers (SIC 630-639)	270	543	810	991	1172	1285
Insurance agents, brokers & service (SIC 640-649)	273	546	811	992	1173	1286
Real estate, combined real estate, insurance, etc. (SIC 651-661)	275	548	812	993	1174	1287
Other & n.e.c. finance, insurance, & real estate (SIC 600,610-628, 670-699)	278	551	814	994	1175	1288
Services (SIC 700-899)	280	553	815	995	1176	1289
Hotels & other lodging places (SIC 700-709)	283	556	818	998	1178	1292
Personal services (SIC 720-729)	286	559	821	1001	1180	1294
Business services (SIC 730-739)	289	562	824	1004	1181	1296
Auto repair, services, & garages (SIC 750-759)	292	565	827	1006	1182	---
Automotive repair shops (SIC 753)	295	567	830	1007	1184	---
Other auto repair, services, & garages (SIC 751,752,754)	298	569	832	1008	1186	---
Miscellaneous repair services (SIC 760-769)	300	570	834	1009	1187	1297
Motion pictures, amusement & recreation services (SIC 781-799)	303	573	836	1011	1189	1298

* Copies of these tables can be obtained by request from NIOSH.

Locator for Microfiche Tables* (Cont'd)

Industry (SIC)	Page in Microfiche Tables					
	White		Black		Other	
	Male	Female	Male	Female	Male	Female
Health services (SIC 800-809)	306	576	838	1012	1190	1311
Nursing & personal care facilities (SIC 805)	309	579	841	1015	1192	1299
Hospitals (SIC 806)	311	582	842	1017	1193	1300
Health services, n.e.c. (SIC 800-809)	314	585	845	1020	1194	1302
Educational services (SIC 820-829)	317	588	847	1023	1195	1313
Elementary & secondary schools (SIC 821)	320	591	850	1026	1196	1304
Colleges & universities (SIC 822)	322	594	852	1028	1197	1305
Other educational services (SIC 823-829)	324	596	854	1030	1198	1306
Social services (SIC 830-839)	327	599	856	1033	1199	1307
Membership organizations (SIC 860-869)	329	601	858	1035	1200	---
Private households (SIC 880-889)	332	603	860	1036	1201	1308
Other, miscellaneous, & n.e.c. services (SIC 700,811,841,842,891-899)	334	606	862	1039	1202	1310
Public administration (SIC 901-972)	337	609	864	1041	1203	1315
Non-manufacturing, n.e.c.	340	612	867	1043	1205	1317
Nonclassifiable establishments & unknown (SIC 990-999)	343	614	868	1044	1206	1318

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Locator for Microfiche Tables* by Cause of Disability and By Sex and Race
Social Security Disability Allowances 1975-1976

Cause of Disability	Page in Microfiche Tables					
	White		Black		Other	
	Male	Female	Male	Female	Male	Female
Infective and parasitic diseases (ICDA 000-136)	1489	1848	2128	2390	2562	2722
Tuberculosis (ICDA 010-019)	1496	1853	2133	2393	2565	2723
Silicotuberculosis (ICDA 010)	1502	-----	2138	-----	-----	-----
Pulmonary tuberculosis (ICDA 011)	1503	1857	2139	2395	2567	2724
Neoplasms (ICDA 140-239)	1509	1861	2143	2397	2569	2725
Malignant neoplasms (ICDA 140-199)	1515	1867	2150	2402	2574	2728
Buccal cavity and pharynx (ICDA 140-149)	1521	1873	2157	2407	2579	2731
Digestive organs and peritoneum (ICDA 150-159)	1527	1875	2160	2408	2580	2732
Respiratory system (ICDA 160-163)	1533	1880	2164	2411	2583	2734
Bone, connective tissue, and skin (ICDA 170-174)	1539	1885	2169	2414	2586	2735
Breast (ICDA 174)	1545	1889	2172	2416	2588	2736
Genital organs (ICDA 180-187)	1549	1894	2174	2419	2589	2738
Urinary organs (ICDA 188-189)	1556	1899	2178	2422	2590	-----
Other and unspecified sites (ICDA 190-199)	1562	1903	2181	2423	2591	2739
Neoplasms of lymphatic and hematopoietic tissue (ICDA 200-209)	1568	1908	2185	2425	2593	2740
Sarcoma (lympho-,reticulo-), other lymphomas (ICDA 200, 202)	1574	1914	2190	2427	2596	2742
Leukemia (ICDA 204-207)	1579	1918	2192	2428	2597	2743
Benign neoplasms (ICDA 210-228)	1585	1922	2194	2430	2598	2744
Neoplasms of unspecified nature (ICDA 230-239)	1590	1926	2196	2432	2599	2745
Endocrine, nutritional, and metabolic diseases (ICDA 240-279)	1594	1928	2198	2433	2600	2746
Diabetes mellitus (ICDA 250)	1600	1933	2204	2437	2603	2748
Diseases of blood and blood-forming organs (ICDA 280-289)	1606	1938	2210	2441	2606	2750

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Locator for Microfiche Tables* by Cause of Disability (Cont'd)

Cause of Disability	Page in Microfiche Tables					
	White		Black		Other	
	Male	Female	Male	Female	Male	Female
Mental Disorders (ICDA 290-315)	1611	1942	2213	2443	2607	2751
Schizophrenia (ICDA 295)	1617	1948	2219	2448	2612	2754
Neuroses (ICDA 300)	1623	1953	2225	2452	2617	2756
Alcoholism (ICDA 303)	1629	1959	2230	2455	2620	-----
Diseases of nervous system and sense organs (ICDA 320-389)	1635	1962	2233	2457	2622	2758
Meningitis (ICDA 320)	1641	1968	2239	-----	-----	-----
Multiple sclerosis (ICDA 340)	1643	1969	2240	2462	2626	2760
Cataract (ICDA 374)	1649	1973	2242	2464	2627	2761
Glaucoma (ICDA 375)	1655	1976	2244	2465	2628	2762
Blindness (ICDA 379)	1660	1979	2248	2467	2629	2763
Diseases of circulatory system (ICDA 390-458)	1665	1983	2251	2469	2631	2764
Heart and hypertensive disease (ICDA 393-429)	1671	1989	2257	2474	2637	2767
Hypertensive disease (ICDA 400-404)	1677	1995	2263	2479	2643	2770
Ischemic heart disease (ICDA 410-414)	1683	2000	2269	2483	2645	2772
Cerebrovascular disease (ICDA 430-438)	1689	2006	2275	2488	2650	2775
Cerebral hemorrhage (ICDA 431)	1695	2012	2282	2492	2653	2777
Cerebral thrombosis and embolism (ICDA 433-434)	1699	2014	2284	2494	2654	2778
Arteriosclerosis (ICDA 440)	1705	2017	2288	2497	2656	2779
Diseases of respiratory system (ICDA 460-519)	1711	2021	2292	2499	2658	2780
Bronchitis and asthma (ICDA 490-491, 493)	1717	2027	2298	2503	2662	2782
Emphysema (ICDA 492)	1723	2032	2302	2505	2664	2784
Pneumoconiosis and related diseases (ICDA 515-516)	1729	2037	2308	2507	2672	-----
Pneumoconiosis due to silica and silicates (ICDA 515)	1733	2039	2310	2508	2673	-----
Other pneumoconioses and related diseases (ICDA 516)	1737	2040	2312	-----	-----	-----
Bronchiectasis (ICDA 518)	1738	2041	2313	2509	-----	2785

* Copies of these tables can be obtained by request from NIOSH.

Locator for Microfiche Tables* by Cause of Disability (Cont'd)

Cause of Disability	Page in Microfiche Tables					
	White		Black		Other	
	Male	Female	Male	Female	Male	Female
Diseases of digestive system (ICDA 520-577)	1742	2044	2314	2510	2674	2786
Peptic ulcer (ICDA 531-533)	1748	2049	2319	2514	2678	2788
Chronic enteritis and ulcerative colitis (ICDA 563)	1753	2052	2322	2516	2680	2789
Cirrhosis of liver (ICDA 571)	1758	2056	2324	2518	2681	2790
Diseases of genitourinary system (ICDA 580-629)	1764	2060	2329	2520	2684	2791
Nephritis and nephrosis (ICDA 580-584)	1770	2064	2334	2523	2687	2792
Chronic nephritis (ICDA 582)	1776	2068	2337	2525	2690	2793
Other diseases of urinary system (ICDA 590-599)	1781	2072	2340	2527	2692	2794
Diseases of male genital organs (ICDA 600-607)	1787	----	2344	----	2693	----
Diseases of female genital organs (ICDA 620-629)	----	2076	----	2529	----	----
Pregnancy, childbirth, and the puerperium (ICDA 630-678)	----	----	----	2531	----	----
Diseases of skin and subcutaneous tissue (ICDA 680-709)	1791	2079	2345	2532	2694	2795
Diseases of musculoskeletal system and connective tissue (ICDA 710-738)	1796	2084	2348	2534	2695	2796
Rheumatoid arthritis (ICDA 712)	1802	2091	2354	2539	2700	2800
Osteoarthritis (ICDA 713)	1808	2096	2359	2542	2703	2802
Other and unspecified arthritis (ICDA 710-711, 714-715)	1814	2101	2365	2546	2707	2804
Displacement of intervertebral disc (ICDA 725)	1820	2105	2369	2549	2709	2805
Congenital anomalies (ICDA 740-759)	1826	2111	2375	2553	2714	2807
Symptoms and ill-defined conditions (ICDA 780-796)	1832	2116	2379	2555	2717	2808
Accidents, poisonings, and violence (ICDA 800-999)	1837	2120	2382	2557	2718	2809
Unknown or not classifiable (ICDA 000-999)	1843	2126	2388	2561	2721	2811

--- Indicates that there are no cases, and therefore, there is no table.
ICDA International Classification of Diseases Adapted - Eighth Revision.

* Copies of these tables can be obtained by request from NIOSH.

INTRODUCTION AND OBJECTIVES

During the period 1975 to 1976 the average daily rate at which workers were allowed Social Security Administration (SSA) benefits for severe disabilities from serious or terminal illnesses or injuries was 1500 workers per day. During that period about 87 million workers were covered by Social Security insurance and eligible for benefits for total disability. Such benefits have been paid by the SSA since 1956 to qualified workers. To qualify for benefits, workers disabled after age 30 must have worked in covered employment for at least 5 of the 10 years immediately preceding the onset of disability; progressively fewer years of coverage are required for younger workers. To be eligible for benefits a worker must be unable to engage in any substantial gainful activity because of a medically determinable physical or mental impairment that has lasted or can be expected to last for at least 12 months or that will result in death.

How many of these disabilities result from work related factors is not known. What can be determined is whether the frequency and type of disabling condition is associated with industry of employment. This is possible because SSA and the National Institute for Occupational Safety and Health (NIOSH) have a collaborative agreement which calls for NIOSH to analyze SSA records compiled as part of the routine administration of the SSA disability program.

This report presents the estimates of the 1975-76 frequency distributions of disabled workers by 121 industries of employment and by 67 disabling conditions as well as by the race, sex, and age of the worker. This provides a basic source for occupational health and safety research.

Associations between the 67 disabling conditions and the 121 industries of employment of disabled workers are also statistically analyzed with estimates of race-sex-specific, age-adjusted, proportional morbidity ratios (PMR's) (see Technical Note 1 in Appendix I for a more complete discussion of PMR's). Such PMR's provide an estimate of the extent to which workers in diverse industries differentially experience disabilities. These differentials provide clues about the extent of work relatedness of the disabling conditions causing impairments. High PMR's provide occupational health and safety surveillance leads, suggest hypotheses concerning workplace hazards, and may suggest directions for more intensive research which might result in intervention programs to reduce the hardship and suffering of the disabled worker as well as the societal cost burden for their care. A major purpose of this report is to initiate such a chain of effort by presenting a comprehensive array of PMR's and by analyses of industry associations with disabling conditions.

Finally, this report identifies industries whose employees may have occupational health problems. A criterion for designation of such industries is defined and then applied to the data. The specific causes of disability which may be cause those occupational health problems are also identified. Since few alternative explanations for these findings can be tested with the SSA disabled worker data, these results suggest industries for additional study and future monitoring.

DATA AND METHODS

The source of data for this report is the SSA Continuous Disability History Sample (CDHS) file (10). Technical Note 2 in Appendix I provides a general description of this sample, which includes approximately 20 percent of the total allowances made from 1975 to 1976. Data selected from this file include age, race, sex, industry, and diagnosis of primary disabling condition.

Age refers to age at the date of the benefit allowance. Allowancees are grouped into 5-year intervals for those aged 40 to 64. The remaining workers fall into two age groups - those under 40 years and those over 64 years (the last interval includes workers age 65 and older at the time they were allowed benefits for disabilities that occurred before they became 65). The race categories available from the CDHS file are black, white, other, and unknown and these are used in this report. A disabled worker's sex is male or female.

The "disabling condition" is the condition diagnosed as the primary cause of the worker's disability. Disabling conditions were coded by SSA coders using the 3-digit codes of the Eighth Revision of the International Classification of Diseases, Adapted for Use in the United States (ICDA) (3). The 67 categories for disabling conditions used in this report have been chosen both for relevance to occupational health and for comprehensive yet specific description of disabling conditions. These are shown in Table 1.

Industry refers to the industry of the longest employment of the disabled worker in the ten years preceding disability. Industry was coded by SSA coders using three digit codes of the Standard Industrial Classification Manual (SIC) (4). Rubrics formed from these are used in the analyses for this report. Several levels of industry classification are used. The complete list of 123 rubrics is presented in Table 2 (two rubrics are not meaningful, as noted below, so that the effective number is 121).

All major or "letter" SIC groups are used. These include: A. Agriculture, Forestry, and Fishing; B. Mining; C. Construction; D. Manufacturing; E. Transportation and Public Utilities; F. Wholesale Trade; G. Retail Trade; H. Finance, Insurance, and Real Estate; I. Services; and J. Public Administration. Two other major categories are used for cases with incomplete or ambiguous information: (1) Non-Manufacturing, N.E.C. (N.E.C. is for Not Elsewhere Classified); and (2) Nonclassifiable Establishments and Unknown.

In some cases the information was so incomplete that SSA coders were unable to classify at any more detail than major industry rubric. These cases are classified in rubrics with the name of the major rubric followed by N.E.C. for Not Elsewhere Classified. The SIC codes associated with these are the same as for the major rubric. Examples are Mining, N.E.C. and Manufacturing, N.E.C. In some cases these are grouped with 2-digit SIC groups which include too few workers or are too ambiguous or heterogeneous to be used separately. An example is Other and N.E.C. Finance, Insurance and Real Estate.

Table 1: Disabling Conditions Analyzed in This Report

DISABLING CONDITIONS	ICDA-8
I. Infective & parasitic diseases	000-136
Tuberculosis	010-019
Silicotuberculosis	010
Pulmonary tuberculosis	011
II. Neoplasms	140-239
Malignant neoplasms	140-199
Buccal cavity & pharynx	140-149
Digestive organs & peritoneum	150-159
Respiratory system	160-163
Bone, connective tissue, & skin	170-174
Genital organs	180-187
Urinary organs	188-189
Other & unspecified sites	190-199
Neoplasms of lymphatic & hematopoietic tissue	200-209
Sarcoma (lympho-,reticulo-), other lymphomas	200,202
Leukemia	204-207
Benign neoplasms	210-228
Neoplasms of unspecified nature	230-239
III. Endocrine, nutritional, & metabolic diseases	240-279
Diabetes mellitus	250
IV. Diseases of blood & blood-forming organs	280-289
V. Mental disorders	290-315
Schizophrenia	295
Neuroses	300
Alcoholism	303
VI. Diseases of nervous system & sense organs	320-389
Meningitis	320
Multiple sclerosis	340
Cataract	374
Glaucoma	375
Blindness	379
VII. Diseases of circulatory system	390-458
Heart & hypertensive disease	393-429
Hypertensive disease	400-404
Ischemic heart disease	410-414
Cerebrovascular disease	430-438
Cerebral hemorrhage	431
Cerebral thrombosis & embolism	433-434
Arteriosclerosis	440
VIII. Diseases of respiratory system	460-519
Bronchitis & asthma	490-491, 493
Emphysema	492

Table 1 (Cont'd.): Disabling Conditions Analyzed in This Report

DISABLING CONDITIONS	ICDA-8
Pneumoconiosis & related diseases	515-516
Pneumoconiosis due to silica & silicates	515
Other Pneumoconioses and related diseases	516
Bronchiectasis	518
IX. Diseases of digestive system	520-577
Peptic ulcer	531-533
Chronic enteritis & ulcerative colitis	563
Cirrhosis of liver	571
X. Diseases of genitourinary system	580-629
Nephritis & nephrosis	580-584
Chronic nephritis	582
Other diseases of urinary system	590-599
Diseases of male genital organs	600-607
Diseases of female genital organs	620-629
XI. Pregnancy, childbirth, & the puerperium	630-678
XII. Diseases of skin & subcutaneous tissue	680-709
XIII. Diseases of musculoskeletal system & connective tissue	710-738
Rheumatoid arthritis	712
Osteoarthritis	713
Other & unspecified arthritis	710-711,
	714-715
Displacement of intervertebral disc	725
XIV. Congenital anomalies	740-759
XV. Symptoms & ill-defined conditions	780-796
XVI. Accidents, poisonings, & violence	800-999
XVII. Unknown or not classifiable	- - -

The large rubric, Manufacturing, is subdivided into two large subcategories, Manufacturing-Durable Goods (SIC 240-259, 330-399) and Manufacturing-Nondurable Goods (SIC 200-239, 260-319).

Rubrics have been formed within the major rubrics by using SIC categories corresponding to the "hundreds" and "tens" digits together (i.e., two-digit SIC categories, the next most detailed categories after the major categories) and to the "units" digit (i.e., three-digit SIC categories, the most detailed categories available). As described in detail in the next paragraph, these SIC categories are used as separate rubrics for the analysis or are grouped together depending on the number of cases in the resulting rubric and the authors' judgment of its reasonableness for the study. A category is used separately if the expected number of disabled workers for the denominator of the PMR (see page 115 in Technical Note 1 of Appendix I) is at least 25 for at least 44 (which represents about two-thirds) of the 67 disabling conditions. This criterion has been adopted so that estimated standard errors of the PMR's would be reliable guides to the reliabilities of the PMR's.

Table 2: Industry Rubrics Used in This Report

INDUSTRY	SIC No.
A. Agriculture, forestry, & fishing	011-097
Agricultural production - crops	010-019
Agricultural services	071-078
Agricultural production - livestock, forestry, fishing & trapping	021-029
Agriculture, N.E.C.	081-097
Agriculture, N.E.C.	011-097
B. Mining	100-149
Bituminous, lignite, & anthracite coal mining	110-121
Oil & gas extraction	130-138
Metal mining, & nonmetallic minerals, except fuels	100-109,
Mining, N.E.C.	140-149
Mining, N.E.C.	100-149
C. Construction	150-179
General building contractors	152-154
Heavy construction contractors	161-162
Highway & street construction	161
Heavy construction, except highway	162
Special trade contractors	171-179
Plumbing, heating, air conditioners	171
Painting, paper hanging, decorating	172
Electrical work	173
Masonry, stonework, & plastering	174
Carpentering & flooring	175
Roofing & sheet metal work	176
Other & miscellaneous special trade contractors	170,
Construction, N.E.C.	177-179
Construction, N.E.C.	150-179
D. Manufacturing	200-399
Manufacturing - durable goods	240-259,
Manufacturing - durable goods	330-399
Lumber & wood products	240-249
Logging camps & logging contractors	241
Sawmills & planing mills	242
Other, miscellaneous, N.E.C. lumber & wood products	240,
Lumber & wood products	243-245,
Lumber & wood products	249
Furniture & fixtures	250-259
Primary metal industries	331-339
Blast furnace & basic steel products	331
Iron & steel foundries	332
Nonferrous metal industries	333-336

Table 2 (Cont'd.): Industry Rubrics Used in This Report

INDUSTRY	SIC No.
Other & N.E.C. primary metal industries	330,339
Fabricated metal products	340-349
Machinery, except electrical	350-359
Electric & electronic equipment	360-369
Transportation equipment	370-379
Motor vehicles & equipment	371
Aircraft & parts	372
Ship & boat building & repairing	373
Other & N.E.C. transportation equipment	370, 374-379
Instruments & related products	380-387
Miscellaneous manufacturing industries	390-399
Manufacturing - nondurable goods	200-239, 260-319
Food & kindred products	200-209
Meat products	201
Dairy products	202
Bakery products	205
Beverages	208
Other & miscellaneous food & kindred products	200,203, 204,206, 207,209
Tobacco manufactures	210-219
Textile mill products	220-229
Apparel & other textile products	230-239
Paper & allied products	260-269
Printing & publishing	270-279
Chemicals & allied products	280-289
Petroleum & coal products	290-299
Rubber & miscellaneous plastics products	300-307
Leather & leather products	310-319
Stone, clay, & glass products	320-329
Manufacturing, N.E.C.	200-399
E. Transportation & public utilities	400-497
Railroad transportation	400-409
Local & interurban passenger transit	410-419
Trucking & warehousing	420-429
Trucking, local & long distance,	
Trucking terminal facilities	421,423
Public warehousing	422
U.S. postal service	430-439
Water transportation	440-449
Transportation by air	450-459
Pipe lines, except natural gas, & electric, gas, & sanitary services	460,490

Table 2 (Cont'd.): Industry Rubrics Used in This Report

INDUSTRY	SIC No.
Transportation services	470-479
Communication	480-489
Transportation & public utilities, N.E.C.	400-497
F. Wholesale trade	500-519
Wholesale trade - durable goods	500-509
Wholesale trade - nondurable goods	510-519
Wholesale trade, N.E.C.	500-519
G. Retail trade	520-599
General merchandise stores	530-539
Food stores	540-549
Grocery stores	541
Other & miscellaneous food stores	542-549
Automotive dealers & service stations	550-559
New & used car dealers, used car dealers	551,552
Gasoline service stations	554
Other, miscellaneous, & N.E.C. automotive dealers & service stations	550,553, 556,557, 559
Furniture & home furnishings stores	570-579
Eating & drinking places	580-589
Other, miscellaneous & N.E.C. retail trade	527, 560-569, 590-599
H. Finance, insurance, & real estate	600-679
Banking	600-609
Insurance carriers	630-639
Insurance agents, brokers & service	641
Real estate, combined real estate, insurance, etc.	651-661
Other & N.E.C. finance, insurance, & real estate	600, 610-628, 670-679
I. Services	700-899
Hotels & other lodging places	700-709
Personal services	720-729
Business services	730-739
Auto repair, Services & garages	750-759
Automotive repair shops	753
Other auto repair, services, & garages	750,751, 752,754

Table 2 (Cont'd.): Industry Rubrics Used in This Report

INDUSTRY	SIC No.
Miscellaneous repair services	760-769
Motion pictures, amusement & recreation services	780-799
Health services	800-809
Nursing & personal care facilities	805
Hospitals	806
Health services, N.E.C.	800-809
Educational services	820-829
Elementary & secondary schools	821
Colleges & universities	822
Other educational services	820, 823-829
Social services	830-839
Membership organizations	860-869
Private households	880,881
Other, miscellaneous, & N.E.C. services	700,811, 841,842 891-899
J. Public administration	901-972
Non-manufacturing, N.E.C.	---
Nonclassifiable establishments & unknown	990-999

All two-digit SIC categories fulfilling the expected number criterion stated above are used as separate rubrics for this study. Combinations of the remaining ones, within major rubrics, are used if the resulting combination appeared to be reasonably interpretable. If no combination appeared reasonable, the two-digit categories are used separately even though the expected number criterion is not fulfilled. An exhaustive set of rubrics was formed within each major rubric.

The formation of more detailed rubrics using all three digits of the SIC codes was done analogously to that described in the previous paragraph.

Rubrics formed from three-digit categories which contain the notation, "N.E.C." include cases which SSA coders were unable to classify in more detail than at the two-digit level. An example is "Other, Miscellaneous, N.E.C. Lumber and Wood Products (SIC 240, 243-245,249)."

Each disabling condition rubric appearing in Table 1 and each industry rubric in Table 2 is treated independently in all analyses of this report. Race- and sex-specific, age-adjusted PMR's have been estimated for all combinations of the 123 industry rubrics by 67 disabling condition rubrics and were used to describe empirical associations between industry and

disabling conditions. The PMR for a selected industry with respect to a specified disabling condition for the 1975 to 1976 period is defined as the ratio of the observed number of newly disabled workers to the corresponding expected number. For each age group the expected number is equal to the proportion of disabled workers for all industries with the specified condition multiplied by the total number of disabled workers for the selected industry. Hereafter, unless stated otherwise, PMR refers to a race- and sex-specific age-adjusted PMR for a specific industry and disabling condition. A more detailed explanation of this measure and its estimation from the Continuous Disability History Sample appears in Technical Note 1 of Appendix I.

The PMR's presented in this report are estimates of national values and are subject to sampling error. Estimates of the standard errors of these PMR's are also presented so that the risk of various magnitudes of sampling error may be determined. Estimation of the standard errors of the PMR's is complicated by the fact that the PMR estimators are ratios and there is no known expression for the standard error. This difficulty was overcome by the use of a sample replicate procedure which is described in Technical Note 1 of Appendix I.

The general characteristics of disabled workers for 1975-76 are described and presented in Tables 3 to 10 in the Results Section. The methodology and the results of the analysis to identify industrial loci of disproportionate disability is described in the Results Section. The results of that analysis are also presented in Tables 7 to 35.

The Social Security Disability Benefit Program

Social Security Administration disability benefits are available to qualified totally disabled persons regardless of the cause of their impairments; it is not necessary for the disability to be occupationally caused. To qualify for benefits, persons disabled after age 30 must have worked in covered employment for at least 5 of the 10 years immediately preceding the onset of disability; progressively fewer years of coverage are required for younger workers. To be eligible, a person must be unable to engage in any substantial gainful activity because of a medically determinable physical or mental impairment that has lasted or can be expected to last for at least 12 months or to result in death (14).

The characteristics of the SSA disability benefit program, as they existed at the time applicable for the study population of this report, have been described in the literature (15, 16, and 17).

A person applies for disability benefits at an office of SSA. The person's eligibility for benefits is determined by SSA while the medical determination of the existence of a physical or mental impairment that has or will last at least 12 months or be terminal is accomplished by a state agency, such as a state vocational rehabilitation agency. SSA reviews the findings of the state

agency regarding the medical basis for the worker's claim and the technical eligibility of the worker for SSA benefits in accordance with SSA rules and regulations. If the worker's remaining capacity to perform physical and mental activities ". . . falls short of the demands of jobs he could reasonably be expected to perform, he is considered disabled. . . ." (19). The worker's claim is regarded as "allowed" or his case is termed "in allowance", if the SSA review determines that the worker fulfills the requirements for a cash benefit for his disability. Workers may appeal a disallowance of their claim. A new entitlement for monthly cash disability benefits to a worker receiving an allowance is termed an award (14). The data for this study are for workers whose claims were allowed for the years 1975 and 1976.

Allowances and awards are nearly equivalent but workers receiving allowances may not receive cash benefits, or be considered a new entitlement, under some conditions which occur relatively infrequently. Among these conditions are the following: (1) The payee is not determined; (2) The address of payee is unknown; (3) Previous overpayment of benefits; (4) The disability is a continuation of one previously associated with an award; and (5) Benefits from workmen's compensation, government pensions, and/or other public assistance programs exceed 80 percent of previous earnings while the worker was employed.

Various characteristics of the SSA disability benefit program and its utilization by workers both enhance and reduce the usefulness of the data on allowances or awards for occupational health research. Characteristics which enhance the validity of the data for occupational safety and health research are: (1) Cash monthly benefits serve as an incentive for workers with impairments to apply for benefits; (2) Determinations of disabling conditions are accomplished by physicians using medical evidence; (3) The accuracy of the determination of the cause and severity of the disabling condition is important to the administration of the program - it is not an issue concerning secondary uses of the data; (4) The determination of occupation and industry of the longest held employment during the ten years prior to disability is based on work histories obtained from the worker in direct interviews by experienced staff; and (5) Occupational information is obtained to satisfy administrative needs.

There are factors which reduce the usefulness or validity of this data for epidemiologic study such as: (1) The precision and reliability of the data for occupation and industry and disabling condition may be more related to the administrative needs of the SSA disability system and less to occupational health research; (2) Data on potential confounding factors, e.g. lifestyle, use of tobacco, alcohol, and other drugs, is not available; and (3) Not all workers with impairments apply for benefits.

Workers may not apply for disability benefits for a variety of reasons which may be related to their occupation and/or industry or to type of impairment. These include the following: (1) Lack of knowledge of the benefits or confusion about requirements, e.g. a worker may erroneously believe that the impairment must be occupationally caused; (2) The impairment may not meet SSA requirements for severity; (3) Cases for which death occurs shortly after the

onset of the disease or injury may be less likely to result in an application for benefits; (4) Disease conditions with long latencies may not affect the worker until after his retirement; (5) Workers with conditions known to be caused by their occupations who receive worker's compensation or other benefits may not apply for or receive SSA disability benefit awards; and (6) Because they choose not to do so for various reasons. There is some evidence that tendencies to apply for benefits and appeal initial denials are related to a worker's occupation, among other factors. It is reasonable that tendencies to apply may also be related to disease conditions. If so the absolute incidence of illness effects by occupation and by disabling condition reflected by disability awards could be deceptive. However, relationships between occupations and illness effects might still be accurately represented by relationships between occupations and disabling conditions of allowances. This would hold if differences among occupational groups in tendencies to apply for benefits operate across all types of impairments and if the characteristics of impairments related to benefit application (if any), e.g. latency period, severity, life expectancy, etc., operate equally across occupations. It seems arguable that this is the case, and there is no evidence that it is not.

An Illustration of the Tables: Mining

Guide for Use of Tables

Estimated PMR's and estimated standard errors (SE's) of the PMR's are presented in more than 2,400 pages of reference tables on microfiche found in the packet on the back cover of this report*. A table appears for each race, sex, and, respectively, industry rubric and disabling condition for which there is at least one disability allowance for 1975-76. Illustration 1 presents the table for white male workers in the industry rubric, Mining (SIC 100-149), which is used to illustrate the tables. The heading of the table describes the race and sex group and the industry rubric for the table. Results are presented by disabling condition for "all disabling conditions" and for each of the 67 specific disabling conditions.

Each line describes a disabling condition. Consider pneumoconiosis due to silica and silicates on the 18th line of Page 2 of Illustration 1. The title of the disabling condition is followed by its ICDA code number or range, e.g. 515. The estimated race- and sex-specific age-adjusted PMR, which is 2707, is next. This has been scaled so that 100 indicates no relative excess or deficit. Thus, the observed number of disabled miners with pneumoconiosis due to silica and silicates is more than 27 times the expected number.

PMR's are estimated for all industry/disabling condition combinations for which the expected number of disabled workers for the U.S. in 1975-76, the denominator of the PMR, is 25 or more. This procedure tends to ensure that

* Copies of these tables can be obtained by request from NIOSH.

Table 4-1. ESTIMATED NUMBER AND AGE ADJUSTED PROPORTIONAL MORBIDITY RATIOS, PMR, AND STANDARD ERRORS, S.E. (PMR), FOR DISABLED WHITE MALE WORKERS BY DISABLING CONDITION AND AGE: SOCIAL SECURITY DISABILITY AWARDS, 1975-1976.

MINING (SIC 100-149)

DISABLING CONDITION	ICDA	PMR	SE(PMR)	TOTAL AGE IN YEARS						
				40	40-44	45-49	50-54	55-59	60-64	65+
All Disabling Conditions.....	000-999	11642		1040	805	1092	1997	3164	3393	151
Infective and parasitic diseases.....	000-136	66	16	5	5	15	16	18	16	0
Tuberculosis.....	010-019	75	25	0	5	10	11	12	4	0
Pulmonary tuberculosis.....	011	89	32	0	5	10	11	12	2	0
Neoplasms.....	140-239	56***	6	27	20	46	99	152	267	11
Malignant neoplasms.....	140-199	54***	6	26	15	29	77	128	220	11
Buccal cavity and pharynx.....	140-149	8***	5	0	0	2	0	2	0	0
Digestive organs and peritoneum.....	150-159	56***	11	120	0	0	23	22	60	0
Respiratory system.....	160-163	59***	10	206	0	22	43	53	88	0
Bone, connective tissue, and skin.....	170-173	22***	16	11	0	0	0	4	5	0
Genital organs.....	180-187	116	39	80	15	0	7	14	40	0
Urinary organs.....	188-199	57 *	20	32	0	0	0	23	9	0
Other and unspecified sites.....	190-199	38***	15	53	0	5	4	10	18	11
Neoplasms of lymphatic & hematopoietic tis.....	200-209	67	16	90	1	17	22	12	33	0
Sarcoma (lympho-, reticulo-)other Lymphomas.....	200,202	69	19	29	1	0	12	0	11	0
Leukemia.....	204-207	51	26	20	0	0	10	10	0	0
Benign neoplasms.....	210-228	---	---	10	0	0	10	10	0	0
Neoplasms of unspecified nature.....	230-239	---	---	16	0	0	0	2	14	0
Endocrine, nutritional, & metabolic diseases.....	240-279	54***	8	194	7	15	34	62	76	0
Diabetes mellitus.....	250	39***	7	109	7	10	17	31	44	0
Diseases of blood and blood-forming organs.....	280-289	---	---	10	0	0	0	0	10	0
Mental disorders.....	290-315	67***	5	675	131	95	155	105	96	5
Schizophrenia.....	295	42***	9	145	42	29	21	10	8	0
Neuroses.....	300	111	15	238	45	27	64	25	36	5
Alcoholism.....	303	95	25	66	0	11	27	21	5	0

Table 4-1 (Cont'd.). ESTIMATED NUMBER AND AGE ADJUSTED PROPORTIONAL MORBIDITY RATIOS, PMR, AND STANDARD ERRORS, S.E. (PMR), FOR DISABLED WHITE MALE WORKERS BY DISABLING CONDITION AND AGE: SOCIAL SECURITY DISABILITY AWARDS, 1975-1976.

MINING (SIC 100-149)

DISABLING CONDITION	ICDA	PMR	SE(PMR)	TOTAL AGE IN YEARS							
				40	40-44	45-49	50-54	55-59	60-64	65+	
Diseases of nervous system and sense organs...320-389		69***	4	452	136	48	9	60	112	86	1
Multiple sclerosis.....340		51	53	18	18	0	0	0	0	0	0
Cataract.....374		---		17	5	0	0	0	10	2	0
Glaucoma.....375		---		21	0	5	0	5	0	11	0
Blindness.....379		90	52	29	10	0	0	0	5	14	0
Diseases of circulatory system.....390-458		82***	4	3102	92	165	234	467	1065	1068	11
Heart and hypertensive disease.....393-429		85 **	4	2573	73	122	195	417	923	832	11
Hypertensive disease.....400-404		113	14	170	5	11	5	36	62	51	0
Ischemic heart disease.....410-414		84 **	4	2223	58	101	188	358	796	713	9
Cerebrovascular disease.....430-438		71 **	9	295	19	33	5	22	78	138	0
Cerebral hemorrhage.....431		---		10	0	0	0	0	0	10	0
Cerebral thrombosis and embolism.....433-434		100	24	70	0	11	0	4	29	26	0
Arteriosclerosis.....440		102	18	119	0	5	5	20	37	52	0
Diseases of respiratory system.....460-519		343***	10	3064	90	155	271	594	855	1015	84
Bronchitis and asthma.....490-491, 493		183 *	33	185	17	5	41	56	40	26	0
Emphysema.....492		259***	19	867	11	30	87	154	255	304	26
Pneumoconiosis and related diseases.....515-516		2629***	114	1004	30	59	69	175	249	378	44
Pneumoconiosis due to silica and silicates...515		2707***	122	1004	30	59	69	175	249	378	44
Bronchiectasis.....518		---		2	0	0	0	0	0	2	0
Diseases of digestive system.....520-577		82	11	265	13	25	46	38	49	90	4
Peptic ulcer.....531-533		175	47	78	10	5	6	5	12	36	4
Chronic enteritis and ulcerative colitis.....563		---		11	0	0	9	0	0	2	0
Cirrhosis of liver.....571		48***	11	77	3	15	16	9	22	12	0
Diseases of genitourinary system.....580-629		92	21	75	15	16	0	12	17	15	0
Nephritis and nephrosis.....580-584		101	32	40	15	6	0	7	2	10	0
Chronic nephritis.....582		113	35	40	15	6	0	7	2	10	0
Other diseases of urinary system.....590-599		77	32	25	0	10	0	5	5	5	0

Table 4-1 (Cont'd.). ESTIMATED NUMBER AND AGE ADJUSTED PROPORTIONAL MORBIDITY RATIOS, PMR, AND STANDARD ERRORS, S.E. (PMR), FOR DISABLED WHITE MALE WORKERS BY DISABLING CONDITION AND AGE: SOCIAL SECURITY DISABILITY AWARDS, 1975-1976.

MINING (SIC 100-149)

DISABLING CONDITION	ICDA	PMR	SE (PMR)	TOTAL AGE IN YEARS							
				40	40-44	45-49	50-54	55-59	60-64	65+	
Diseases of male genital organs.....	600-607	---		10	0	0	0	10	0	0	0
Diseases of skin and subcutaneous tissue.....	680-709	91	34	34	9	0	13	10	2	0	0
Dis of musculoskeletal sys & connective tis..	710-738	119***	4	2241	264	198	399	590	509	30	30
Rheumatoid arthritis.....	712	62 **	11	104	8	12	25	19	15	0	0
Osteoarthritis.....	713	115	9	734	5	25	165	241	254	12	12
Other & unspecified arthritis.....	710-711, 714-715	96	28	76	0	10	7	38	16	0	0
Displacement of intervertebral disc.....	725	154***	11	688	137	65	118	190	100	3	3
Congenital anomalies.....	740-759	102	24	108	20	15	22	17	14	20	0
Symptoms and ill-defined conditions.....	780-796	30***	15	7	0	0	0	5	2	0	0
Accidents, poisoning, and violence.....	800-999	118	9	695	231	67	88	78	105	121	5
Unknown or not classifiable.....	000-999	---		23	0	3	0	15	5	0	0

--- The expected total number of disabled workers is less than 25 and the PMR is not significant at the .001 level or the expected number is less than 5.

* The difference between PMR and 100 is statistically significant at the .05 level.

** The difference between PMR and 100 is statistically significant at the .01 level.

*** The difference between PMR and 100 is statistically significant at the .001 level.

the SE's are reliable guides to the variabilities of the PMR's. If the expected number is less than 25, a PMR is presented only if the expected number is at least 5 and the PMR is statistically significantly different from 100 at the .001 level using the two-tailed test described in Technical Note 1 of Appendix I. This modification has been motivated by the objective to present a maximum of reliable information. It is based on an asymptotic approximation to Chebychev's Inequality (see, for example, reference 11, page 75).

The presence of "---" indicates that neither of the criteria just described are fulfilled and the PMR is not estimated. An example is found on the line for Benign Neoplasms in Illustration 1 for which the expected number of disabled workers is 4.8, which is less than 25, and the PMR of 210.0 is not statistically significant even at the .05 level.

The appearance of one, two, or three asterisks after the values of the PMR's presented in this report represents the outcome of the F-test described in Technical Note 1 in Appendix I. No asterisk appears if the estimated PMR does not differ from 100 by a statistically significant amount. A single asterisk indicates that the difference is statistically significant at the 0.05 probability level, two asterisks indicate statistical significance at the 0.01 probability level, and three asterisks indicate statistical significance at the 0.001 level. In this context, the hypothesis tested is that the observed PMR would be 100 if all, rather than a sample of all, disability records had been analysed. A "statistically significant" difference means that the hypothesis has been rejected. The 0.05 level or 0.01 level statistical test results are very useful for accumulating fresh evidence for or against specific hypotheses formulated without use of this report. They are less useful, and potentially misleading, if the occurrence of one or more "statistically significant" PMR's for an industrial group is used as an indication of an unusual disability pattern for that industrial group. Because 67 PMR statistical tests are reported for each industrial group, the probability that one or more of these achieves the 0.05 (0.01) significance level is greater than 0.05 (0.01) for any industrial group, even if it has no unusual disability pattern. A more detailed discussion of the measures used for this report, the data limitations, the CDHS study file, and sampling variance are included in Appendix I.

In Illustration 1, three asterisks appear after the PMR of 56 for Neoplasms, indicating it differs significantly from 100 at the 0.001 level. In this case the PMR is low and indicates low relative incidence. On the second page of Illustration 1 three asterisks appear after the PMR of 343 for Diseases of the Respiratory System. This indicates statistical significance also at the 0.001 level. In this case the relative incidence of Respiratory System Disease for Mining is 3.43 times that expected.

The estimated standard error of the PMR is presented in the next column of the table. This can be used to compute confidence intervals using standard Student's t tables with 19 degrees of freedom (df) (see page 119). To illustrate, for Diseases of the Respiratory System, a 99 percent two-tailed

confidence interval is 314 to 371. This is computed by multiplying the SE of 10 by the 0.005 t percentile for 19 df of -2.84 and adding this to the PMR of 343 to obtain the rounded lower bound of 314. The 99.5 percentile of 2.84 is multiplied by the SE and added to the PMR to obtain the rounded upper bound of 371.

The next column of the table presents the total estimated number of disability benefit allowances granted during the two year period for the race and sex group and industry/disabling condition combination. For white male disabled workers in the Mining industry the number of disabled workers with Diseases of the Respiratory System is 3064. Estimated numbers of disabled workers by the age at which they received the disability benefit allowances are presented in the rightmost seven columns of the table.

Disabilities of Miners

The illustration demonstrates the well known (12, 13) illness effects of the hazards of mining. Diseases of the respiratory system disabled miners nearly 3.5 times relatively more often than workers in other industries; a result significant at the 0.001 two-tail probability level. Pneumoconiosis, a well known consequence of prolonged inhalation of various dusts, accounts for more disabilities than any other respiratory condition. The PMR for pneumoconiosis is 2629, which is significant below the 0.001 probability level, and indicates a disproportionately huge number of miners were disabled from this cause. Pneumoconiosis due to silica and silicates accounts for all of the pneumoconiosis disabilities for miners. The 1,004 estimated miners disabled from pneumoconiosis due to silica and silicates is more than 27 times the number expected. This result is significant beyond the 0.001 probability level.

Also, the PMR for emphysema is significantly high at the 0.001 probability level as miners are disabled from that cause more than 2.5 times relatively more often than other workers. Tobacco smoking may be a significant factor in these emphysema disabilities. Still another possibility is that many workers with emphysema have some other disease, e.g. pneumoconiosis, and were misdiagnosed. However, it is also possible that dust conditions may have aggravated the effects of smoking or that many miners with emphysema also had pneumoconiosis and the combined effects impaired respiratory function enough to cause disability. But, only one diagnosis can be recorded as the primary cause of disability on the SSA source document; such complexities are not manifest in the data.

However, the 1,004 cases of pneumoconiosis do not account for even one-third of the estimated 3,064 total respiratory system disease disabilities. In fact, more than one-third of the respiratory system disease disabilities do not appear in any of the subcategories under diseases of the respiratory system which appear in the table. An interested researcher might request detailed tabulations of three-digit ICDA-8 categories.

The illustration also shows that respiratory system disabilities occur for young miners as well as older miners. Examination of the entire table reveals interesting reversals. Ninety miners aged under 40 were disabled from respiratory disease. This accounts for 9 percent of all disabilities for young miners. However, more young miners were disabled from mental disorders, diseases of the nervous system and sense organs, diseases of the circulatory system, diseases of the musculoskeletal system and connective tissue, and accidents, poisoning and violence respectively, than from respiratory disease. While the (age adjusted) PMR for diseases of the musculoskeletal system and connective tissue of 119 is significantly high at the 0.01 probability level, PMR's for the other disabling conditions are not high but significantly low.

These results suggest several questions for which additional analyses of the disability data might provide partial answers. Would age specific PMR's indicate excess disabilities for the other conditions mentioned above for young miners? How much do the huge excesses of respiratory disease disabilities mask excesses for other conditions? Does coal dust have other illness effects in addition to respiratory disease? What is the relation, if any, of coal dust to respiratory diseases other than pneumoconiosis? Do coal dust and other adverse exposures, particularly tobacco smoke, have synergistic effects?

This discussion has presumed that most of the adverse mining exposures have been associated with coal mining. While coal mining, no doubt, is a large component, it may not be the only one. Other tables in the reference (on microfiche*) provide results specifically for coal mining and also for the other rubrics contributing to the major industry rubric, mining. These include oil and gas extraction and metal mining.

Moreover, the illustration presents data only for white male miners. Unanswered is the question of whether results for that race and sex group hold or differ by race or by sex. Additional tables can be located in the reference set for all other race and sex groups by using the locator at the front of this report. For example, the table for black male miners begins on page 632 in the microfiche packet.

Limitations of the Data

The SSA disability program data, like data from other routine sources, are inadequate for thorough epidemiological study of disabling diseases. Limitations result from having only one occupation and industry recorded for each worker when, in reality, workers may change from one occupation or industry to another. Moreover, additional factors may affect associations between industries and disabling conditions. These factors may be classified

* Copies of these tables can be obtained by request from NIOSH.

as demographic, socioeconomic, environmental, or be related to the physical or mental attributes of the workers. Without information on factors such as residence (urban or rural), life style, smoking habits, diet, hobbies, medical history, or previous jobs held, it is not possible to determine the extent, if any, of confounding of such factors in the relationship of disabling disease with the selected occupation.

Limitations of using "usual" occupation or industry have been studied previously by Gamble and Spirtas, (6) and studies by Lansing and Mueller and by Steinberg (7,8) have dealt with occupational mobility. These studies indicated that changes are most likely to take place between occupations or industries in which work requirements are similar, that changes occur most frequently among individuals who have limited training, and that changes in occupation decrease after age 40. Because the disabled worker population in this study was relatively old (the estimated median age was greater than 50), their occupational stability was probably high. Moreover, it is reasonable to believe that the industry of the longest held occupation in the ten years preceding disability is a reliable measure of a disabled worker's major industrial experience.

Determination of disabling condition, the primary cause of a worker's disability, was accomplished mostly by state agencies. In most cases a diagnosis by either the worker's private physician or one provided by the state agency was the source of the diagnosis of primary cause. And, of course, such diagnoses are subject to error.

Proportional morbidity ratios are used in this report because the sizes of the various industrial populations at risk are difficult to estimate with sufficient accuracy for computation of actual disability rates. A PMR is a measure of relative incidence. Essentially, a PMR for a particular industrial group and a specific disabling condition compares the proportion of all disabled workers in that industrial group who have that disabling condition to the proportion of all disabled workers in all industries who have the same disabling condition. If the PMR is greater than 100 then workers in that industry were disabled by that particular condition relatively more often (but a causal relationship is not implied by that fact alone). The actual rate at which workers in that industrial group are disabled by that condition, however, may be more than, equal to, or less than the corresponding rate for all workers of all industries.

The use of PMR's might be compared to comparisons between relative sizes of pieces from two different pies. The first piece may be one-third of the first pie whereas the second piece is only one-fourth of the second pie; however, if the second pie has a 20-inch diameter and the first pie has a 10-inch diameter, the second piece is absolutely larger than the first piece, even though the first is proportionately the larger. Thus, comparison of PMR's for different industrial groups must be done with great caution.

On the other hand, these PMR analyses offer at least two distinct advantages. First, the comparisons avoid the bias commonly known as the "healthy worker effect" because workers in one industry are compared to workers in other industries. The "healthy worker effect" occurs because labor force participation generally decreases as illness becomes more severe. Thus, workers in any industry generally appear healthier than non-workers in general. And second, in PMR analyses groups of workers are treated, in part, as their own "controls." Thus, if a group of workers is generally healthier than other groups of workers, perhaps because of rigorous physical occupational selection criteria, their absolute rates of disability for most disabling conditions can be lower than other workers even if they are exposed to hazards which increase the risk of specific types of disabilities. Such cases might be detected with PMR analyses because proportions of workers with specific disabling conditions are compared to the corresponding proportions of all other workers.

This analysis includes data only for those workers granted benefits for disabilities under SSA. It does not include data on workers with impairments who were either not insured by SSA or whose disabilities were not considered severe enough or of long enough duration to qualify or those who died before becoming eligible. Moreover, it does not include eligible workers not choosing to apply.

Finally, the relationship between health impairments and disability probably varies among industries. As an illustration, an impairment of the back may prevent a construction worker from engaging in work if he has little training for other types of work. This type of impairment might not markedly interfere with the work capability of a statistician. Such relationships tend to obscure the relation between industry of employment and the incidence of impairments when studied with disability allowance data.

RESULTS

Characteristics of Disabled Workers

During the 1975-1976 period 1,158,439 workers were allowed Social Security disability benefits for impairments. Of these, 69 percent were men and 31 percent were women. Nearly 84 percent of the beneficiaries were white, 14 percent were black, 1.5 percent were of other races, and race was unknown for about 0.5 percent.

Most Frequent Disabling Conditions

Benefits were most frequently granted for disabilities caused by diseases of the circulatory system (ICDA 390-458). Table 3 and Table A-5 display the numbers of disabled workers by disabling condition; Table 4 and Table A-6 display the corresponding percentage distribution. Tables 3 and 4 provide this information by race and sex (race unknown is not included) while Tables A-5 and A-6 provide race totals (including race unknown).

More than one-fourth (28.5 percent) of all allowances were for circulatory system diseases. More men (30.6 percent) than women (23.8 percent) were disabled for this cause except in the case of black women (31.6 percent), who were more often disabled from those causes than any other race and sex group. Black workers (nearly 30.0 percent) were disabled for this cause more often than other race groups. Workers of other races (21.4 percent) of either sex were least often disabled for this reason, but circulatory system disease was the leading cause for all race and sex groups combined.

Within circulatory diseases, heart and hypertensive disease (ICDA 393-429) was most frequent (22.4 percent) for all race and sex groups. Ischemic heart disease (ICDA 410-414) accounted for most of that incidence (18.5 percent). In fact, ischemic heart disease was the cause of more disability than any other detailed disabling condition rubric. However, diseases of the musculoskeletal system and connective tissue (ICDA 710-738) were more frequent for women. Ischemic heart disease was the leading cause for white workers, but not for either blacks or workers of other races. For non-white workers, musculoskeletal system and connective tissue disease caused more disability than ischemic heart disease for either sex.

Hypertensive disease (ICDA 400-404) was the cause for disabilities for black workers substantially more often, relatively, (5.1 percent) than for other race groups (1.4 percent for white workers and 2.1 percent for other race workers). This relative high incidence occurred for black male workers (4.4 percent), but was even more pronounced for black female workers (6.2 percent). Other race female workers also had relatively high incidence (3.6 percent) of disability from hypertensive disease.

Table 3: Estimated Number of Workers Receiving SSA Disability Benefits by Disabling Condition, Sex, and Race: Social Security Disability Allowances 1975-1976

DISABLING CONDITION (ICDA)	ESTIMATED NUMBER DISABLED WORKERS*					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
ALL DISABLING CONDITIONS	675538	294356	108735	57886	11567	4362
Infective & parasitic diseases (000-136)	6712	2479	2559	884	256	48
Tuberculosis (010-019)	3213	876	1964	415	178	26
Silicotuberculosis (010)	38	0	40	0	0	0
Pulmonary tuberculosis (011)	2579	552	1716	284	156	15
Neoplasms (140-239)	62853	35445	8018	4597	897	463
Malignant neoplasms (140-199)	52880	30278	6985	4108	694	372
Buccal cavity & pharynx (140-149)	2785	660	359	84	44	18
Digestive organs & peritoneum (150-159)	11853	4990	1809	773	244	80
Respiratory system (160-163)	19389	4378	2583	597	198	24
Bone, connective tissue, & skin (170-173)	2889	1406	225	166	74	7
Breast (174)	545	9300	107	1122	6	125
Genital organs (180-187)	4115	4563	760	713	62	59
Urinary organs (188-189)	3135	804	341	68	19	0
Other & unspecified sites (190-199)	8169	4142	791	585	47	59
Neoplasms of lymphatic & hematopoietic tissue (200-209)	7941	3960	714	315	169	62
Sarcoma (lympho-, reticulo-), other lymphomas (200, 202)	2401	1486	124	74	22	4
Leukemia (204-207)	2343	997	193	107	51	35
Benign neoplasms (210-228)	1209	807	20	137	24	8
Neoplasms of unspecified nature (230-239)	823	400	116	37	10	21
Endocrine, nutritional, & metabolic diseases (240-279)	20863	11861	3981	4494	630	298
Diabetes mellitus (250)	15999	7138	3060	2853	503	225
Diseases of blood & blood-forming organs (280-289)	1043	793	576	466	26	7
Mental disorders (290-315)	66637	34999	13761	6171	1657	636
Schizophrenia (295)	25212	12583	6398	2711	817	313
Neuroses (300)	12789	10359	1191	1252	218	143
Alcoholism (303)	3868	521	1032	99	87	0

* Does not include 5995 workers of unknown race.

TABLE 3 (Cont'd.): Estimated Number of Workers Receiving SSA Disability Benefits by Disabling Condition, Sex, and Race: Social Security Disability Allowances 1975-1976

DISABLING CONDITION (ICDA)	ESTIMATED NUMBER DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Diseases of nervous system & sense organs (320-389)	39748	21083	6901	3391	747	286
Meningitis (320)	76	19	4	0	0	0
Multiple sclerosis (340)	2259	3154	142	326	10	42
Cataract (374)	1348	751	184	116	21	7
Glaucoma (375)	1131	552	690	291	17	11
Blindness (379)	1943	945	381	260	60	12
Diseases of circulatory system (390-458)	209736	65946	31617	18278	2522	891
Heart & hypertensive disease (393-429)	167402	49455	24560	14480	2011	661
Hypertensive disease (400-404)	8409	5039	4836	3572	180	157
Ischemic heart disease (410-414)	146339	38065	17237	9925	1613	432
Cerebrovascular disease (430-438)	23046	7649	4587	2105	305	107
Cerebral hemorrhage (431)	694	285	238	118	16	4
Cerebral thrombosis & embolism (433-434)	3889	1164	912	402	62	2
Arteriosclerosis (440)	6416	1416	861	317	24	22
Diseases of respiratory system (460-519)	49455	14319	4904	1869	446	170
Bronchitis & asthma (490-491), (493)	5664	3768	817	703	135	101
Emphysema (492)	18396	3816	1644	321	107	31
Pneumoconiosis & related diseases (515-516)	2136	96	129	3	8	0
Pneumoconiosis due to silica & silicates (515)	2074	91	119	3	8	0
Other pneumoconioses & related diseases (516)	62	5	10	0	0	0
Bronchiectasis (518)	361	307	41	32	0	4
Diseases of digestive system (520-577)	18574	8056	2922	1069	370	134
Peptic ulcer (531-533)	2507	1099	476	137	70	11
Chronic enteritis & ulcerative colitis (563)	1454	1471	115	96	14	10
Cirrhosis of liver (571)	9071	2436	1410	428	204	56

TABLE 3 (Cont'd.): Estimated Number of Workers Receiving SSA Disability Benefits by Disabling Condition, Sex, and Race: Social Security Disability Allowances 1975-1976

DISABLING CONDITION (ICDA)	ESTIMATED NUMBER DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Diseases of genitourinary system (580-629)	4980	2962	1278	680	125	45
Nephritis & nephrosis (580-584)	2469	919	652	331	80	24
Chronic nephritis (582)	2217	831	607	311	69	1
Other diseases of urinary system (590-599)	1974	1212	540	212	25	21
Diseases of male genital organs (600-607)	398	11	66	0	13	0
Diseases of female genital organs (620-629)	55	367	0	93	5	0
Pregnancy, childbirth, & the puerperium (630-678)	5	0	0	12	0	0
Diseases of skin & subcutaneous tissue (680-709)	2197	1497	361	319	69	22
Diseases of musculoskeletal system and connective tissue (710-738)	108449	64968	17414	10602	2156	905
Rheumatoid arthritis (712)	9465	9700	1032	1168	133	181
Osteoarthritis (713)	35308	22423	6342	4518	847	230
Other & unspecified arthritis (710-711), (714-715)	4484	3044	809	679	88	24
Displacement of intervertebral disc (725)	26587	11777	3806	1479	440	187
Congenital anomalies (740-759)	6774	3351	795	486	177	27
Symptoms & ill-defined conditions (780-796)	1382	809	253	110	2	15
Accidents, poisonings, & violence (800-999)	38575	10919	6502	1472	745	184
Unknown or not classifiable (000-999)	37555	14869	6893	2986	742	231

Disabling conditions which occur with high incidence are not necessarily those with strong relationships to occupational exposure factors. Black workers, for example, had a higher relative incidence of hypertensive disease than non-black workers. The high relative incidence of disabilities for black workers caused by hypertensive disease seems to be spread over most industry rubrics. However, there has been no analysis of the relation between age

levels and industry for black workers disabled from hypertensive disease which might reveal an industrial relationship.

After circulatory disease, the second most frequent cause of disability is Diseases of the Musculoskeletal System and Connective Tissue (ICDA 710-738) which was diagnosed as the primary cause of nearly 18 percent of all disability benefit allowances. For female workers, these diseases caused almost as many disabilities (21.4 percent) as circulatory system diseases (23.8 percent). For female workers of "other races" musculoskeletal system and connective tissue system diseases caused more (20.8 percent as compared to 20.4 percent for circulatory system disease).

Within the musculoskeletal system and connective tissue group, osteoarthritis (ICDA 713) caused about one-third of the disabilities for every race and sex group. More than 6 percent of all disabilities were diagnosed as being caused primarily by osteoarthritis. This percentage applies approximately to each race and sex group.

Displacement of Intervertebral Disc (ICDA 725) is the second most frequent cause of disabilities within the musculoskeletal system group. This condition accounts for almost 4 percent of all disabilities.

Mental disorders (ICDA 290-315) were the third most frequently diagnosed primary cause of disabilities. Nearly 11 percent of all disabilities were caused by mental disorders. Non-white workers tended to be disabled from these conditions more often than white workers, and female workers more often than male workers. However, for white female workers, neoplasms (ICDA 140-239) caused slightly more disabilities (12 percent) than mental disorders (11.9 percent).

Neoplasms (ICDA 140-239) were diagnosed as the primary cause for 9.7 percent of all disability benefit allowances for 1975-1976. A slightly higher percentage (11.3 percent) of female workers than male workers (9 percent) had disabilities from these causes. White workers (10.1 percent), especially white female workers, (12 percent) had more disabilities caused by neoplasms than black workers (7.6 percent) or "other race" workers (8.5 percent). White women were disabled proportionately more often (12 percent) from this cause than any other race and sex group. The majority of these disabilities were caused by malignant neoplasms (ICDA 140-199) which caused 8.3 percent of all disabilities. For male workers, respiratory system malignant neoplasms (ICDA 160-163) were most frequent, causing 2.4 percent of all disabilities. For female workers, the most frequent was malignant neoplasms of the breast (ICDA 174), with nearly 3 percent of all disabilities.

TABLE 4: Estimated Percentage of Workers Receiving SSA Disability Benefits by Disabling Condition, Sex and Race: Social Security Disability Allowances 1975-1976

DISABLING CONDITION (ICDA)	ESTIMATED PERCENTAGE DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
All disabling conditions	100.00	100.00	100.00	100.00	100.00	100.00
Infective & parasitic diseases (000-136)	0.99	0.84	2.35	1.53	2.21	1.10
Tuberculosis (010-019)	0.48	0.30	1.81	0.72	1.54	0.60
Silicotuberculosis (010)	0.01	0.00	0.04	0.00	0.00	0.00
Pulmonary tuberculosis (011)	0.38	0.19	1.58	0.49	1.35	0.34
Neoplasms (140-239)	9.30	12.04	7.37	7.94	7.75	10.61
Malignant neoplasms (140-199)	7.83	10.29	6.42	7.10	6.00	8.53
Buccal cavity & pharynx (140-149)	0.41	0.22	0.33	0.15	0.38	0.41
Digestive organs & peritoneum (150-159)	1.75	1.70	1.66	1.34	2.11	1.83
Respiratory system (160-163)	2.87	1.49	2.38	1.03	1.71	0.55
Bone, connective tissue, & skin (170-173)	0.43	0.48	0.21	0.29	0.64	0.16
Breast (174)	0.08	3.16	0.10	1.94	0.05	2.87
Genital organs (180-187)	0.61	1.55	0.70	1.23	0.54	1.35
Urinary organs (188-189)	0.46	0.27	0.31	0.12	0.16	0.00
Other & unspecified sites (190-199)	1.21	1.41	0.73	1.01	0.41	1.35
Neoplasms of lymphatic & hematopoietic tissue (200-209)	1.18	1.35	0.66	0.54	1.46	1.42
Sarcoma (lympho-, reticulo-), other lymphomas (200, 202)	0.36	0.50	0.11	0.13	0.19	0.09
Leukemia (204-207)	0.35	0.34	0.18	0.18	0.44	0.80
Benign neoplasms (210-228)	0.18	0.27	0.19	0.24	0.21	0.18
Neoplasms of unspecified nature (230-239)	0.12	0.14	0.11	0.06	0.09	0.48
Endocrine, nutritional, & metabolic diseases (240-279)	3.09	4.03	3.66	7.76	5.45	6.83
Diabetes mellitus (250)	2.37	2.42	2.81	4.93	4.35	5.16
Diseases of blood & blood-forming organs (280-289)	0.15	0.27	0.53	0.81	0.22	0.16
Mental disorders (290-315)	9.86	11.89	12.66	10.66	14.33	14.58
Schizophrenia (295)	3.73	4.27	5.88	4.68	7.06	7.18
Neuroses (300)	1.89	3.52	1.10	2.16	1.88	3.28
Alcoholism (303)	0.57	0.18	0.95	0.17	0.75	0.00

TABLE 4 (Cont'd.): Estimated Percentage of Workers Receiving SSA Disability Benefits by Disabling Condition, Sex and Race: Social Security Disability Allowances 1975-1976

DISABLING CONDITION (ICDA)	ESTIMATED PERCENTAGE DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Diseases of nervous system & sense organs (320-389)	5.88	7.16	6.35	5.86	6.46	6.56
Meningitis (320)	0.01	0.01	0.00	0.00	0.00	0.00
Multiple sclerosis (340)	0.33	1.07	0.13	0.56	0.09	0.96
Cataract (374)	0.20	0.26	0.17	0.20	0.18	0.16
Glaucoma (375)	0.17	0.19	0.63	0.50	0.15	0.25
Blindness (379)	0.29	0.32	0.35	0.45	0.52	0.28
Diseases of circulatory system (390-458)	31.05	22.40	29.08	31.58	21.80	20.43
Heart & hypertensive disease (393-429)	24.78	16.80	22.59	25.01	17.39	15.15
Hypertensive disease (400-404)	1.24	1.71	4.45	6.17	1.56	3.60
Ischemic heart disease (410-414)	21.66	12.93	15.85	17.15	13.94	9.90
Cerebrovascular disease (430-438)	3.41	2.60	4.22	3.64	2.64	2.45
Cerebral hemorrhage (431)	0.10	0.10	0.22	0.20	0.14	0.09
Cerebral thrombosis & embolism (433-434)	0.58	0.40	0.84	0.69	0.54	0.05
Arteriosclerosis (440)	0.95	0.48	0.79	0.55	0.21	0.50
Diseases of respiratory system (460-519)	7.32	4.86	4.51	3.23	3.86	3.90
Bronchitis & asthma (490-491, 493)	0.84	1.28	0.75	1.21	1.17	2.32
Emphysema (492)	2.72	1.30	1.51	0.55	0.93	0.71
Pneumoconiosis & related diseases (515-516)	0.32	0.03	0.12	0.01	0.07	0.00
Pneumoconiosis due to silica & silicates (515)	0.31	0.03	0.11	0.01	0.07	0.00
Other pneumoconioses & related diseases (516)	0.01	0.00	0.01	0.00	0.00	0.00
Bronchiectasis (518)	0.05	0.10	0.04	0.06	0.00	0.09
Diseases of digestive system (520-577)	2.75	2.74	2.69	1.85	3.20	3.07
Peptic ulcer (531-533)	0.37	0.37	0.44	0.24	0.61	0.25
Chronic enteritis & ulcerative colitis (563)	0.22	0.50	0.11	0.17	0.12	0.23
Cirrhosis of liver (571)	1.34	0.83	1.3	0.74	1.76	1.28

TABLE 4 (Cont'd.): Estimated Percentage of Workers Receiving SSA Disability Benefits by Disabling Condition, Sex and Race: Social Security Disability Allowances 1975-1976

DISABLING CONDITION (ICDA)	ESTIMATED PERCENTAGE DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Diseases of genitourinary system (580-629)	0.74	1.01	1.18	1.17	1.08	1.03
Nephritis & nephrosis (580-584)	0.37	0.31	0.6	0.57	0.69	0.55
Chronic nephritis (582)	0.33	0.28	0.56	0.54	0.60	0.02
Other diseases of urinary system (590-599)	0.29	0.41	0.50	0.37	0.22	0.48
Diseases of male genital organs (600-607)	0.06	0.00	0.06	0.00	0.11	0.00
Diseases of female genital organs (620-629)	0.01	0.12	0.00	0.16	0.04	0.00
Pregnancy, childbirth, & the puerperium (630-678)	0.00	0.00	0.00	0.02	0.00	0.00
Diseases of skin & subcutaneous tissue (680-709)	0.33	0.51	0.33	0.55	0.60	0.50
Diseases of musculoskeletal system & connective tissue (710-738)	16.05	22.07	16.02	18.32	18.64	20.75
Rheumatoid arthritis (712)	1.40	3.30	0.95	2.02	1.15	4.15
Osteoarthritis (713)	5.23	7.62	5.83	7.80	7.32	5.27
Other & unspecified arthritis (710-711, 714-715)	0.66	1.03	0.74	1.17	0.76	0.55
Displacement of intervertebral disc (725)	3.94	4.00	3.50	2.56	3.80	4.29
Congenital anomalies (740-759)	1.00	1.14	0.73	0.84	1.53	0.62
Symptoms & ill-defined conditions (780-796)	0.20	0.27	0.23	0.19	0.02	0.34
Accidents, poisonings, & violence (800-999)	5.71	3.71	5.98	2.54	6.44	4.22
Unknown or not classifiable	5.56	5.05	6.34	5.16	6.41	5.3

The fifth and sixth leading diagnosed primary causes of disability were diseases of the nervous system and sense organs (ICDA 320-389) (6.3 percent) and diseases of the respiratory system (ICDA 460-519) (6.2 percent). Respiratory system disabilities were slightly more frequent for male workers (6.9 percent) than nervous system and sense organ disabilities (6.0 percent). The reverse was true for female workers (7.0 percent for nervous system and sense organ and 4.6 percent for respiratory system disease). White male workers were disabled substantially more often (7.3 percent) from respiratory disease than any other race and sex group (the next highest race and sex group is white female workers with 4.9 percent).

Accidents, poisonings, and violence (ICDA 800-999) were diagnosed as the primary cause of slightly more than 5 percent of all disabilities. The percentage for male workers (5.8) was higher than for female workers (3.5). This sex difference appeared for all race groups.

Industries of Disabled Workers

The distribution of workers receiving SSA disability benefit allowances by industry rubric is shown in Tables 5 and 6 and Tables A-7, A-8, A-9, and A-10. Table 5 and Tables A-5, A-7, and A-9 present numbers of disabled workers while Table 6 and Tables A-8 and A-10 present corresponding percentages. Tables 5 and 6 present distributions by race (excluding race unknown) and sex while Tables A-7 and A-8 present sex group totals and Tables A-9 and A-10 present race group totals (race unknown is included in all Appendix tables).

The distribution of disabled workers among the 123 industry rubrics varied considerably by race and sex. The most frequently cited industry for disabled workers in 1975-1976 was manufacturing (SIC 200-399). More than 22 percent were so classified. This percentage differed little between sexes but varied with race as more white workers (22.9 percent) than black workers (19.5 percent) or other race workers (17.3 percent) were classified in this major rubric. Within the major rubric about 8.2 percent were in each of the major subcategories, manufacturing - durable goods and manufacturing - nondurable goods. The remaining 5.9 percent could not be classified in more detail than manufacturing and are shown under the rubric, manufacturing, n.e.c. None of the 36 more detailed rubrics within the major manufacturing category accounted for more than 2 percent of the disabled workers. More than 22 percent of the workers had to be assigned to the category "nonclassifiable establishments and unknown."

TABLE 5: Estimated Numbers of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race*: Social Security Disability Allowances, 1975-1976

INDUSTRY (SIC)	ESTIMATED NUMBER DISABLED WORKERS*					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
All industries	675538	294356	108735	57886	11567	4362
Agriculture, forestry, & fishing (SIC 011-097)	34585	3875	5953	1117	1508	157
Agricultural production - crops (SIC 010-019)	31002	3414	5232	1027	1341	141
Agricultural services (SIC 071-078)	1971	307	481	24	76	16
Agricultural production - livestock, forestry, fishing, and trapping (SIC 021-029, 081-097)	1299	128	178	61	70	0
Agriculture, N.E.C. (SIC 011-097)	313	26	62	5	21	0
Mining (SIC 100-149)	11642	384	721	25	124	0
Bituminous, lignite, & anthracite coal mining (SIC 110-121)	4254	96	228	0	35	0
Oil & gas extraction (SIC 130-138)	2083	132	155	15	9	0
Metal mining, & nonmetallic minerals, except fuels (SIC 100-109, 140-149)	1046	51	104	10	22	0
Mining, N.E.C. (SIC 100-149)	4259	105	234	0	58	0
Construction (SIC 150-179)	84903	3183	15464	509	1543	21
General building contractors (SIC 152-154)	1768	78	161	0	4	0
Heavy construction contractors (SIC 161-162)	2985	119	622	0	42	0
Highway & street construction (SIC 161)	1174	42	185	0	7	0

* Does not include 5995 workers of unknown race.

TABLE 5 (Cont'd.): Estimated Numbers of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race*: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED NUMBER DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Heavy construction, except highway (SIC 162)	1811	77	437	0	35	0
Special trade contractors (SIC 171-179)	20205	694	1806	91	209	10
Plumbing, heating, air conditioners (SIC 171)	3422	172	331	0	33	0
Painting, paper hanging, decorating (SIC 172)	3017	66	179	0	14	0
Electrical work (SIC 173)	2083	82	85	11	10	0
Masonry, stonework & plastering (SIC 174)	1143	29	383	10	17	0
Carpentering & flooring (SIC 175)	5718	89	319	36	66	0
Roofing & sheet metal work (SIC 176)	993	35	154	0	17	0
Other & misc. special trade contractors (SIC 170, 177-179)	3829	221	355	34	52	10
Construction, N.E.C. (SIC 150-179)	59945	2292	12875	418	1288	11
Manufacturing (SIC 200-399)	154318	67867	23804	8658	1615	1146
Manufacturing - durable goods (SIC 240-259, 330-399)	65861	14328	11617	1841	723	265
Lumber & wood products (SIC 240-249)	8245	687	2535	139	117	11
Logging camps & logging contractors (SIC 241)	2294	72	657	40	25	0
Sawmills & planing mills (SIC 242)	2682	172	1015	21	39	11
Other, misc., N.E.C. lumber, & wood products (SIC 240, 243-245, 249)	3269	443	863	78	53	0
Furniture & fixtures (SIC 250-259)	2094	650	320	130	60	21
Primary metal industries (SIC 331-339)	18064	1213	4034	184	168	5
Blast furnace & basic steel products (SIC 331)	2112	191	529	25	31	0
Iron & steel foundries (SIC 332)	9970	511	2172	86	72	5

* Does not include 5995 workers of unknown race.

Table 5 (Cont'd.): Estimated Numbers of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race*: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED NUMBER DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Nonferrous metal industries (SIC 333-336)	994	133	155	33	12	0
Other & N.E.C. primary metal industries (SIC 330, 339)	4998	378	1178	40	53	0
Fabricated metal products (SIC 340-349)	3490	783	292	79	40	2
Machinery, except electrical (SIC 350-359)	8066	1058	572	92	45	25
Electric & electronic equip- ment (SIC 360-369)	6419	5530	542	558	54	87
Transportation equipment (SIC 370-379)	17723	3042	3144	448	206	58
Motor vehicles & equip- ment (SIC 371)	10311	1874	2328	316	70	25
Aircraft & parts (SIC 372)	4801	943	319	82	82	25
Ship & boat building & repairing (SIC 373)	1717	127	408	40	32	8
Other & N.E.C. transporta- tion equipment (SIC 370, 374-379)	894	98	89	10	22	0
Instruments & related products (SIC 380-387)	771	482	55	25	26	0
Misc. manufacturing industries (SIC 390-399)	989	883	123	186	7	56
Manufacturing - nondurable goods (SIC 200-239, 260-319)	47718	34349	6927	4580	585	604
Food & kindred products (SIC 200-209)	12471	5863	2434	1177	303	191
Meat products (SIC 201)	3183	1592	954	386	62	24
Dairy products (SIC 202)	1341	173	26	0	11	0
Bakery products (SIC 205)	1919	894	406	95	15	2
Beverages (SIC 208)	1962	214	192	46	34	14

* Does not include 5995 workers of unknown race.

Table 5 (Cont'd.): Estimated Numbers of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race*: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED NUMBER DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Other & misc. food & kindred products (SIC 200, 203, 204, 206 207, 209)	4066	2990	856	650	181	151
Tobacco manufactures (SIC 210-219)	389	587	135	238	15	20
Textile mill products (SIC 220-229)	7594	8550	1209	857	22	72
Apparel & other textile products (SIC 230-239)	3167	11662	383	1562	69	238
Paper & allied products (SIC 260-269)	3558	929	550	76	26	10
Printing & publishing (SIC 270-279)	6002	2327	494	266	44	0
Chemicals & allied products (SIC 280-289)	3794	1212	714	97	30	5
Petroleum & coal products (SIC 290-299)	3336	258	96	15	20	0
Rubber & miscellaneous plastics products (SIC 300-307)	2919	1059	347	157	6	22
Leather & leather products (SIC 310-319)	991	988	91	63	28	26
Stone, clay, & glass products (SIC 320-329)	3497	914	474	72	22	20
Manufacturing, N.E.C. (SIC 200-399)	40739	19190	5260	2237	307	277
Transportation & public utilities (SIC 400-497)	49221	7076	7990	771	661	45
Railroad transportation (SIC 400-409)	1878	190	499	30	48	2
Local & interurban passenger transit (SIC 410-419)	5409	704	882	106	57	7

* Does not include 5995 workers of unknown race.

Table 5 (Cont'd.): Estimated Numbers of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race*: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED NUMBER DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Trucking & warehousing (SIC 420-429)	20958	1052	3130	218	231	1
Trucking, local & long distance, trucking terminal facilities (SIC 421, 422, 423)	19171	859	2822	167	205	0
Public warehousing (SIC 422)	1787	193	308	51	26	1
U.S. postal service (SIC 430-439)	1110	324	175	2	20	0
Water transportation (SIC 440-449)	3888	177	1246	36	150	0
Transportation by air (SIC 450-459)	1631	255	168	0	18	2
Pipe lines, except natural gas, & electric, gas, & sanitary services (SIC 460, 490)	6912	617	1027	61	77	2
Transportation services (SIC 470-479)	733	172	108	5	4	8
Communication (SIC 480-489)	3638	3035	317	271	31	23
Transportation & public utilities, N.E.C. (SIC 400-497)	3064	550	438	42	25	0
Wholesale trade (SIC 500-519)	8834	1951	1117	146	89	31
Wholesale trade - durable goods (SIC 500-509)	3565	590	521	29	30	2
Wholesale trade - nondurable goods (SIC 510-519)	3483	1048	442	102	44	22
Wholesale trade, N.E.C. (SIC 500-519)	1786	313	154	15	15	7
Retail trade (SIC 520-599)	53686	47533	6506	5311	1028	547
General merchandise stores (SIC 530-539)	1632	4574	276	406	24	13
Food stores (SIC 540-549)	8092	4881	631	235	127	33
Grocery stores (SIC 541)	5938	3785	394	169	77	26
Other & misc. food stores (SIC 542-549)	2154	1096	237	66	50	7

* Does not include 5995 workers of unknown race.

Table 5 (Cont'd.): Estimated Numbers of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race*: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED NUMBER DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Automotive dealers & service stations (SIC 550-559)	11752	727	1386	47	155	7
New & used car dealers, used car dealers (SIC 551, 552)	2337	266	199	20	9	2
Gasoline service stations (SIC 554)	6680	249	914	17	109	5
Other, misc. and n.e.c. automotive dealers & service stations (SIC 550, 553, 556, 557, & 559)	2735	212	273	10	37	0
Furniture & home furnishings stores (SIC 570-579)	1748	355	178	10	11	0
Eating & drinking places (SIC 580-589)	13011	20894	2524	3680	503	364
Other, misc., & N.E.C. retail trade (SIC 520, 560-569, 590-591)	17451	16102	1511	933	208	130
Finance, insurance, & real estate (SIC 600-679)	11785	8080	879	611	97	59
Banking (SIC 600-609)	1872	3124	180	174	13	32
Insurance carriers (SIC 630-639)	3446	1739	70	156	14	2
Insurance agents, brokers & service (SIC 640-649)	1749	836	85	82	15	10
Real estate, combined real estate, insurance, etc. (SIC 651-661)	3134	1392	443	149	33	4
Other & N.E.C. finance, insurance, & real estate (SIC 600, 610-628, 670-699)	1584	989	101	50	22	11
Services (SIC 700-899)	81445	81079	15619	30066	1348	1298
Hotels & other lodging places (SIC 700-709)	7116	9159	1411	2534	224	150
Personal services (SIC 720-729)	6418	8017	1609	3208	166	194
Business services (SIC 730-739)	7798	3193	1426	544	76	34

* Does not include 5995 workers of unknown race.

Table 5 (Cont'd.): Estimated Numbers of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race*: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED NUMBER DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Auto repair, services, & garages (SIC 750-759)	12942	532	1989	63	175	0
Automotive repair shops (SIC 753)	11993	401	1454	42	147	0
Other auto repair services & garages (SIC 751, 752, 754)	949	131	535	21	64	13
Miscellaneous repair services (SIC 760-769)	12849	3979	2577	628	192	60
Motion pictures, amusement & recreation services (SIC 781-799)	3726	1238	513	93	64	13
Health services (SIC 800-809)	9742	32067	2228	7824	141	449
Nursing & personal care facilities (SIC 805)	818	3644	222	1224	20	40
Hospitals (SIC 806)	3828	10733	1330	3305	62	192
Health services, N.E.C. (SIC 800-809)	5096	17690	676	3295	59	217
Educational services (SIC 820-829)	9341	10705	1683	2082	134	141
Elementary & secondary schools (SIC 821)	1667	2578	315	454	8	44
Colleges & universities (SIC 822)	1305	906	283	177	35	10
Other educational services (SIC 823-829)	6369	7221	1085	1451	91	87
Social services (SIC 830-839)	3269	3034	603	710	56	75
Membership organizations (SIC 860-869)	2229	769	286	195	27	0
Private households (SIC 880-889)	1237	5759	784	11838	58	179
Other, misc., & N.E.C. services (SIC 700, 811, 841, 842, 891-899)	4778	2627	510	347	35	3
Public administration (SIC 901-972)	30819	6022	4764	871	698	150
Nonmanufacturing, N.E.C.	1575	468	112	41	14	4
Nonclassifiable establishments & unknown (SIC 990-999)	152725	66838	25806	9760	2842	904

* Does not include 5995 workers of unknown race.

TABLE 6: Estimated Percentages of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED PERCENTAGE DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
All industries	100.00	100.00	100.00	100.00	100.00	100.00
Agriculture, forestry, & fishing (SIC 011-097)	5.12	1.32	5.47	1.93	13.04	3.60
Agricultural production - crops (SIC 010-019)	4.59	1.16	4.81	1.77	11.59	3.23
Agricultural services (SIC 071-078)	0.29	0.10	0.44	0.04	0.66	0.37
Agricultural production - livestock, forestry, fishing, and trapping (SIC 021-029, 081-097)	0.19	0.04	0.16	0.11	0.61	0.00
Agriculture, N.E.C. (SIC 011-097)	0.05	0.01	0.06	0.01	0.18	0.00
Mining (SIC 100-149)	1.72	0.13	0.66	0.04	1.07	0.00
Bituminous, lignite, & anthracite coal mining (SIC 110-121)	0.63	0.03	0.21	0.00	0.30	0.00
Oil & gas extraction (SIC 130-138)	0.31	0.04	0.14	0.03	0.08	0.00
Metal mining, & nonmetallic minerals, except fuels (SIC 100-109, 140-149)	0.15	0.02	0.10	0.02	0.19	0.00
Mining, N.E.C. (SIC 100-149)	0.63	0.04	0.22	0.00	0.50	0.00
Construction (SIC 150-179)	12.57	1.08	14.22	0.88	13.34	0.48
General building contractors (SIC 152-154)	0.26	0.03	0.15	0.00	0.03	0.00
Heavy construction contractors (SIC 161-162)	0.44	0.04	0.57	0.00	0.36	0.00
Highway & street construction (SIC 161)	0.17	0.01	0.17	0.00	0.06	0.00
Heavy construction except highway (SIC 162)	0.27	0.03	0.40	0.00	0.30	0.00
Special trade contractors (SIC 171-179)	2.99	0.24	1.66	0.16	1.81	0.23
Plumbing, heating, air conditioners (SIC 171)	0.51	0.06	0.30	0.00	0.29	0.00
Painting, paper hanging, decorating (SIC 172)	0.45	0.02	0.16	0.00	0.12	0.00

TABLE 6 (Cont'd.): Estimated Percentages of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED PERCENTAGE DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Electrical work (SIC 173)	0.31	0.03	0.08	0.02	0.09	0.00
Masonry, stonework & plastering (SIC 174)	0.17	0.01	0.35	0.02	0.15	0.00
Carpentering & flooring (SIC 175)	0.85	0.03	0.29	0.06	0.57	0.00
Roofing & sheet metal work (SIC 176)	0.15	0.01	0.14	0.00	0.15	0.00
Other & misc. special trade contractors (SIC 170, 177-179)	0.57	0.08	0.33	0.06	0.45	0.23
Construction, N.E.C. (SIC 150-179)	8.87	0.78	11.84	0.72	11.14	0.25
Manufacturing (SIC 200-399)	22.84	23.06	21.89	14.96	13.96	26.27
Manufacturing - durable goods (SIC 240-259, 330-399)	9.75	4.87	10.68	3.18	6.25	6.08
Lumber & wood products (SIC 240-249)	1.22	0.23	2.33	0.24	1.01	0.25
Logging camps & logging contractors (SIC 241)	0.34	0.02	0.60	0.07	0.22	0.00
Sawmills & planing mills (SIC 242)	0.40	0.06	0.93	0.04	0.34	0.25
Other, misc., N.E.C. lumber & wood products (SIC 240, 243-245, 249)	0.48	0.15	0.79	0.13	0.46	0.00
Furniture & fixtures (SIC 250-259)	0.31	0.22	0.29	0.22	0.52	0.48
Primary metal industries (SIC 331-339)	2.67	0.41	3.71	0.32	1.45	0.11
Blast furnace & basic steel products (SIC 331)	0.31	0.06	0.49	0.04	0.27	0.00
Iron & steel foundries (SIC 332)	1.48	0.17	2.00	0.15	0.62	0.11
Nonferrous metal industries (SIC 333-336)	0.15	0.05	0.14	0.06	0.10	0.00
Other & N.E.C. primary metal industries (SIC 330, 339)	0.74	0.13	1.08	0.07	0.46	0.00

TABLE 6 (Cont'd.): Estimated Percentages of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED PERCENTAGE DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Fabricated metal products (SIC 340-349)	0.52	0.27	0.27	0.14	0.35	0.05
Machinery, except electrical (SIC 350-359)	1.19	0.36	0.53	0.16	0.39	0.57
Electric & electronic equipment (SIC 360-369)	0.95	1.88	0.50	0.96	0.47	1.99
Transportation equipment (SIC 370-379)	2.62	1.03	2.89	0.77	1.78	1.33
Motor vehicles & equipment (SIC 371)	1.53	0.64	2.14	0.55	0.61	0.57
Aircraft & parts (SIC 372)	0.71	0.32	0.29	0.14	0.71	0.57
Ship & boat building & repairing (SIC 373)	0.25	0.04	0.38	0.07	0.28	0.18
Other & N.E.C. transportation equipment (SIC 370, 374-379)	0.13	0.03	0.08	0.02	0.19	0.00
Instruments & related products (SIC 380-387)	0.11	0.16	0.05	0.04	0.22	0.00
Miscellaneous manufacturing industries (SIC 390-399)	0.15	0.30	0.11	0.32	0.06	1.28
Manufacturing- nondurable goods (SIC 200-239, 260-319)	7.06	11.67	6.37	7.91	5.06	13.85
Food & kindred products (SIC 200-209)	1.85	1.99	2.24	2.03	2.62	4.38
Meat products (SIC 201)	0.47	0.54	0.88	0.67	0.54	0.55
Dairy products (SIC 202)	0.20	0.06	0.02	0.00	0.10	0.00
Bakery products (SIC 205)	0.28	0.30	0.37	0.16	0.13	0.05
Beverages (SIC 208)	0.29	0.07	0.18	0.08	0.29	0.32
Other & misc. food & kindred products (SIC 200, 203, 204, 206, 207, 209)	0.60	1.02	0.79	1.12	1.56	3.46
Tobacco manufactures (SIC 210-219)	0.06	0.20	0.12	0.41	0.13	0.46
Textile mill products (SIC 220-229)	1.12	2.90	1.11	1.48	0.19	1.65

TABLE 6 (Cont'd.): Estimated Percentages of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED PERCENTAGE DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Apparel & other textile products (SIC 230-239)	0.47	3.96	0.35	2.70	0.60	5.46
Paper & allied products (SIC 260-269)	0.53	0.32	0.51	0.13	0.22	0.23
Printing & publishing (SIC 270-279)	0.89	0.79	0.45	0.46	0.38	0.00
Chemicals & allied products (SIC 280-289)	0.56	0.41	0.66	0.17	0.26	0.11
Petroleum & coal products (SIC 290-299)	0.49	0.09	0.09	0.03	0.17	0.00
Rubber & misc. plastics products (SIC 300-307)	0.43	0.36	0.32	0.27	0.05	0.50
Leather & leather products (SIC 310-319)	0.15	0.34	0.08	0.11	0.24	0.60
Stone, clay, & glass products (SIC 320-329)	0.52	0.31	0.44	0.12	0.19	0.46
Manufacturing, N.E.C. (SIC 200-399)	6.03	6.52	4.84	3.86	2.65	6.35
Transportation & public utilities (SIC 400-497)	7.29	2.40	7.35	1.33	5.71	1.03
Railroad transportation (SIC 400-409)	0.28	0.06	0.46	0.05	0.41	0.05
Local & interurban passenger transit (SIC 410-419)	0.80	0.24	0.81	0.18	0.49	0.16
Trucking & warehousing (SIC 420-429)	3.10	0.36	2.88	0.38	2.00	0.02
Trucking, local & long distance, trucking terminal facilities (SIC 421, 422, 423)	2.84	0.29	2.60	0.29	1.77	0.00
Public warehousing (SIC 422)	0.26	0.07	0.28	0.09	0.22	0.02
U.S. postal service (SIC 430-439)	0.16	0.11	0.16	0.00	0.17	0.00
Water transportation (SIC 440-449)	0.58	0.06	1.15	0.06	1.30	0.00
Transportation by air (SIC 450-459)	0.24	0.09	0.15	0.00	0.16	0.05

TABLE 6 (Cont'd.): Estimated Percentages of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED PERCENTAGE DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Pipe lines, except natural gas, & electric, gas, & sanitary services (SIC 460, 490)	1.02	0.21	0.94	0.11	0.67	0.05
Transportation services (SIC 470-479)	0.11	0.06	0.10	0.01	0.03	0.18
Communication (SIC 480-489)	0.54	1.03	0.29	0.47	0.27	0.53
Transportation & public utilities, N.E.C. (SIC 400-497)	0.45	0.19	0.40	0.07	0.22	0.00
Wholesale trade (SIC 500-519)	1.31	0.66	1.03	0.25	0.77	0.71
Wholesale trade - durable goods (SIC 500-509)	0.53	0.20	0.48	0.05	0.26	0.05
Wholesale trade - nondurable goods (SIC 510-519)	0.52	0.36	0.41	0.18	0.38	0.50
Wholesale trade, N.E.C. (SIC 500-519)	0.26	0.11	0.14	0.03	0.13	0.16
Retail trade (SIC 520-599)	7.95	16.15	5.98	9.17	8.89	12.54
General merchandise stores (SIC 530-539)	0.24	1.55	0.25	0.70	0.21	0.30
Food stores (SIC 540-549)	1.20	1.66	0.58	0.41	1.10	0.76
Grocery stores (SIC 541)	0.88	1.29	0.36	0.29	0.67	0.60
Other & misc. food stores (SIC 542-549)	0.32	0.37	0.22	0.11	0.43	0.16
Automotive dealers & service stations (SIC 550-559)	1.74	0.25	1.27	0.08	1.34	0.16
New & used car dealers, used car dealers (SIC 551, 552)	0.35	0.09	0.18	0.03	0.08	0.05
Gasoline service stations (SIC 554)	0.99	0.08	0.84	0.03	0.94	0.11
Other, misc. and n.e.c. automotive dealers & service stations (SIC 550, 553, 556, 557, & 559)	0.40	0.07	0.25	0.02	0.32	0.00
Furniture & home furnishing stores (SIC 570-579)	0.26	0.12	0.16	0.02	0.10	0.00
Eating & drinking places (SIC 580-589)	1.93	7.10	2.32	6.36	4.35	8.34
Other, misc., & N.E.C. retail trade (SIC 520, 560-569, 590-591)	2.58	5.47	1.39	1.61	1.80	2.98

TABLE 6 (Cont'd.): Estimated Percentages of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED PERCENTAGE DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Finance, insurance, & real estate (SIC 600-679)	1.74	2.74	0.81	1.06	0.84	1.35
Banking (SIC 600-609)	0.28	1.06	0.17	0.30	0.11	0.73
Insurance carriers (SIC 630-639)	0.51	0.59	0.06	0.27	0.12	0.05
Insurance agents, brokers & service (SIC 640-649)	0.26	0.28	0.08	0.14	0.13	0.23
Real estate, combined real estate, insurance, etc. (SIC 651-661)	0.46	0.47	0.41	0.26	0.29	0.09
Other & N.E.C. finance, insurance, & real estate (SIC 600, 610-628, 670-699)	0.23	0.34	0.09	0.09	0.19	0.25
Services (SIC 700-899)	12.06	27.54	14.36	51.94	11.65	29.76
Hotels & other lodging places (SIC 700-709)	1.05	3.11	1.30	4.38	1.94	3.44
Personal services (SIC 720-729)	0.95	2.72	1.48	5.54	1.44	4.45
Business services (SIC 730-739)	1.15	1.08	1.31	0.94	0.66	0.78
Auto repair, services, & garages (SIC 750-759)	1.92	0.18	1.83	0.11	1.51	0.00
Automotive repair shops (SIC 753)	1.78	0.14	1.34	0.07	1.27	0.00
Other auto repair, services, & garages (SIC 751, 752, 754)	0.14	0.04	0.49	0.04	0.24	0.00
Miscellaneous repair services (SIC 760-769)	1.90	1.35	2.37	1.08	1.66	1.38
Motion pictures, amusement & recreation services (SIC 781-799)	0.55	0.42	0.47	0.16	0.55	0.30

TABLE 6 (Cont'd.): Estimated Percentages of Workers in U.S. Receiving SSA Disability Benefits by Industry, Sex, and Race: Social Security Disability Allowances, 1975-1976

INDUSTRY	ESTIMATED PERCENTAGE DISABLED WORKERS					
	WHITE		BLACK		OTHER	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Health services (SIC 800-809)	1.44	10.89	2.05	13.52	1.22	10.29
Nursing & personal care facilities (SIC 805)	0.12	1.24	0.20	2.11	0.17	0.92
Hospitals (SIC 806)	0.57	3.65	1.22	5.71	0.54	4.40
Health services N.E.C. (SIC 800-809)	0.75	6.01	0.62	5.69	0.51	4.97
Educational services (SIC 820-829)	1.38	3.64	1.55	3.60	1.16	3.23
Elementary & secondary schools (SIC 821)	0.25	0.88	0.29	0.78	0.07	1.01
Colleges & universities (SIC 822)	0.19	0.31	0.26	0.31	0.30	0.23
Other educational services (SIC 823-829)	0.94	2.45	1.00	2.51	0.79	1.99
Social services (SIC 830-839)	0.48	1.03	0.55	1.23	0.48	1.72
Membership organizations (SIC 860-869)	0.33	0.26	0.26	0.34	0.23	0.00
Private households (SIC 880-889)	0.18	1.96	0.72	20.45	0.50	4.10
Other, misc., & N.E.C. services (SIC 700, 811, 841, 842, 891-899)	0.71	0.89	0.47	0.60	0.30	0.07
Public administration (SIC 901-972)	4.56	2.05	4.38	1.50	6.03	3.44
Nonmanufacturing, N.E.C.	0.23	0.16	0.10	0.07	0.12	0.09
Nonclassifiable establishments & unknown (SIC 990-999)	22.61	22.71	23.73	16.86	24.57	20.72

Services (SIC 700-899) accounted for 18.3 percent of the disabled workers with considerably more female workers (31.5 percent) than male workers (12.4 percent) in that industry. Considerably more black workers (27.4 percent) than either white (16.8 percent) or other race workers (16.6 percent) had been employed in service industries. Almost all of this difference can be explained by the very large percentage (51.9) of black female workers in this industry. More than 20 percent of all black female workers had been employed in private households (SIC 880-889) which is far greater than the 4.1 percentage for other race female workers, the next most frequent group with that employment. Relatively sizable percentages of black females had been employed in health services (SIC 800-809) (13.5 percent), hotels and other lodging places (SIC 700-709) (4.4 percent), and personal services (5.5 percent). White and other race female workers also had worked in those industries with relatively high frequency. Male workers were not concentrated in any particular service industry subcategory.

More male workers had been employed in construction (SIC 150-179) (12.8 percent) than in services (12.4 percent), but only one percent of female workers had been employed in the former. The great majority of male workers classified in the construction industry, 9.3 percent of all male workers, could not be assigned to a detailed industry rubric within that industry. Nearly 10 percent of the disabled workers had been employed in Retail Trade (SIC 520-599). This percentage is higher for female workers (15.0 percent) than for male workers (7.7 percent). Somewhat fewer black workers (7.1 percent) than white (10.4 percent) or other race (19.9 percent) had been employed in this industry.

Industrial Loci of Disability

The results for each industry group were analyzed by race and sex to identify the industrial loci of industry related worker disability as well as to identify the primary conditions causing the disabilities. The criterion for the designation of an industry as a locus of industry related disability is the occurrence of one or more disabling conditions with statistically significant elevated PMR's at the 0.0005 one-tail level using the test described in the Appendix. Because there are 67 disabling conditions, this ensures an overall Type I error probability for an industry rubric of less than 0.05 (with appropriate distribution assumptions). The disabling conditions causing the industry related disabilities include those achieving the criterion.

The objective of this analysis is to detect the existence of occupational health and/or safety problems for the employees of the industries selected for study. The premise is that exposure to hazards in an industry will generally result in an increase in one or more specific disease conditions or types of injuries rather than a uniform increase in all disease conditions or types of injuries. To the extent that such disease and/or injuries result in disabilities, the result should be an increase in the number of disabilities caused by those diseases and/or injuries relative to others. That result is

equivalent to a change in the distribution of disabilities by disease condition for that industry.

The extent to which the distribution of the causes of disabilities for an industry differs from the corresponding distribution for all workers combined should be a sensitive indicator of the existence of an occupational health and safety problem for that industry, if there is allowance for statistical and non-statistical errors. Since PMR's are sensitive to differences in distributions of causes of disabilities, they are reasonable measures to accomplish the objective. Note that an industry fulfills the criterion if any one or more of its 67 disabling condition PMR's is significantly high at the 0.0005 level.

While this analysis may be sensitive for detecting the existence of some type of occupational health or safety problem for the employees of an industry, an accepted limitation is that it may not, certainly in any definitive sense, determine the exact nature of the problem. First, as to be noted in the next paragraph, it is not possible to adjust for all non-statistical errors. Second, it is not possible to design a set of disease rubrics which is small enough for practical analyses but yet which is so detailed that any change in distribution occurs precisely in terms of the rubrics selected. Each disease rubric is a grouping and changes are not apt to affect all members of the groups within a rubric equally. Third, because the PMR's for an industry have a slight negative correlation, it is difficult for more than one to achieve the criterion even when there is higher incidence for several rubrics. And fourth, but not necessarily exhaustively, while a particular worker may suffer the effects of several diseases, only one is selected as the primary cause and the other diseases are then under-represented.

While the statistical criterion provides adequate protection for statistical errors, e.g. Type I and Type II, it is not possible to adjust for many non-statistical errors. These have been discussed in the Data and Methods Section on pages 9 to 18.

The intent is to determine which industries appear to exhibit signs of occupational health and safety problems for workers. To improve this determination these industries might be monitored with SSA disability data in the future, other surveillance data, or be studied by other methods. These results are a starting point.

A more complete description of any industry rubric identified with this analysis can be obtained by studying the full set of microfiche* tables for that industry rubric. The index in the front of this report can be used to locate the necessary tables. For example, tables for mining, the industry used for illustration in previous discussions, are located on pages 19, 360, 632, 882, and 1058. Reference to these tables suggests, for example, excess disability for white male miners due to musculoskeletal system disease, in general, although this condition is not one of the conditions achieving the criterion for this analysis.

* Copies of these tables can be obtained by request from NIOSH.

This analysis is specifically designed to be applied to the disability allowance file to detect previously unsuspected patterns of excessive disability. Relationships known or suggested by other research should be monitored with different techniques to achieve the greater statistical power attainable when testing a priori hypotheses about specific relationships. However, because the necessary compilations of previous research results for the 121 industry rubrics have not been completed this was not possible in this report. Thus, many of the relationships identified are well known, e.g. pneumoconiosis for miners, accidents for construction workers, etc. Such findings support the validity of this approach in detecting industries with excess disability. These results are presented to stimulate additional occupational health research.

The criterion for identification of industry related disability was applied independently to both major and detailed groupings of SIC's. A major group is the aggregate of more detailed subgroups. Thus, a more inclusive major industry group can be identified as a locus of disability while none of its more detailed subgroups are. Conversely, a detailed industry subgroup can be so identified while the major industry group within which it is included is not. In many cases, both a major industry group and one or more subgroups are so identified. The results for the major and each detailed industry group are described separately.

Overview of Results

Fifty-nine (59) of the 121 industry rubrics have a statistically significantly high PMR on one or more disabling conditions for one or more of the four race and sex groups used in the analysis. These are listed in Table 7. These results are described in more detail in Tables 8 to 21. Forty (40) industries have disproportionate disability for white males while the numbers for the other race and sex groups are as follows: white females, 26; black males, 9; and black females, 15. Two industry rubrics have disproportionate disability for all four race and sex groups. These are Construction (SIC 150-179) and Construction, N.E.C. (SIC 150-179). The latter rubric includes all cases in the former rubric which could not be assigned to a more detailed rubric within the construction industry. The sources of disability in these two cases are described on pages 54 to 58. Six industry rubrics had significantly high disability for three or more of the four race and sex groups. In addition to the two described in the previous paragraph, these include Mining, N.E.C. (SIC 100-149) and Manufacturing (SIC 200-399), respectively, for both white males and females and also black male workers, and both Transportation and Public Utilities, N.E.C. (SIC 400-497) and Services (SIC 700-899), respectively, for white male and female workers and black female workers. These rubrics are broad industry groupings. These results may reflect the fact shown in Tables 17 and 20, respectively, that several detailed industry rubrics within these broad groupings show significantly high PMR's for different race and sex groups.

Twenty-three (23) industry rubrics have significantly high PMR's for one or more disabling conditions for at least two race and sex groups while 36 industries have significantly high PMR's for one specific race and sex group. The substantial number of industry rubrics found to have high disability for more than one race and sex group, when each race and sex group is analyzed separately and independently, suggests the operation of occupational factors generally affecting the health of all workers.

TABLE 7: Industries with Elevated Age Adjusted Proportional Morbidity Ratios, PMR, for at Least One Disabling Condition for at Least One Race/Sex Population

INDUSTRY (SIC)

Agriculture, forestry, and fishing (SIC 011-097)
 Agricultural production - crops (SIC 010-019)
 Agriculture, N.E.C. (SIC 011-097)
Mining (SIC 100-149)
 Bituminous, lignite, and anthracite coal mining (SIC 110-121)
 Metal mining, and nonmetallic minerals, except fuels (SIC 100-109, 140-149)
 Mining, N.E.C. (SIC 100-149)
Construction (SIC 150-179)
 Highway and street construction (SIC 161)
 Special trade contractors (SIC 171-179)
 Painting, paper hanging, decorating (SIC 172)
 Masonry, stonework, and plastering (SIC 174)
 Carpentering and flooring (SIC 175)
 Construction, N.E.C. (SIC 150-179)
Manufacturing (SIC 200-399)
 Manufacturing - durable goods (SIC 240-259, 330-399)
 Lumber and wood products (SIC 240-249)
 Logging camps and logging contractors (SIC 241)
 Iron & steel foundries (SIC 332)
 Other and N.E.C. primary metal industries (SIC 330, 339)
 Fabricated metal products (SIC 340-349)
 Transportation equipment (SIC 370-379)
 Motor vehicles & equipment (SIC 371)
 Other & N.E.C. transportation equipment (SIC 370, 374-379)

TABLE 7 (Cont'd.): Industries with Elevated Age Adjusted Proportional Morbidity Ratios, PMR, for at Least One Disabling Condition for at Least One Race/Sex Population

Manufacturing - nondurable goods (SIC 200-239, 260-319)
 Tobacco manufactures (SIC 210-219)
 Apparel & other textile products (SIC 230-239)
 Manufacturing, N.E.C. (SIC 200-399)
 Transportation & public utilities (SIC 400-497)
 Railroad transportation (SIC 400-409)
 Local & interurban passenger transit (SIC 410-419)
 Trucking & warehousing (SIC 420-429)
 Trucking, local & long distance, trucking terminal facilities
 (SIC 421, 423)
 Water transportation (SIC 440-449)
 Transportation by air (SIC 450-459)
 Pipe lines, except natural gas, & electric, gas, & sanitary
 services (SIC 460, 490)
 Transportation & public utilities, N.E.C. (SIC 400-497)
 Wholesale trade (SIC 500-519)
 Wholesale trade - durable goods (SIC 500-509)
 Wholesale trade, N.E.C. (SIC 500-519)
 Retail trade (SIC 520-599)
 Food stores (SIC 540-549)
 Gasoline service stations (SIC 554)
 Eating & drinking places (SIC 580-589)
 Other, miscellaneous & N.E.C. retail trade (SIC 520, 560-569, 590-591)
 Finance, insurance, & real estate (SIC 600-679)
 Insurance agents, brokers & service (SIC 640-649)
 Real estate, combined real estate, insurance, etc. (SIC 651-661)
 Services (SIC 700-899)
 Personal services (SIC 720-729)
 Auto repair, services, & garages (SIC 750-759)
 Automotive repair shops (SIC 753)
 Miscellaneous repair services (SIC 760-769)
 Health services (SIC 800-809)
 Health services N.E.C. (SIC 800-809)
 Social services (SIC 830-839)
 Private households (SIC 880-889)
 Other, miscellaneous & N.E.C. services (SIC 700, 811, 841, 842,
 891-899)
 Public administration (SIC 901-972)

The large number of rubrics which are significant for only one race and sex group might be explained in several ways. Race and sex differences in employment, past and present, result in differences in occupational distributions which determine numbers of workers exposed which affects the power of the statistical test used. Moreover, because there have been many recent changes in work choices, especially by minority workers, there may be large age differences among workers of different race and sex, and younger workers may not have sufficient exposure time to become disabled.

Seventeen industries are statistically significant for white females or black females but not both. An additional industry rubric, private households (SIC 880-889) is significant for both. Unlike private households, many of the former group of 17 rubrics might not be considered "traditional" employments for female workers, e.g. gasoline service stations (SIC 554), water transportation (SIC 440-449). Of course, these female workers may be employed in traditional female occupations within those industries such as secretaries and other clerical occupations. It is also possible that some of these are false positives. However, there may be other explanations for industries having high (relative) disability for minority workers only - which occurs not only in the above mentioned 18 rubrics but also for two others involving black males and either white or black females, but not both; e.g. minority workers might be assigned to the most hazardous jobs within an industry.

Some disabling conditions achieve the criterion for more industries than others. This may suggest that occupational factors are important in the etiology of disabilities caused by these conditions. Disabling conditions which achieve the criterion most frequently are circulatory disease, except for hypertension, diseases of the musculoskeletal system and connective tissue, mental disorders, diseases of the nervous system, respiratory system disease, and accidents, poisonings, and violence. Those disabling conditions which do not fulfill the criterion for many industries include neoplasms, infective and parasitic diseases, diseases of the digestive system, diseases of the genitourinary system, and diseases of the skin and subcutaneous tissue.

The following discussion identifies potential loci of industry related disability and describes the disabling conditions achieving the criterion. The discussion also notes similarities occurring among race/sex groups. The industries identified as potential loci of industry related disability for at least one race-sex group are shown in Tables 8 to 21 which also present the estimated PMR, standard error, and number of disabled workers by race and sex for each disabling condition achieving the criterion. A PMR estimated as 0 occurs if the estimated number of disabled workers is 0 but the estimated expected number is greater than 0. If both the estimated and estimated expected numbers, respectively, are 0, then the PMR is listed as ---.

Results are presented for all 4 race and sex groups even when only one is significant to provide additional information on the pattern of the association across race and sex groups.

Specific Results

I. Agriculture, Forestry, and Fishing (SIC 011-097):

Both white men and white women appear to have disproportionately high disability in this industry category.

1) The Major Industry Group:

Diseases of the respiratory system and diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white men. Within the latter major disabling condition rubric, osteoarthritis caused disproportionately high disability for white men as compared with white men in all industries.

Agricultural Production--Crops (SIC 010-019):

Diseases of the respiratory system and diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white men. Within the latter disease category, osteoarthritis caused disproportionately high disability for white men.

Agriculture, N.E.C. (SIC 011-097):

Diseases of the circulatory system caused disproportionately high disability for white women.

II. Mining (SIC 100-149):

Both white and black men as well as white women appear to have disproportionately high disability. Male respiratory disability appears to be quite notable.

1) The Major Industry Group:

Diseases of the respiratory system caused disproportionately high disability for both white and black men. Within this disease category, pneumoconiosis due to silica and silicates caused disproportionately high disability for both white and black men as well as white women. Also within the respiratory system disease category, emphysema caused disproportionately high disability for white men. Additionally, displacement of intervertebral disc caused disproportionately high disability for white men.

Table 8: Agricultural industries and disabling conditions with high PMR's for 1975-76

INDUSTRY/DISABLING CONDITION	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
AGRICULTURE, FORESTRY, & FISHING (SIC 011-097)							
VIII.Diseases of Respiratory System	W	123***	4	3302	126	27	237
.....460-519	B	110	14	316	228	75	82
XIII.Dis of Musculoskeletal Sys and Connective Tis.....710-738	W	127***	3	7047	114	7	979
	B	97	7	947	84	17	173
Osteoarthritis.....713	W	152***	5	2960	151	* 20	440
	B	102	17	388	76	28	67
AGRICULTURAL PRODUCTION - CROPS (SIC 010-019)							
VIII.Diseases of Respiratory System	W	124***	5	3018	116	25	192
.....460-519	B	118	15	300	216	111	71
XIII.Dis of Musculoskeletal Sys and Connective Tis.....710-738	W	125***	3	6217	114	8	860
	B	98	8	844	78	16	146
Osteoarthritis.....713	W	152***	5	2680	166	* 21	430
	B	106	19	356	69	24	55
AGRICULTURE, N.E.C. (SIC 011-097)							
VII. Diseases of Circulatory System	W	109	13	104	436***	16	26
.....390-458	B	124	16	21	0	0	0

SE refers to the estimate of the standard error of the estimated PMR.

S refers to achieved significance level.

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

Much is known about the diseases of miners. No new discoveries were made here. The large PMR's for respiratory diseases (see Table 9) are noteworthy beyond the discovery of miners' illnesses. For one, they give credibility to the data and this data analysis since the PMR's most definitely should be high if this procedure is a good surveillance tool. However, the fact that respiratory system disease, particularly pneumoconiosis and emphysema, and musculoskeletal system disease PMR's are high for miners contradicts any notion that such health problems are merely of historical importance for miners. The magnitude of the observed PMR's seems to leave little reason to doubt the seriousness of the occupational health problems of this industry.

2) Bituminous, Lignite, and Anthracite Coal Mining (SIC 110-121):

Diseases of the respiratory system caused disproportionately high disability for both white and black men. Within this disease category, emphysema, as well as pneumoconiosis and related diseases caused disproportionately high disability for both white and black men. All of the disabilities within the latter disease category were caused by pneumoconiosis due to silica and silicates which also caused disproportionately high disability for both white and black men.

3) Metal Mining and Nonmetallic Minerals except Fuels (SIC 100-109, 140-149):

Diseases of the circulatory system caused disproportionately high disability for white women. Within this disease category, heart and hypertensive disease also caused disproportionately high disability for white women. Within this latter disease category, ischemic heart disease also caused disproportionately high disability for white women.

4) Mining, N.E.C. (SIC 100-149):

Diseases of the respiratory system caused disproportionately high disability for both white and black men. Within this disease category, emphysema caused disproportionately high disability for white men. Also within the respiratory disease category, pneumoconiosis and related diseases caused disproportionately high disability for both white and black men. Within this latter disease category, pneumoconiosis due to silica and silicates caused disproportionately high disability for both white and black men. Diseases of the musculoskeletal system and connective tissues caused disproportionately high disability for white females.

Table 9: Mining Industries and Disabling Conditions with High PMR's for 1975-76

INDUSTRY/DISABLING CONDITION	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
MINING (SIC 100-149)							
VIII.Diseases of Respiratory System	W	343***	10	3064	367	* 101	71
.....460-519	B	521***	92	187	0	0	0
Empysema.....492	W	259***	19	867	0	0	0
	B	348	* 101	42	0	0	0
Pneumoconiosis and Related	W	2629***	114	1004	3753	** 893	5
Diseases.....515-516	B	5040***	1052	53	100	0	0
Pneumoconiosis Due to Silica	W	2707***	122	1004	4154***	893	5
and Silicates.....515	B	5404***	1052	53	100	0	0
Displacement of Intervertebral	W	154***	11	688	213	50	32
Disc.....725	B	132	62	30	567	* 146	5
BITUMINOUS, LIGNITE, & ANTHRACITE COAL MINING (SIC 110-121)							
VIII.Diseases of Respiratory System	W	470***	19	1558	464	* 157	25
.....460-519	B	713***	137	86	--	-	0
Empysema.....492	W	318***	35	394	0	0	0
	B	730***	112	30	--	-	0
Pneumoconiosis and Related	W	4274***	254	611	11724	* 3587	5
Diseases.....515-516	B	7275***	1006	26	--	-	0
Pneumoconiosis Due to Silica	W	4402***	260	611	11724	* 3587	5
and Silicates.....515	B	7905***	1006	26	--	-	0

TABLE 9 (Cont'd.): Mining Industries and Disabling Conditions with High PMR's for 1975-76

INDUSTRY/DISABLING CONDITION	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
METAL MINING, AND NONMETALLIC MINERALS, EXCEPT FUELS (SIC 100-109, 140-149)							
VII. Diseases of Circulatory System	W	99	14	341	180***	15	20
.....390-458	B	146	28	50	0	0	0
Heart and Hypertensive Disease	W	98	12	271	240***	20	20
.....393-429	B	169	38	45	0	0	0
Ischemic Heart Disease..410-414	W	100	14	243	311***	25	20
	B	157	50	30	0	0	0
MINING, N.E.C. (SIC 100-149)							
VIII. Diseases of Respiratory System	W	373***	16	1215	453***	34	22
.....460-519	B	700***	135	82	--	-	0
Emphysema.....492	W	297***	30	361	0	0	0
	B	316	131	12	--	-	0
Pneumoconiosis and Related Diseases.....515-516	W	2613***	196	363	0	0	0
	B	7863***	1079	27	--	-	0
Pneumoconiosis Due To Silica and Silicates.....515	W	2689***	219	363	0	0	0
	B	8313***	1079	27	--	-	0
Dis of Musculoskeletal Sys and Connective Tis.....710-738	W	123 *	8	850	181***	12	41
	B	98	34	38	--	-	0

SE refers to the estimate of the standard error of the estimated PMR.

S refers to achieved significance level.

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

III. Construction (SIC 150-179):

Each of the four black-white, male-female groups appeared to have disproportionately high disability. However, male disability, especially white, was notable.

1) The Major Industry Group (SIC 150-179):

Pulmonary tuberculosis caused disproportionately high disability for white women. Diseases of the respiratory system caused disproportionately high disability for white men. Within this latter disease category, emphysema caused disproportionately high disability for white men. Diseases of the digestive system caused disproportionately high disability for black women. Diseases of the male genital organs caused disproportionately high disability for black men. Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for both white and black men. Within this disease category, osteoarthritis and displacement of intervertebral disc also caused disproportionately high disability for both white and black men. Also within the diseases of the musculoskeletal system and connective tissue category, other and unspecified arthritis caused disproportionately high disability for white men. Accidents, poisonings, and violence caused disproportionately high disability for both white and black men as well as white women. The numbers and proportions of men, white and blacks, estimated as disabled from musculoskeletal system and connective tissue disease and accidents (in this case the same is true for white women) are large.

2) Highway and Street Construction (SIC 161):

Diseases of the circulatory system caused disproportionately high disability for white women. Within this disease category, heart and hypertensive disease also caused disproportionately high disability for white women. Within this latter disease category ischemic heart disease also caused disproportionately high disability for white women.

3) Special Trade Contractors (SIC 171-179):

a) The Major Industry Group (SIC 171-179):

Diseases of the musculoskeletal system and connective tissue, as well as accidents, poisonings, and violence caused disproportionately high disability for white men.

b) Painting, Paper Hanging, Decorating (SIC 172):

Ischemic heart disease caused disproportionately high disability for white women.

Table 10: Construction (SIC 150-179) and disabling conditions with high PMR's for 1975-76

DISABLING CONDITION	ICDA	RACE	MALE			FEMALE		
			PMR	S	SE NUMBER	PMR	S	SE NUMBER
Pulmonary tuberculosis.....	011	W	140 *	14	459	551***	92	33
		B	124	16	295	301	299	10
VIII. Diseases of respiratory system	460-519	W	117***	2	7340	125	20	187
		B	112	7	810	170 *	25	26
Emphysema.....	492	W	126***	5	2920	180	55	71
		B	123	19	298	140	53	3
IX. Diseases of digestive system	520-577	W	109	6	2557	132	23	116
		B	115	13	480	342***	50	35
Diseases of male genital organs	600-607	W	87	40	44	0	0	0
		B	323***	41	30	100	0	0
XIII. Dis of musculoskeletal sys and connective tis.....	710-738	W	140***	1	19111	115 *	6	798
		B	138***	4	3469	91	16	77
Osteoarthritis.....	713	W	144***	4	6404	122	10	289
		B	149***	6	1411	14	1	4
Other and unspecified arthritis	710-711, 714-715	W	147***	9	827	93	47	30
		B	117	24	139	109	71	5
Displacement of intervertebral disc.....	725	W	148***	5	4957	147 *	15	188
		B	139***	8	744	218 **	28	33
Accidents, poisonings, and violence.....	800-999	W	162***	3	7665	259***	21	313
		B	126***	5	1098	98	14	15

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

Table 11: Detailed construction industries and disabling conditions with high PMR's for 1975-76.

INDUSTRY/DISABLING CONDITION	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
HIGHWAY & STREET CONSTRUCTION (SIC 161)							
VII. Diseases of circulatory system	W	116	14	454	263***	26	30
.....390-458	B	119	25	67	100	0	0
Heart and hypertensive disease	W	117	19	365	347***	35	30
.....393-429	B	153	33	67	100	0	0
Ischemic heart disease..410-414	W	116	18	318	365***	44	25
	B	203	* 45	62	100	0	0
SPECIAL TRADE CONTRACTORS (SIC 171-179)							
Disease of musculoskeletal system & connective tissue....710-738	W	140***	5	4553	87	20	132
	B	131	17	380	98	60	13
Accidents, poisonings, and violence.....800-999	W	149***	8	1633	200	97	53
	B	140	27	149	0	0	0
PAINTING, PAPER HANGING, DECORATING (SIC 172)							
Ischemic heart disease..410-414	W	108	9	722	262***	34	20
	B	62	22	17	100	0	
MASONRY, STONEMWORK, AND PLASTERING (SIC 174)							
Diseases of circulatory system	W	100	10	354	371***	33	24
.....390-458	B	65	18	73	0	0	0

Table 11: (Cont'd.): Detailed Construction Industries and Disabling Conditions with High PMR's for 1975-76.

INDUSTRY/DISABLING CONDITION	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
CARPENTERING & FLOORING (SIC 175)							
Mental disorders.....290-315	W	61	5	300	77	18	10
	B	88	28	37	207***	24	16
Disease of musculoskeletal system & connective Tissue....710-738	W	165***	10	1522	198 *	41	37
	B	121	36	61	0	0	0
CONSTRUCTION, N.E.C. (SIC 150-179)							
Diseases of circulatory system .....390-458	W	93	1	17289	97	5	482
	B	104	2	4054	132***	6	155
Heart and hypertensive disease .....393-429	W	93	1	13842	102	6	378
	B	108 *	3	3286	140***	8	130
Arteriosclerosis.....440	W	94	9	529	192***	17	20
	B	103	21	110	283	184	5
Diseases of respiratory system .....460-519	W	117***	3	5132	128	20	137
	B	112	10	683	204 **	28	26
Cirrhosis of liver.....571	W	103	7	841	187***	12	35
	B	98	16	166	444	156	15
Disease of musculoskeletal system & connective tissue....710-738	W	141***	2	13635	134***	7	666
	B	141***	4	2941	89	9	64
Osteoarthritis.....713	W	148***	3	4597	154 **	14	257
	B	151***	7	1197	15	1	4
Displacement of intervertebral Disc.....725	W	153***	5	3649	156 **	14	145
	B	139***	9	617	249***	20	30
Accidents, poisonings, and violence.....800-999	W	168***	5	5700	285***	19	250
	B	122 **	6	883	125	13	15

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL
 * .025 LEVEL. ** .005 LEVEL. *** .0005 LEVEL.

c) Masonry, Stonework, and Plastering (SIC 174):

Diseases of the circulatory system caused disproportionately high disability for white women.

d) Carpentering and Flooring (SIC 175):

Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white men. Mental disorders caused disproportionately high disability for black women.

4) Construction, N.E.C. (SIC 150-179):

Diseases of the circulatory system caused disproportionately high disability for black women. Within this disease category, heart and hypertensive disease also caused disproportionately high disability for black women. Within this latter disease category, arteriosclerosis caused disproportionately high disability for white women. Diseases of the respiratory system caused disproportionately high disability for white men. Cirrhosis of the liver caused disproportionately high disability for white women. Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for both white and black men as well as white women. Also, within this disease category, displacement of intervertebral disc caused disproportionately high disability for white and black men as well as black women and osteoarthritis caused disproportionately high disability for men, white and black. Accidents, poisonings, and violence caused disproportionately high disability for white men and white women.

IV. Manufacturing (SIC 200-389):

The major industry group, as well as its durable and nondurable goods manufacturing subgroups are associated with disproportionately high disability. More detailed groups within these two subgroups are related to disproportionately high disability. These detailed groups are discussed under the durable and nondurable manufacturing headings, respectively. Additionally, the major industry, n.e.c. group is associated with excessive disability.

Both whites and black workers of both sexes appear to have high risk of disability. However, more industry associations occur for whites.

1) The Major Industry Group (SIC 200-399):

Silicotuberculosis caused disproportionately high disability for black men.

This is the only industry group which has neuroses as a significant disabling cause. In this group, neuroses caused disproportionately high disability for white women.

Diseases of the circulatory system caused disproportionately high disability for white men and white women. Within this disease category, heart and hypertensive disease caused disproportionately high disability for white men and white women. Within this disease category, ischemic heart disease also caused disproportionately high disability for white men, black men and white women. Ischemic heart disease also caused disproportionately high disability for black men.

Diseases of the respiratory system caused disproportionately high disability for white men and white women. Within this disease category, bronchitis and asthma caused disproportionately high disability for white women.

Also, within this disease category pneumoconiosis, and within that disease category, pneumoconiosis due to silica and silicates also caused disproportionately high disability for white women.

Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for both white men and white women. Within this disease category, osteoarthritis caused disproportionately high disability for white women.

2) Manufacturing--Durable Goods (SIC 240-259, 330-399):

All associations occur for white men. Diseases of the circulatory system caused disproportionately high disability for white men. Within this disease category, heart and hypertensive disease caused disproportionately high disability for white men. Within the heart and hypertensive disease category, ischemic heart disease caused disproportionately high disability for white men.

In addition, diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white men.

Table 12: Manufacturing (SIC 200-399) and Disabling Conditions with High PMR's for 1975-76.

DISABLING CONDITION	ICDA RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
Silicotuberculosis.....	010 W	112		22 10	100	0	0
	B	230***		22 20	100	0	0
Neuroses.....	300 W	110 *	4	3124	126***	6	3013
	B	124	13	319	137 *	15	273
VII Diseases of circulatory system	W	111***	1	54667	110***	1	16974
	.....390-458 B	109 **	3	7642	99	5	2606
Heart and hypentensive disease	W	112***	1	43776	113***	2	13150
	.....393-429 B	111 **	3	6031	96	7	1999
Ischemic heart disease..	410-414 W	112***	1	38586	113***	2	10115
	B	116***	3	4434	89	10	1264
VIII Diseases of respiratory system	W	109***	2	12688	121***	5	4074
	.....460-519 B	122 *	7	1322	127	17	355
Bronchitis and asthma	W	108	5	1417	137***	8	1201
	.....490-491, 493 B	96	19	175	126	26	141
Pneumoconiosis and related	W	79	10	396	292***	31	66
	diseases.....515-516 B	166 *	27	47	0	0	0
Pneumoconiosis due to silica	W	79	10	386	283***	31	61
	and silicates.....515 B	142	25	37	0	0	0
XIII Dis of musculoskeletal sys and	W	109***	1	27032	116***	1	17605
	connective tis.....710-738 B	112 *	4	4293	107	5	1657
Osteoarthritis.....	713 W	107 *	3	8940	120***	3	6262
	B	111	7	1562	114	9	708

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

a) Lumber and Wood Products (SIC 240-249):

White men have disproportionately high disability in this industry.

i) The Major Industry Group (SIC 240-249).

Diseases of the musculoskeletal system and connective tissue disproportionately disabled white men.

ii) Logging Camps and Logging Contractors (SIC 241):

Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white men. Accidents, poisonings, and violence caused disproportionately high disability for white men and black women.

b) Iron and Steel Foundries (SIC 332):

Heart and hypertensive disease caused disproportionately high disability for black men.

Table 13: Manufacturing - Durable Goods (SIC 240-259, 300-399):
Disabling Conditions with High PMR's for 1975-76.

DISABLING CONDITION	ICDA RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
VII Diseases of circulatory system.....390-458	W	110***	1	23131	109 **	3	3540
	B	108	4	3726	86	9	463
Heart and hypertensive disease.....393-429	W	110***	1	18581	111	5	2716
	B	110	5	2934	71	12	300
Ischemic heart disease..410-414	W	111***	1	16363	113 *	4	2125
	B	114 *	5	2152	69	11	197
XIII Dis of musculoskeletal sys and connective tis.....710-738	W	115***	2	12239	116 **	4	3693
	B	114	6	2129	106	11	339

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

Table 14: Durable goods manufacturing industries with high PMR's
for 1975-76.

INDUSTRY/DISABLING CONDITION	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
LUMBER AND WOOD PRODUCTS (SIC 240-249)							
XIII Dis of musculoskeletal sys and connective tis.....710-738	W	156***	9	2072	138	21	215
	B	129	15	531	55	34	14
LOGGING CAMPS & LOGGING CONTRACTORS (SIC 241)							
XIII Dis of musculoskeletal sys and connective tis.....710-738	W	207***	19	761	126	29	20
	B	69	19	73	0	0	0
XVII Accidents, poisonings, and violence.....800-999	W	181***	18	229	631 *	228	17
	B	236	61	92	623***	50	5
IRON & STEEL FOUNDRIES (SIC 332)							
Heart and hypertensive disease.....393-429	W	119***	4	3144	131	26	118
	B	114	10	598	107	38	20
OTHER AND N.E.C. PRIMARY METAL INDUSTRIES (SIC 330, 339)							
VIII Diseases of respiratory system.....460-519	W	157***	12	612	99	35	20
	B	183	44	100	684 **	140	10
FABRICATED METAL PRODUCTS (SIC 340-349)							
VII Diseases of circulatory system.....390-458	W	120 **	6	1323	116	20	208
	B	84	23	75	244***	25	52

TABLE 14 (Cont'd): Durable goods manufacturing industries with high PMR's for 1975-76.

INDUSTRY/DISABLING CONDITION	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
TRANSPORTATION EQUIPMENT (SIC 370-379)							
Neuroses.....300	W	193***	19	644	131	38	141
	B	25	14	9	207	128	24
VII Diseases of circulatory system.....390-458	W	113***	2	6297	121	10	846
	B	116	8	1023	47	14	59
Ischemic heart disease..410-414	W	115***	3	4478	120	16	482
	B	123	13	586	51	17	34
MOTOR VEHICLES & EQUIPMENT (SIC 371)							
Ischemic heart disease..410-414	W	117***	4	2601	111	21	265
	B	123	14	429	52	15	24
OTHER AND N.E.C. TRANSPORTATION EQUIPMENT (SIC 370, 374-379)							
Neoplasms.....140-239	W	125	33	103	16	11	2
	B	189***	19	10	0	0	0
Ischemic heart disease..410-414	W	145	22	274	326***	51	42
	B	0	0	0	0	0	0

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

c) Other and N.E.C. Primary Metal Industries (SIC 330, 339):

Diseases of the respiratory system caused disproportionately high disability for white men.

d) Fabricated Metal Products (SIC 340-349):

Diseases of the circulatory system caused disproportionately high disability for black women.

e) Transportation Equipment (SIC 370-379):

Both white and black men appear to have disproportionately high disability in this industry classification as a group or in specific subgroups.

i) The Major Industry Group (SIC 370-379)

Neuroses caused disproportionately high disability for white men. Diseases of the circulatory system disease caused disproportionately high disability for white men. Within this disease category, ischemic heart disease also caused disproportionately high disability for white men.

ii) Motor Vehicles and Equipment (SIC 371):

Ischemic heart disease caused disproportionately high disability for white men.

iii) Other and N.E.C. Transportation Equipment (SIC 370, 374-379).

Neoplasms caused disproportionately high disability for black men, and ischemic heart disease caused disproportionately high disability for white women.

3) Manufacturing--Nondurable Goods (SIC 200-239, 260-319):

The nondurable goods manufacturing group and two of its detailed groups are associated with disproportionately high disability.

White men and white women appear to have disproportionate disability in this industry category. Diseases of the circulatory system caused disproportionately high disability for white men. Within this disease category, heart and hypertensive and ischemic heart disease caused disproportionately high disability for white men. Heart and hypertensive disease also caused disproportionately high disability for white women.

Table 15: Nondurable goods manufacturing industries with high PMR's by disabling condition for 1975-76.

INDUSTRY/DISABLING CONDITION		RACE	MALE			FEMALE			
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
MANUFACTURING - NONDURABLE GOODS (SIC 200-239, 260-319)									
VII	Diseases of circulatory system	W	114***	2	17297	110 **	3		8740
	.....390-458	B	114 *	6	2326	97	7		1394
	Heart and hypertensive disease	W	113***	2	13753	115***	3		6882
	.....393-429	B	116 *	6	1842	101	8		1147
	Ischemic heart disease..410-414	W	115***	2	12212	117 **	4		5418
		B	126 **	8	1409	96	13		743
XIII	Dis of musculoskeletal sys and	W	104	3	8002	119***	2		9167
	connective tis.....710-738	B	104	8	1154	106	6		878
	Osteoarthritis.....713	W	107	5	2771	130***	4		3529
		B	102	16	418	127	13		437
TOBACCO MANUFACTURES (SIC 210-219)									
V	Mental disorders.....290-315	W	102	29	40	256***	34		219
		B	64	15	10	128	46		31
APPAREL AND OTHER TEXTILE PRODUCTS (SIC 230-239)									
XIII	Dis of musculoskeletal sys and	W	105	12	536	133***	4		3463
	connective tis.....710-738	B	114	35	72	113	21		323
	Osteoarthritis.....713	W	93	26	155	153***	11		1393
		B	164	63	42	166	39		200

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white women. Within this disease category, osteoarthritis also caused disproportionately high disability for white women.

a) Tobacco Manufacturers (SIC 210-219):

Mental disorders caused disproportionately high disability for white women in this industry classification.

b) Apparel and Textile Products (SIC 230-239):

Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white women. Within this disease category, osteoarthritis also caused disproportionately high disability for white women.

4) Manufacturing, N.E.C. (SIC 200-399):

Diseases of the circulatory system caused disproportionately high disability for white men. Within this disease category, heart and hypertensive disease, and ischemic heart disease caused disproportionately high disability for white men. Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white women.

Table 16: Manufacturing, N.E.C. (SIC 200-399) and Disabling Conditions with High PMR's for 1975-76.

DISABLING CONDITION	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
VII Diseases of circulatory system.....390-458	W	111***	1	14239	110 **	3	4694
	B	106	3	1590	111	8	749
Heart and hypertensive disease.....393-429	W	112***	1	11442	111 **	3	3552
	B	108	4	1255	104	11	552
Ischemic heart disease..410-414	W	112***	1	10011	105	4	2572
	B	107	6	873	90	15	324
Dis of musculoskeletal sys and connective tis.....710-738	W	104 *	1	6791	112***	2	4745
	B	122 *	7	1010	111	11	440

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

V. Transportation and Public Utilities (SIC 400-497):

The major industry group, seven of its detailed groups, and its n.e.c. group are associated with disproportionately high disability.

Although both white and black women appear to have elevated risk in this industry group, the associations between industry and disabling condition are most numerous for white men.

1) The major industry group (SIC 400-497):

Diseases of the musculoskeletal system and connective tissue and accidents, poisonings, and violence caused disproportionately high disability for white men. Diseases of the circulatory system caused disproportionately high disability for white men and white women. Within the circulatory disease category, ischemic heart disease also caused disproportionately high disability for white men and white women. Also within the circulatory disease category, heart and hypertensive disease caused disproportionately high disability for white men.

2) Railroad Transportation (SIC 400-409):

Diseases of the circulatory system and two of its detailed groups caused disproportionately high disability for black women. The two detailed groups are heart and hypertensive disease and ischemic heart disease within the heart and hypertensive disease group.

3) Local and Interurban Passenger Transit (SIC 400-419):

Neoplasms caused disproportionately high disability for black women.

4) Trucking and Warehousing (SIC 420-429):

a) The major industry group:

Diseases of the musculoskeletal system and connective tissue, and specifically displacement of intervertebral disc within that category, and accidents, poisonings, and violence caused disproportionately high disability for white men. Diseases of the circulatory system also caused disproportionately high disability for white men. Within the circulatory disease category, heart and hypertensive disease caused disproportionately high disability for white men. Within the heart and hypertensive category, ischemic heart disease also caused disproportionately high disability for white men.

b) Trucking, Local, and Long Distance, Trucking Terminal Facilities (SIC 421, 423):

Diseases of the musculoskeletal system and connective tissue, specifically displacement of intervertebral disc, caused disproportionately high disability for white men. Diseases of the circulatory system caused disproportionately high disability for white men. Within the circulatory disease category, heart and hypertensive disease caused disproportionately high disability for white men. Within the heart and hypertensive category, ischemic heart disease also caused disproportionately high disability for white men.

5) Water Transportation (SIC 440-449):

Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for black women.

6) Transportation by Air (SIC 450-459):

Diseases of the circulatory system caused disproportionately high disability for white men.

7) Pipelines, except Natural Gas, and Electric, Gas, and Sanitary Services (SIC 460,490):

Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for black women. Within this disease category, osteoarthritis caused disproportionately high disability for black women.

8) Transportation and Public Utilities, N.E.C. (SIC 400-497):

Leukemia caused disproportionately high disability for white men. Diseases of the circulatory system caused disproportionately high disability for white women. Within this latter disease category, heart and hypertensive disease also caused disproportionately high disability for white women. Within the heart and hypertensive disease category, ischemic heart disease also caused disproportionately high disability for white and black women.

VI. Wholesale Trade (SIC 500-519):

Both white and blacks of both sexes appeared to have elevated risk in this industry group.

1) The major industry group (SIC 500-519):

Diseases of the circulatory system caused disproportionately high disability for white men. Within this disease category, heart and hypertensive disease as well as ischemic heart disease, caused disproportionately high disability for white men.

2) Wholesale Trade - Durable Goods (SIC 500-509):

Diseases of the circulatory system caused disproportionately high disability for black men. Within this disease category, heart and hypertensive disease also caused disproportionately high disability for black women. Within this latter disease category, ischemic heart disease also caused disproportionately high disability for black women.

Table 17: Transportation and Public Utilities Industries with High PMR's by Disabling Condition for 1975-76.

INDUSTRY/DISABLING CONDITION		RACE	MALE		FEMALE					
			PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
TRANSPORTATION AND PUBLIC UTILITIES (SIC 400-497)										
VII	Diseases of circulatory system	W	112***	1	17508	124***	5	1917		
	.....390-458	B	115 **	4	2754	101	19	232		
	Heart and hypertensive disease	W	116***	1	14476	122 **	6	1418		
	.....393-429	B	119 **	5	2205	109	26	197		
	Ischemic heart disease..410-414	W	116***	2	12673	130***	6	1158		
		B	123 **	7	1616	111	32	137		
XIII	Dis of musculoskeletal sys and	W	112***	3	8916	93	6	1444		
	connective tis.....710-738	B	130 **	7	1674	127	19	174		
XVII	Accidents, poisonings, and	W	122***	4	3211	112	14	298		
	Violence.....800-999	B	120	17	552	115	65	24		

TABLE 17 (Cont'd.): Transportation and Public Utilities Industries with High PMR's by Disabling Condition for 1975-76.

INDUSTRY/DISABLING CONDITION		RACE		MALE		FEMALE		
		PMR	S	SE	NUMBER	PMR	S	SE NUMBER
RAILROAD TRANSPORTATION (SIC 400-409)								
VII	Diseases of circulatory system	W	100	8	582	123	41	57
	.....390-458	B	108	23	169	191***	15	20
	Heart and hypertensive disease	W	99	7	458	128	52	45
	.....393-429	B	94	26	114	238***	18	20
	Ischemic heart disease..410-414	W	98	8	396	164	74	45
		B	114	31	98	352***	30	20
LOCAL AND INTERURBAN PASSENGER TRANSIT (SIC 410-419)								
II	Neoplasms.....140-239	W	90	11	469	117	42	99
		B	83	27	56	237***	30	20
TRUCKING AND WAREHOUSING (SIC 420-429)								
VII	Diseases of circulatory system	W	110***	2	7203	147 **	14	331
	.....390-458	B	123 **	7	1126	114	38	77
	Heart and hypertensive disease	W	116***	2	6085	150 *	20	252
	.....393-429	B	125 *	8	891	144	46	77
	Ischemic heart disease..410-414	W	116***	2	5320	175 *	28	225
		B	134 *	14	671	115	51	42
XIII	Dis of musculoskeletal sys and connective tis.....710-738	W	121***	4	4086	86	12	198
		B	131 *	11	654	89	30	35
	Displacement of intervertebral disc..... ..725	W	141***	9	1179	114	46	51
		B	155	26	176	168	64	10
XVII	Accidents, poisonings, and violence.....800-999	W	131***	7	1518	265	78	104
		B	125	20	235	362 **	72	20

Table 17 (Cont'd).: Transportation and Public Utilities Industries with High PMR's by Disabling Condition for 1975-76.

INDUSTRY/DISABLING CONDITION		RACE	MALE			FEMALE			
			PMR	S	SE NUMBER	PMR	S	SE NUMBER	
TRUCKING, LOCAL & LONG DISTANCE, TRUCKING TERMINAL FACILITIES (SIC 421, 423)									
VII	Diseases of circulatory system	W	110***	2	6645	149	*	20	265
	.....390-458	B	124 *	8	1024	129		68	67
	Heart and hypertensive disease	W	118***	3	5669	162	*	22	215
	.....393-429	B	129 *	9	830	163		81	67
	Ischemic heart disease..410-414	W	117***	3	4956	203	**	30	205
		B	135	16	612	150		86	42
XIII	Dis of musculoskeletal sys and	W	124***	5	3839	80		14	149
	connective tis.....710-738	B	134 *	12	607	102		27	30
	Displacement of intervertebral	W	146***	10	1122	112		74	41
	disc..... ..725	B	164	29	169	209		64	10
WATER TRANSPORTATION (SIC 440-449)									
XIII	Dis of musculoskeletal sys and	W	151 **	13	948	5		21	2
	connective tis.....710-738	B	127	20	260	286***		27	21
TRANSPORTATION BY AIR (SIC 450-459)									
VII	Diseases of circulatory system	W	150***	10	765	73		29	36
	.....390-458	B	140	29	65	100		0	0

Table 17 (Cont'd).: Transportation and Public Utilities Industries with High PMR's by Disabling Condition for 1975-76.

INDUSTRY/DISABLING CONDITION	RACE	MALE			FEMALE			
		PMR	S	SE NUMBER	PMR	S	SE NUMBER	
PIPE LINES, EXCEPT NATURAL GAS, AND ELECTRIC, GAS, AND SANITARY SERVICES (SIC 460, 490)								
XIII Dis of musculoskeletal sys and connective tis.....710-738	W	107	8	1192	120	22	160	
	B	120	26	202	268***	31	31	
	Osteoarthritis.....713	W	110	18	416	127	37	56
		B	104	48	71	306***	44	16
TRANSPORTATION AND PUBLIC UTILITIES, UTILITIES, N.E.C. (SIC 400-497)								
Leukemia.....204-207	W	273***	16	29	0	0	0	
	B	0	0	0	0	0	0	
VII Diseases of circulatory system.....390-458	W	118 **	5	1139	171***	9	206	
	B	97	10	128	133 *	10	16	
Heart and hypertensive disease.....393-429	W	122 **	7	936	167***	11	151	
	B	110	11	112	115	10	11	
Ischemic heart disease..410-414	W	129 **	8	865	182***	16	126	
	B	115	10	82	171***	16	11	

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

3) Wholesale Trade, n.e.c. (SIC 500-519):

Diseases of the nervous system and sense organs caused excess disability for black women. Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white women.

VII. Retail Trade (SIC 520-599):

White men and white women appear to have disproportionately high disability in this group. This is the only industry group which has diabetes mellitus as a significant disabling condition. Disproportionate disability also occurs for the major group and several detailed industry rubrics for circulatory system diseases for white men and for musculoskeletal system disease for white women.

1) The Major Industry Group (SIC 520-599):

Endocrine, nutritional, and metabolic diseases caused disproportionately high disability for white men. Within this disease category, diabetes mellitus caused disproportionately high disability for white men. Diseases of the circulatory system caused disproportionately high disability for white men and white women. Diseases of the musculoskeletal system and connective tissue, caused disproportionately high disability for white women. Within the musculoskeletal system and connective tissue disease category, displacement of intervertebral discs also caused disproportionately high disability for white women.

2) Food Stores (SIC 540-549):

Diseases of the circulatory system caused disproportionately high disability for white men.

3) Gasoline Service Stations (SIC 554):

Diseases of the circulatory system caused disproportionately high disability for black women.

4) Eating and Drinking Places (SIC 580-589):

Mental disorders caused disproportionately high disability for white men.

Table 18: Trade industries with high PMR's by disabling condition for 1975-76.

INDUSTRY/DISABLING CONDITION		RACE	MALE			FEMALE		
			PMR	S	SE NUMBER	PMR	S	SE NUMBER
WHOLESALE TRADE (SIC 500-519)								
VII	Diseases of circulatory system	W	120***	3	3473	103	13	464
	.....390-458	B	112	14	382	131	17	55
	Heart and hypertensive disease	W	125***	5	2882	121	17	408
	.....393-429	B	111	17	297	130	23	43
	Ischemic heart disease..410-414	W	127***	5	2562	128	21	334
		B	106	23	200	194	* 40	43
WHOLESALE TRADE - DURABLE GOODS (SIC 500-509)								
VII	Diseases of circulatory system	W	124 **	7	1427	103	31	140
	.....390-458	B	92	29	151	152***	11	15
	Heart and hypertensive disease	W	127 *	9	1166	122	29	124
	.....393-429	B	85	17	109	191***	17	15
	Ischemic heart disease..410-414	W	129 *	10	1034	121	32	95
		B	79	17	72	274***	21	15
WHOLESALE TRADE, N.E.C. (SIC 500-519)								
	Diseases of nervous system & sense organs.....320-389	W	66	16	65	134	36	29
		B	299***	40	30	0	0	0
	Dis of musculoskeletal sys & connective tis.....710-738	W	92	12	264	194***	21	134
		B	62	11	15	0	0	0
RETAIL TRADE (SIC 520-599)								
VII	Endocrine, nutritional, & metabolic diseases....240-279	W	142***	7	2347	117	* 6	2242
		B	116	16	267	95	9	388
	Diabetes mellitus.....250	W	148***	8	1879	108	7	1256
		B	118	19	210	97	14	251

Table 18: (cont'd) Trade industries with high PMR's by disabling condition for 1975-76.

INDUSTRY/DISABLING CONDITION		RACE	MALE		FEMALE					
			PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
RETAIL TRADE (SIC 520-599) (cont'd)										
VIII	Diseases of circulatory system	W	115***	2	19010	109***	2	12046		
	.....390-458	B	112	7	2023	115 **	4	1896		
	Heart and hypertensive disease	W	113***	2	14829	107 *	2	8879		
	.....393-429	B	116	7	1620	112	6	1467		
	Ischemic heart disease	410-414 W	112***	2	12795	107 *	3	6907		
		B	120 *	9	1169	121 *	9	1074		
XIII	Diseases of the musculoskeletal	W	90	3	7696	109***	2	11650		
	sys and connective tis..710-738	B	84	9	856	100	6	966		
	Displacement of intervertebral	W	79	4	1671	119***	4	2214		
	disc..... ..725	B	86	15	197	68	15	94		
FOOD STORES (SIC 540-549)										
VII	Diseases of circulatory system	W	123***	5	3125	106	7	1191		
	.....390-458	B	106	22	193	122	28	84		
GASOLINE SERVICE STATIONS (SIC 554)										
VII	Diseases of circulatory system	W	109	5	2194	154	42	80		
	.....390-458	B	106	11	275	200***	17	12		

Table 18: (cont'd) Trade industries with high PMR's by disabling condition for 1975-76.

INDUSTRY/DISABLING CONDITION		RACE	MALE			FEMALE		
			PMR	S	SE NUMBER	PMR	S	SE NUMBER
EATING AND DRINKING PLACES (SIC 580-589)								
V	Mental disorders.....290-315	W	133***	6	1968	86	4	2046
		B	130	16	513	100	16	395
OTHER, MISC., AND N.E.C. RETAIL TRADE (SIC 520, 560-569, 590-591)								
VIII	Diseases of circulatory system	W	120***	3	6553	109 **	3	4185
	.....390-458	B	117	11	507	89	11	259
	Heart and hypertensive disease	W	116***	4	5041	109 *	3	3143
	.....393-429	B	133 *	14	443	56	14	128
	Ischemic heart disease..410-414	W	118***	4	4471	117 **	5	2615
		B	126	13	292	74	14	116
	Cerebrovascular disease.430-438	W	133***	7	806	100	10	443
		B	86	29	54	199	50	67

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

- 5) Other, Miscellaneous, and N.E.C. Retail Trade (SIC 520, 560-569, 590-591):

Diseases of the circulatory system caused disproportionately high disability for white men in this industry group. Within this disease category, cerebrovascular disease caused disproportionately high disability for white men. Also within this disease category, heart and hypertensive disease caused disproportionately high disability for white men. Within the heart and hypertensive disease category, ischemic heart disease also caused disproportionately high disability for white men.

VIII. Finance, Insurance, and Real Estate (SIC 600-679):

Both white men and black women appear to have elevated risk in this industry group.

- 1) The major industry group (SIC 600-679):

Diseases of the circulatory system caused disproportionately high disability for white men. Within this disease category, heart and hypertensive disease as well as ischemic heart disease caused disproportionately high disability for white men.

- 2) Insurance Agents, Brokers and Service (SIC 640-649):

Heart and hypertensive disease caused disproportionately high disability for white men. Within this disease category, hypertensive disease caused disproportionately high disability for black women.

- 3) Real Estate, Combined Real Estate, Insurance, etc. (SIC 651-661):

Diseases of the circulatory system, in particular, heart and hypertensive disease and ischemic heart disease caused disproportionately high disability for white men.

TABLE 19: Finance, Insurance, and Real Estate Industries with High PMR's by Disabling Condition for 1975-76.

INDUSTRY/DISABLING CONDITION		RACE		MALE			FEMALE		
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
FINANCE, INSURANCE, AND REAL ESTATE (SIC 600-679)									
VII	Diseases of circulatory system	W	130***	4	5009	95	4		1715
	.....390-458	B	127	20	348	101	17		180
	Heart and hypertensive disease	W	135***	5	4137	95	5		1285
	.....393-429	B	112	20	238	104	21		145
	Ischemic heart disease..410-414	W	139***	6	3745	96	6		1002
		B	123	23	187	83	32		79
INSURANCE AGENTS, BROKERS AND SERVICE (SIC 640-649)									
	Heart and hypertensive disease	W	148***	11	683	94	18		135
	.....393-429	B	41	17	8	129	20		26
	Hypertensive disease....400-404	W	74	41	17	203	90		30
		B	0	0	0	215***	19		11
REAL ESTATE, COMBINED REAL ESTATE, INSURANCE, ETC. (SIC 651-661)									
VII	Diseases of circulatory system	W	130***	6	1365	102	9		351
	.....390-458	B	151 *	21	217	136	21		75
	Heart and hypertensive disease	W	141***	9	1180	109	14		284
	.....393-429	B	142	29	159	136	25		60
	Ischemic heart disease..410-414	W	143***	8	1049	103	15		209
		B	134	38	108	98	30		30

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

IX. Service (SIC 700-899):

The major industry group, seven of its detailed groups, and its n.e.c. groups are associated with disproportionately high disability.

White men and white women and black women appear to have elevated risk in this industry group. Except for the automotive and social services, women of both races seem to have more risk of disproportionately high disability. In the auto services, men appear to have more risk of disproportionately high disability.

1) The major industry group (SIC 700-899):

Mental disorders caused disproportionately high disability for white men and white women. Diseases of the nervous system and sense organs also caused disproportionately high disability for white men.

Diseases of the circulatory system caused disproportionately high disability for black women. Within this last named disease category, heart and hypertensive disease caused disproportionately high disability for black women.

Bronchiectasis also caused disproportionately high disability for black women.

Osteoarthritis caused disproportionately high disability for white and black women.

2) Personal Services (SIC 720-729):

Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white women.

3) Auto Repair Services and Garages (SIC 750-759):

Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white men.

a) Automotive Repair Shops (SIC 753):

Diseases of the musculoskeletal system and connective tissue, and in particular, displacement of intervertebral disc caused disproportionately high disability for white men.

Table 20: Service Industries with High PMR's by Disabling Condition for 1975-76.

INDUSTRY/DISABLING CONDITION		RACE	MALE			FEMALE			
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
<u>SERVICES (SIC 700-899)</u>									
V	Mental disorders.....290-315	W	135***	3	11808	111***	2	10879	
		B	128 **	8	2519	100	4	2909	
VI	Diseases of nervous system and sense organs.....320-389	W	124***	4	6144	102	3	6014	
		B	114	7	1124	99	4	1655	
VII	Diseases of circulatory system	W	102	1	24939	103	1	18644	
	.....390-458	B	103	3	4697	110***	1	10793	
	Heart and hypertensive disease	W	101	1	19743	103	2	14024	
	.....393-429	B	105	4	3724	110***	2	8621	
	Bronchiectasis.....518	W	134	55	57	77	24	64	
		B	175	42	10	134***	7	22	
	Osteoarthritis.....713	W	99	5	4062	115***	2	7124	
		B	83	9	774	113***	2	2840	
<u>PERSONAL SERVICES (SIC 720-729)</u>									
XIII	Dis of musculoskeletal sys and connective tis.....710-738	W	95	8	984	123***	5	2203	
		B	98	20	261	109	9	663	
<u>AUTO REPAIR, SERVICES, AND GARAGES, (SIC 750-759)</u>									
XIII	Dis of musculoskeletal sys and connective tis.....710-738	W	137***	6	2850	96	20	108	
		B	111	20	357	91	17	10	
<u>AUTOMOTIVE REPAIR SHOPS (SIC 753)</u>									
XIII	Dis of musculoskeletal sys and connective tis.....710-738	W	141***	6	2721	79	17	68	
		B	124	19	292	123	16	10	
	Displacement of intervertebral disc.....725	W	165***	14	788	86	29	14	
		B	173	55	86	1060 **	270	10	

Table 20 (Cont'd).: Service Industries with High PMR's by Disabling Condition for 1975-76.

INDUSTRY/DISABLING CONDITION		RACE		MALE		FEMALE		
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
MISCELLANEOUS REPAIR SERVICES (SIC 760-769)								
V	Mental disorders.....290-315	W	155***	9	2520	153 **	16	872
		B	154 **	15	593	166	41	159
	Schizophrenia.....295	W	154***	12	1091	191***	20	430
		B	158	31	306	188	56	87
HEALTH SERVICES (SIC 800-809)								
VII	Diseases of circulatory system	W	99	4	2942	112***	3	8092
	.....390-458	B	111	12	673	101	4	2442
XIII	Dis of musculoskeletal sys and	W	94	5	1458	115***	2	8105
	connective tis.....710-738	B	79	15	278	122 **	7	1707
	Osteoarthritis.....713	W	94	11	471	122***	4	3022
		B	62	22	73	79	10	454
HEALTH SERVICES N.E.C. (SIC 800-809)								
XIII	Dis of musculoskeletal sys and	W	80	6	656	120***	3	4691
	connective tis.....710-738	B	53	21	56	132 **	8	773
SOCIAL SERVICES (SIC 830-839)								
V	Mental disorders.....290-315	W	279***	13	1795	272***	13	1533
		B	221 *	41	276	153	59	141

Table 20 (Cont'd.): Service Industries with High PMR's by Disabling Condition for 1975-76.

INDUSTRY/DISABLING CONDITION		RACE	MALE			FEMALE		
			PMR	S	SE NUMBER	PMR	S	SE NUMBER
PRIVATE HOUSEHOLDS (SIC 880-889)								
III	Endocrine, nutritional, and metabolic diseases...240-279	W	109	65	42	157 *	18	365
		B	339	138	100	139***	7	1345
	Cataract.....374	W	0	0	0	55	83	9
		B	0	0	0	279***	41	64
VII	Diseases of circulatory system .....390-458	W	84	11	342	90	6	1257
		B	98	19	235	112***	2	4604
	Heart and hypertensive disease .....393-429	W	89	13	287	88	8	931
		B	113	27	210	115***	3	3743
	Ischemic heart disease..410-414	W	82	16	232	83	9	676
		B	99	43	130	116***	4	2635
	Osteoarthritis.....713	W	140	53	97	158***	13	780
		B	110	31	54	132***	5	1471
OTHER, MISC., AND N.E.C. SERVICES (SIC 700, 811, 841, 842, 891-899)								
II	Neoplasms.....140-239	W	125 *	11	563	160***	13	503
		B	147	36	59	201	48	55
	Glaucoma.....375	W	187***	16	15	0	0	0
		B	299	261	10	325	1588	5

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

* .025 LEVEL.
 ** .005 LEVEL.
 *** .0005 LEVEL.

4) Miscellaneous Repair Services (SIC 760-769):

Mental disorders caused disproportionately high disability for white men. Within this disease category, schizophrenia caused disproportionately high disability for white men and white women.

6) Health Services (SIC 800-809):

a) The major industry group (SIC 800-809):

Diseases of the circulatory system and, in particular, diseases of the musculoskeletal system and connective tissue and osteoarthritis caused disproportionately high disability for white women.

b) Health Services, n.e.c. (SIC 800-809):

Diseases of the musculoskeletal system and connective tissue caused disproportionately high disability for white women.

7) Social Services (SIC 830-839):

Mental disorders caused disproportionately high disability for white men and white women.

8) Private Households (SIC 880-889):

Associations between industries and disability conditions for black women are paramount. One association is found for white women but none for men of either race. Endocrine, nutritional, and metabolic diseases caused disproportionately high disability for black women. Cataracts also caused disproportionately high disability for black women. Diseases of the circulatory system and two of its detailed groups each caused disproportionately high disability for black women. Within the circulatory system disease category, heart and hypertensive disease also caused disproportionately high disability for black women. Within the heart and hypertensive disease category, ischemic heart disease also caused disproportionately high disability for black women. Osteoarthritis caused disproportionately high disability for white and black women.

9) Other, Miscellaneous and N.E.C. Services (SIC 700, 811, 841, 842, 891-899):

Neoplasms caused disproportionately high disability for white women. Glaucoma also caused disproportionately high disability for white men.

X. Public Administration (SIC 901-972):

Both white and black men appear to have elevated disproportionate disability risk. However, associations with disabling conditions for white men are paramount.

Schizophrenia caused disproportionately high disability for white and black men.

Diseases of the circulatory system also caused disproportionately high disability for white men. Within this disease category, heart and hypertensive disease, and in particular, ischemic heart disease caused disproportionately high disability for white men.

TABLE 21: Public administration (SIC 901-972) and disabling conditions with high PMR's for 1975-76.

DISABLING CONDITION	ICDA	RACE	MALE				FEMALE			
			PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
Schizophrenia.....	295	W	130***	6		1895	129	22	348	
		B	183***	17		676	170	42	81	
VII Diseases of circulatory system	390-458	W	118***	3		10534	112	6	1487	
		B	109		6	1379	88	18	227	
Heart and hypertensive disease	393-429	W	121***	3		8640	112	9	1113	
		B	109		7	1074	100	25	205	
Ischemic heart disease..	410-414	W	127***	4		7902	118	11	902	
		B	123 *	10		832	127	36	176	

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

Summary of Disabling Conditions Achieving the Statistical Criterion

The previous discussion described the disabling conditions which caused industry related disability, as defined on page 43, for each industry identified as the locus of industry related disability. The following discussion restates those results by describing each disabling condition which fulfills the statistical criterion stated on page 43 for at least one industry. All industries for which the disabling condition is the cause of disability are listed. These results are presented in Tables 22 to 35 which present, by race and sex, the estimated PMR, its estimated standard error, and the estimated number of disabled workers. The previous explanations of major and detailed industry groupings also apply here. Additionally, analagous definitions for major and detailed disease categories will be assumed here.

I. Silicotuberculosis (ICDA 010):

Silicotuberculosis caused disproportionately high disability for black men in manufacturing. This is one of only two industry associations involving infectious diseases.

II. Pulmonary Tuberculosis (ICDA 011):

Pulmonary tuberculosis caused disproportionately high disability for white women in the construction industry.

Table 22: Infectious and parasitic diseases with high PMR's by industry for 1975-76

DISABLING CONDITION/INDUSTRY	RACE	MALE			FEMALE				
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
SILICOTUBERCULOSIS (ICDA 010)									
Manufacturing (SIC 200-399)	W	112		22	10	--	-		0
	B	230***		22	20	--	-		0
PULMONARY TUBERCULOSIS (ICDA 011)									
Construction (SIC 150-179)	W	140	*	14	459	551***	92		33
	B	124		16	295	301	299		10

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL
 * .025 LEVEL. ** .005 LEVEL. *** .0005 LEVEL.

III. Neoplasms (ICDA 140-239):

In general few relationships to industries are found for neoplastic disabilities. And, with one exception, these relationships involve only the major disabling condition, neoplasms. None involve malignant neoplasms nor any specific type of malignant neoplasms.

1) The Major Disease Category (ICDA 140-239):

Neoplasms caused disproportionately high disability for black men in the other and n.e.c. transportation equipment industry. These diseases also caused disproportionately high disability for black women in the local and interurban transit industry. Neoplasms also caused disproportionately high disability for white women in the other, miscellaneous and n.e.c. services industry.

2) Leukemia (ICDA 204-207):

Leukemia caused disproportionately high disability for white men in the transportation and public utilities industry.

Table 23: Neoplastic Conditions with High PMR's by Disabling Condition for 1975-76.

DISABLING CONDITION/INDUSTRY	RACE	MALE			FEMALE				
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
NEOPLASMS (ICDA 140-239)									
Other and N.E.C. transportation equipment (SIC 370, 374-379)	W	125		33	103	16		11	2
	B	189***		19	10	0		0	0
Local and interurban passenger transit (SIC 410-419)	W	90		11	469	117		42	99
	B	83		27	56	237***		30	20
Other, misc., and N.E.C. services (SIC 700, 811, 841, 842, 891-899)	W	125	*	11	563	160***		13	503
	B	147		36	59	201		48	55
LEUKEMIA (ICDA 204-207)									
Transportation and public utilities, N.E.C. (SIC 400-497)	W	273***		16	29	0		0	0
	B	0		0	0	0		0	0

IV. Endocrine, Nutritional, and Metabolic Diseases (ICDA 240-279):

1) The Major Disease Category:

Endocrine, nutritional, and metabolic diseases caused disproportionately high disability for white men in the retail trade industry. The diseases also caused disproportionately high disability for black women in the private household services industry.

2) Diabetes Mellitus (ICDA 250):

Diabetes mellitus caused disproportionately high disability for white men in the retail trade industry.

Table 24: Endocrine, Nutritional, and Metabolic Disease with High PMR's by Industry for 1975-76.

DISABLING CONDITION/INDUSTRY	RACE	MALE			FEMALE				
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
ENDOCRINE, NUTRITIONAL, AND METABOLIC DISEASES (ICDA 240-249)									
Retail trade (SIC 520-599)	W	142***	7	2347	117	*	6	2242	
	B	116	16	267	95		9	388	
Private households (SIC 880-889)	W	109	65	42	157	*	18	365	
	B	339	138	100	139***		7	1345	
DIABETES MELLITUS (ICDA 250)									
Retail trade (SIC 520-599)	W	148***	8	1879	108		7	1256	
	B	118	19	210	97		14	251	

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

V. Mental Disorders (ICDA 290-315):

1) The Major Disease Category (ICDA 290-315):

Mental disorders caused disproportionately high disability for black women in the carpentering and flooring industry. It also caused disproportionately high disability among both white men and white women in the services industries (SIC 700-899). Within these service industries, mental disorders caused disproportionately high disability for white men and white women in the social services industries. Also within the services industries, mental disorders caused disproportionately high disability for white men in the miscellaneous repair services industry. Additionally, mental disorders caused disproportionately high disability for white men in the eating and drinking place industry. Mental disorders also caused disproportionately high disability for white women in the tobacco manufacturing industry.

2) Schizophrenia (ICDA 295):

Schizophrenia caused disproportionately high disability for white men and white women in the miscellaneous repair services industry. Schizophrenia caused disproportionately high disability among black and white men in public administration.

3) Neuroses (ICDA 300):

Neuroses caused disproportionately high disability for white women in the manufacturing industry. Within the manufacturing industry, neuroses caused disproportionately high disability for white men in the transportation equipment manufacturing industry.

Table 25: Mental Disorders with High PMR's by Industry for 1975-76.

DISABLING CONDITION/INDUSTRY	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
MENTAL DISORDERS (ICDA 290-315)							
Carpentering and flooring (SIC 175)	W	61	5	300	77	18	10
	B	88	28	37	207***	24	16
Tobacco manufactures (SIC 210-219)	W	102	29	40	256***	34	219
	B	64	15	10	128	46	31

Table 25 (cont'd): Mental Disorders with High PMR's by Industry for 1975-76.

DISABLING CONDITION/INDUSTRY	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER

MENTAL DISORDERS (ICDA 290-315) (cont'd)

Eating and drinking places (SIC 580-589)	W	133***	6	1968	86	4	2046
	B	130	16	513	100	16	395
Services (SIC 700-899)	W	135***	3	11808	111***	2	10879
	B	128 **	8	2519	100	4	2909
Miscellaneous repair services (SIC 760-769)	W	155***	9	2520	153 **	16	872
	B	154 **	15	593	166	41	159
Social services (SIC 830-839)	W	279***	13	1795	272***	13	1533
	B	221 *	41	276	153	59	141

SCHIZOPHRENIA (ICDA 295)

Miscellaneous repair services (SIC 760-769)	W	154***	12	1091	191***	20	430
	B	158	31	306	188	56	87
Public administration (SIC 901-972)	W	130***	6	1895	129	22	348
	B	183***	17	676	170	42	81

NEUROSES (ICDA 300)

Manufacturing (SIC 200-399)	W	110 *	4	3124	126***	6	3013
	B	124	13	319	137 *	15	273
Transportation equipment (SIC 370-379)	W	193***	19	644	131	38	141
	B	25	14	9	207	128	24

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

* .025 LEVEL.

** .005 LEVEL.

*** .0005 LEVEL.

VI. Diseases of Nervous System and Sense Organs (ICDA 320-389):

1) The Major Disease Category (ICDA 320-389):

Diseases of the nervous system and sense organs caused disproportionately high disability for black men in the wholesale trade, n.e.c. industry. Diseases of the nervous system and sense organs also caused disproportionately high disability for white men in the services industry.

2) Cataract (ICDA 374):

Cataracts caused disproportionately high disability for black women in the private households industry.

3) Glaucoma (ICDA 375):

Glaucoma caused disproportionately high disability for white men in the other, miscellaneous, and n.e.c. services industry.

Table 26: Nervous System and Sense Organ Diseases with High PMR's by Industry for 1975-76.

DISABLING CONDITION/INDUSTRY	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER

DISEASES OF NERVOUS SYSTEM AND SENSE ORGANS (ICDA 320-389)

Wholesale trade, N.E.C. (SIC 500-519)	W	66	16	65	134	36	29
	B	299***	40	30	0	0	0
Services (SIC 700-899)	W	124***	4	6144	102	3	6014
	B	114	7	1124	99	4	1655

CATARACT (ICDA (374)

Private households (SIC 880-889)	W	0	0	0	55	83	9
	B	0	0	0	279***	41	64

GLAUCOMA (ICDA 375)

Other, misc., and N.E.C. services (SIC 700, 811, 841, 842, 891-899)	W	187***	16	15	0	0	0
	B	299	261	10	325	1588	5

VII. Diseases of the Circulatory System (ICDA 390-458):

There are too many indications of occupationally related circulatory disability to give the same detail in this summary as is given in the brief summaries of other disease categories. Therefore, only some of the more salient results are presented. Detailed information is presented in Table 27.

Three general findings are evident from the tables.

First, most of the disproportionately high circulatory disease disability is found in the Heart and Hypertensive Diseases and Ischemic Heart Disease categories.

Second, no industry consistently exhibits disproportionately high disability for all four race and sex groups.

Third, significant industry related disability is nonexistent for black men in the major disease category and in all circulatory disease subcategories with the single exception of ischemic heart disease in the case of Manufacturing. In contrast, industry related disability for white men and women and black women are found for several industries and several categories and sub-categories within the circulatory system rubric.

In the three broad industry groupings of Retail Trade, Manufacturing, and Transportation and Public Utilities, both white men and white women experience disproportionately high circulatory disability. An examination of the specific disease subgroups suggests that ischemic heart disease, and especially heart and hypertensive disease, are major causes of circulatory disability for the latter two industries. In the retail trade, this is also plausible for white men, but no specific disease subgroups appear to account for the excess disability for white women.

White men also experienced excess disability in the Public Administration and Finance and in the Insurance and Real Estate industries. In the latter, the excess disability appears to be concentrated in the real estate industry. The tabulations for the specific disease subgroups suggest that heart and hypertensive disease are both major causes in both these major industries.

Outstandingly large proportions of excess disabilities for white women are found in the Metal Mining, and Nonmetallic Minerals, Except Fuels; Highway and Street Construction; and Masonry, Stonework, and Plastering groupings. The analyses for the first two of these industries suggests that heart and hypertensive disease and ischemic heart disease are both major causes. However, no specific disease subgroups appear as major sources of the excess in the third industry. Also, the PMR's are based on relatively small expected and observed numbers of disabled women.

Table 27: Diseases of the Circulatory System (ICDA 390-458): Industries with High PMR's for 1975-76.

INDUSTRY	RACE	MALE			FEMALE			
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
Agriculture, N.E.C. (SIC 011-097)	W	109	13	104	436***	16	26	
	B	124	16	21	0	0	0	
Metal mining, and nonmetallic minerals, except fuels (SIC 100-109, 140-149)	W	99	14	341	180***	15	20	
	B	146	28	50	0	0	0	
Highway and street construction (SIC 161)	W	116	14	454	263***	26	30	
	B	119	25	67	--	-	0	
Masonry, stonework, and plastering (SIC 174)	W	100	10	354	371***	33	24	
	B	65	18	73	0	0	0	
Construction, N.E.C. (SIC 150-179)	W	93	1	17289	97	5	482	
	B	104	2	4054	132***	6	155	
Manufacturing (SIC 200-399)	W	111***	1	54667	110***	1	16974	
	B	109 **	3	7642	99	5	2606	
Manufacturing - durable goods (SIC 240-259, 330-399)	W	110***	1	23131	109 **	3	3540	
	B	108	4	3726	86	9	463	
Fabricated metal products (SIC 340-349)	W	120 **	6	1323	116	20	208	
	B	84	23	75	244***	25	52	
Transportation equipment (SIC 370-379)	W	113***	2	6297	121	10	846	
	B	116	8	1023	47	14	59	
Manufacturing - nondurable goods (SIC 200-239, 260-319)	W	114***	2	17297	110 **	3	8740	
	B	114 *	6	2326	97	7	1394	
Manufacturing, N.E.C. (SIC 200-399)	W	111***	1	14239	110 **	3	4694	
	B	106	3	1590	111	8	749	
Transportation and public utilities (SIC 400-497)	W	112***	1	17508	124***	5	1917	
	B	115 **	4	2754	101	19	232	
Railroad transportation (SIC 400-409)	W	100	8	582	123	41	57	
	B	108	23	169	191***	15	20	

Table 27 (Cont'd.): Diseases of the Circulatory System (ICDA 390-458):
Industries with High PMR's for 1975-76.

INDUSTRY	RACE	MALE			FEMALE			
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
Trucking and warehousing (SIC 420-429)	W	110***	2	7203	147 **	14	331	
	B	123 **	7	1126	114	38	77	
Trucking, local & long distance, trucking terminal facilities (SIC 421,421,423)	W	110***	2	6645	149 *	20	265	
	B	124 *	8	1024	129	68	67	
Transportation by air (SIC 450-459)	W	150***	10	765	73	29	36	
	B	140	29	65	--	-	0	
Transportation and public utilities, N.E.C. (SIC 400-497)	W	118 **	5	1139	171***	9	206	
	B	97	10	128	133 *	10	16	
Wholesale trade (SIC 500-519)	W	120***	3	3473	103	13	464	
	B	112	14	382	131	17	55	
Wholesale trade - durable goods (SIC 500-509)	W	124 **	7	1427	103	31	140	
	B	92	29	151	152***	11	15	
Retail trade (SIC 520-599)	W	115***	2	19010	109***	2	12046	
	B	112	7	2023	115 **	4	1896	
Food stores (SIC 540-549)	W	123***	5	3125	106	7	1191	
	B	106	22	193	122	28	84	
Gasoline service stations .....(SIC 554)	W	109	5	2194	154	42	80	
	B	106	11	275	200***	17	12	
Other, misc., and N.E.C. retail trade (SIC 520, 560-569, 590-591)	W	120***	3	6553	109 **	3	4185	
	B	117	11	507	89	11	259	
Finance, insurance, and real estate (SIC 600-679)	W	130***	4	5009	95	4	1715	
	B	127	20	348	101	17	180	
Real estate, combined real estate, insurance, etc. (SIC 651-661)	W	130***	6	1365	102	9	351	
	B	151 *	21	217	136	21	75	
Services (SIC 700-899)	W	102	1	24939	103	1	18644	
	B	103	3	4697	110***	1	10793	

TABLE 27 (Cont'd.): Diseases of the Circulatory System
(ICDA 390-458): Industries with High PMR's for 1975-76.

INDUSTRY	RACE	MALE			FEMALE				
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
Health services (SIC 800-809)	W	99		4	2942	112***		3	8092
	B	111		12	673	101		4	2442
Private households (SIC 880-889)	W	84		11	342	90		6	1257
	B	98		19	235	112***		2	4604
Public administration (SIC 901-972)	W	118***		3	10534	112		6	1487
	B	109		6	1379	88		18	227

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

TABLE 28: Industries With High PMR's for Heart and Hypertensive
Disease (ICDA 393-429) for 1975-76.

INDUSTRY	RACE	MALE			FEMALE				
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
Metal mining, and nonmetallic minerals, except fuels (SIC 100-109, 140-149)	W	98		12	271	240***		20	20
	B	169		38	45	0		0	0
Highway and street construction (SIC 161)	W	117		19	365	347***		35	30
	B	153		33	67	--		-	0
Construction, N.E.C. (SIC 150-179)	W	93		1	13842	102		6	378
	B	108	*	3	3286	140***		8	130

TABLE 28 (Cont'd.): Industries With High PMR's for Heart and Hypertensive Disease (ICDA 393-429) for 1975-76.

INDUSTRY	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
Manufacturing (SIC 200-399)	W	112***	1	43776	113***	2	13150
	B	111 **	3	6031	96	7	1999
Manufacturing - durable goods (SIC 240-259, 330-399)	W	110***	1	18581	111	5	2716
	B	110	5	2934	71	12	300
Iron & steel foundries (SIC 332)	W	119***	4	3144	131	26	118
	B	114	10	598	107	38	20
Manufacturing - nondurable goods (SIC 200-239,260-319)	W	113***	2	13753	115***	3	6882
	B	116 *	6	1842	101	8	1147
Manufacturing, N.E.C. (SIC 200-399)	W	112***	1	11442	111 **	3	3552
	B	108	4	1255	104	11	552
Transportation and public utilities (SIC 400-497)	W	116***	1	14476	122 **	6	1418
	B	119 **	5	2205	109	26	197
Railroad transportation (SIC 400-409)	W	99	7	458	128	52	45
	B	94	26	114	238***	18	20
Trucking and warehousing (SIC 420-429)	W	116***	2	6085	150 *	20	252
	B	125 *	8	891	144	46	77
Trucking, local & long distance, trucking terminal facilities (SIC 421,421,423)	W	118***	3	5669	162 *	22	215
	B	129 *	9	830	163	81	67
Transportation and public utilities, N.E.C. (SIC 400-497)	W	122 **	7	936	167***	11	151
	B	110	11	112	115	10	11
Wholesale trade (SIC 500-519)	W	125***	5	2882	121	17	408
	B	111	17	297	130	23	43
Wholesale trade - durable goods (SIC 500-509)	W	127 *	9	1166	122	29	124
	B	85	17	109	191***	17	15

TABLE 28 (Cont'd.): Industries With High PMR's for Heart and Hypertensive Disease (ICDA 393-429) for 1975-76.

INDUSTRY	RACE	MALE			FEMALE			
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
Retail trade (SIC 520-599)	W	113***	2	14829	107	*	2	8879
	B	116	7	1620	112		6	1467
Other, misc., and N.E.C. Retail trade (SIC 520, 560-569, 590-591)	W	116***	4	5041	109	*	3	3143
	B	133 *	14	443	56		14	128
Finance, insurance, and real estate (SIC 600-679)	W	135***	5	4137	95		5	1285
	B	112	20	238	104		21	145
Insurance agents, brokers and service (SIC 640-649)	W	148***	11	683	94		18	135
	B	41	17	8	129		20	26
Real estate, combined real estate, insurance, etc. (SIC 651-661)	W	141***	9	1180	109		14	284
	B	142	29	159	136		25	60
Services (SIC 700-899)	W	101	1	19743	103		2	14024
	B	105	4	3724	110***		2	8621
Private households (SIC 880-889)	W	89	13	287	88		8	931
	B	113	27	210	115***		3	3743
Public administration (SIC 901-972)	W	121***	3	8640	112		9	1113
	B	109	7	1074	100		25	205

The PMR is statistically significantly higher than 100 at the 1-tail

- * .025 level.
- ** .005 level.
- *** .0005 level.

TABLE 29: Industries with high PMR's for ischemic heart disease
(ICDA 410-414) for 1975-76.

INDUSTRY	RACE	MALE			FEMALE				
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
Metal mining, and nonmetallic minerals, except fuels (SIC 100-109, 140-149)	W	100		14	243	311***	25		20
	B	157		50	30	0	0		0
Highway and street construction (SIC 161)	W	116		18	318	365***	44		25
	B	203	*	45	62	--	-		0
Painting, paper hanging, decorating (SIC 172)	W	108		9	722	262***	34		20
	B	62		22	17	--	-		0
Manufacturing (SIC 200-399)	W	112***		1	38586	113***	2		10115
	B	116***		3	4434	89	10		1264
Manufacturing - durable goods (SIC 240-259, 330-399)	W	111***		1	16363	113	*	4	2125
	B	114	*	5	2152	69	11		197
Transportation equipment (SIC 370-379)	W	115***		3	4478	120	16		482
	B	123		13	586	51	17		34
Motor vehicles & equipment (SIC 371)	W	117***		4	2601	111	21		265
	B	123		14	429	52	15		24
Other and N.E.C. transportation equipment (SIC 370, 374-379)	W	145		22	274	326***	51		42
	B	0		0	0	0	0		0
Manufacturing - nondurable goods (SIC 200-239,260-319)	W	115***		2	12212	117	**	4	5418
	B	126	**	8	1409	96	13		743
Manufacturing, N.E.C. (SIC 200-399)	W	112***		1	10011	105	4		2572
	B	107		6	873	90	15		324
Transportation and public utilities (400-497)	W	116***		2	12673	130***	6		1158
	B	123	**	7	1616	111	32		137
Railroad transportation (SIC 400-409)	W	98		8	396	164	74		45
	B	114		31	98	352***	30		20
Trucking and warehousing (SIC 420-429)	W	116***		2	5320	175	*	28	225
	B	134	*	14	671	115	51		42

TABLE 29 (Cont'd.): Industries with high PMR's for ischemic heart disease (ICDA 410-414) for 1975-76.

INDUSTRY	RACE	MALE			FEMALE			
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
Trucking, local & long distance, trucking terminal facilities (SIC 421,421,423)	W	117***		3	4956	203 **	30	205
	B	135		16	612	150	86	42
Transportation and public utilities, N.E.C. (SIC 400-497)	W	129 **		8	865	182***	16	126
	B	115		10	82	171***	16	11
Wholesale trade (SIC 500-519)	W	127***		5	2562	128	21	334
	B	106		23	200	194 *	40	43
Wholesale trade - durable Goods (SIC 500-509)	W	129 *		10	1034	121	32	95
	B	79		17	72	274***	21	15
Retail trade (SIC 520-599)	W	112***		2	12795	107 *	3	6907
	B	120 *		9	1169	121 *	9	1074
Other, misc., and N.E.C. retail trade (SIC 520, 560-569, 590-591)	W	118***		4	4471	117 **	5	2615
	B	126		13	292	74	14	116
Finance, insurance, and real estate (SIC 600-679)	W	139***		6	3745	96	6	1002
	B	123		23	187	83	32	79
Real estate, combined real estate, insurance, etc. (SIC 651-661)	W	143***		8	1049	103	15	209
	B	134		38	108	98	30	30
Private households (SIC 880-889)	W	82		16	232	83	9	676
	B	99		43	130	116***	4	2635
Public administration (SIC 901-972)	W	127***		4	7902	118	11	902
	B	123 *		10	832	127	36	176

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

VIII. Diseases of the Respiratory System (ICDA 460-519):

Although mining and coal mining are known to be hazardous to the respiratory system, the huge PMR's for the mining industry, especially coal mining, for all men, white and black, and white women are stunning. (Since there are no black women coal miners disabled from any condition, results for this race/sex group are not really in contrast with the others for the mining industry.) There are a large number of associations with white disabilities in the manufacturing industry, but the PMR's are much less.

The evidence suggests that white men, black men, and white women are all adversely affected by the hazardous exposures associated with the mining industry. The evidence also indicates that much of the excess respiratory disability is caused by pneumoconiosis due to silica and silicates (this includes coal workers' pneumoconiosis) as well as emphysema. PMR's for pneumoconiosis due to silica and silicates are of enormous magnitude for disabled mine workers.

TABLE 30: Industries with high PMR's for other circulatory diseases for 1975-76.

Disabling Condition/Industry	RACE	MALE			FEMALE			
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
CEREBROVASCULAR DISEASE (ICDA 430-438)								
Other, misc., and N.E.C.								
retail trade (SIC 520, 560-569, 590-591)	W	133***	7	806	100	10	443	
	B	86	29	54	199	50	67	
ARTERIOSCLEROSIS (ICDA 440)								
Construction, N.E.C. (SIC 150-179)	W	94	9	529	192***	17	20	
	B	103	21	110	283	184	5	

The PMR is statistically significantly higher than 100 at the 1-tail

* .025 level.

** .005 level.

*** .0005 level.

Table 31: Respiratory system diseases with high PMR's by industry for 1975-76.

Disabling Condition/Industry	RACE	MALE			FEMALE			
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
DISEASES OF RESPIRATORY SYSTEM (ICDA 460-519)								
Agriculture, forestry, and fishing (SIC 011-097)	W	123***	4	3302	126	27	237	
	B	110	14	316	228	75	82	
Agricultural production - crops (SIC 010-019)	W	124***	5	3018	116	25	192	
	B	118	15	300	216	111	71	
Mining (SIC 100-149)	W	343***	10	3064	367	* 101	71	
	B	521***	92	187	0	0	0	
Bituminous, lignite, and anthracite coal mining (SIC 110-121)	W	470***	19	1558	464	* 157	25	
	B	713***	137	86	--	-	0	
Mining, N.E.C. (SIC 100-149)	W	373***	16	1215	453***	34	22	
	B	700***	135	82	--	-	0	
Construction (SIC 150-179)	W	117***	2	7340	125	20	187	
	B	112	7	810	170	* 25	26	
Construction, N.E.C. (SIC 150-179)	W	117***	3	5132	128	20	137	
	B	112	10	683	204	** 28	26	
Manufacturing (SIC 200-399)	W	109***	2	12688	121***	5	4074	
	B	122 *	7	1322	127	17	355	
Other and N.E.C. primary metal industries (SIC 330, 339)	W	157***	12	612	99	35	20	
	B	183	44	100	684	** 140	10	
BRONCHITIS AND ASTHMA (ICDA 490-491, 493)								
Manufacturing (SIC 200-399)	W	108	5	1417	137***	8	1201	
	B	96	19	175	126	26	141	

Table 31 (Cont'd.): Respiratory system diseases with high PMR's by industry for 1975-76.

Disabling Condition/Industry	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
<u>EMPHYSEMA (ICDA 492)</u>							
Mining (SIC 100-149)	W	259***	19	867	0	0	0
	B	348 *	101	42	.0	0	0
Bituminous, lignite, and anthracite coal mining (SIC 110-121)	W	318***	35	394	0	0	0
	B	730***	112	30	--	-	0
Mining, N.E.C. (SIC 100-149)	W	297***	30	361	0	0	0
	B	316	131	12	--	-	0
Construction (SIC 150-179)	W	126***	5	2920	180	55	71
	B	123	19	298	140	53	3
<u>PNEUMOCONIOSIS AND RELATED DISEASES (ICDA 515-516)</u>							
Mining (SIC 100-149)	W	2629***	114	1004	3753 **	893	5
	B	5040***	1052	53	0	0	0
Bituminous, lignite, and anthracite coal mining (SIC 110-121)	W	4274***	254	611	11724	*3587	5
	B	7275***	1006	26	--	-	0
Mining, N.E.C. (SIC 100-149)	W	2613***	196	363	0	0	0
	B	7863***	1079	27	--	-	0
Manufacturing (SIC 200-399)	W	79	10	396	292***	31	66
	B	166 *	27	47	0	0	0

Table 31 (Cont'd.): Respiratory system diseases with high PMR's by industry for 1975-76.

Disabling Condition/Industry	RACE		MALE		FEMALE			
	PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
PNEUMOCONIOSIS DUE TO SILICA & SILICATES (ICDA 515)								
Mining (SIC 100-149)	W	2707***	122	1004	4154***	893		5
	B	5404***	1052	53	0	0		0
Bituminous, lignite, & anthracite coal mining (SIC 110-121)	W	4402***	260	611	#	3587		5
	B	7905***	1006	26	--	-		0
Mining, N.E.C. (SIC 100-149)	W	2689***	219	363	--	-		0
	B	8313***	1079	27	--	-		0
Manufacturing (SIC 200-399)	W	79	10	386	283***	31		61
	B	142	25	37	0	0		0
BRONCHIECTASIS (ICDA 518)								
Services (SIC 700-899)	W	134	55	57	77	24		64
	B	175	42	10	134***	7		22

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

The estimated PMR is 11724.

IX. Diseases of the Digestive System (ICDA 510-577)

1) The Major Disease Category (ICDA 390-458):

Diseases of the digestive system caused disproportionately high disability for black women in the construction industry (SIC 150-179).

2) Cirrhosis of Liver (ICDA 571):

Cirrhosis of the liver caused disproportionately high disability for white women in the construction, n.e.c. industry (SIC 150-179).

X. Diseases of Male Genital Organs (ICDA 600-607)

Diseases of the male genital organs caused disproportionately high disability for black men in the construction industry (SIC 150-179).

TABLE 32: Digestive system and reproductive system diseases with high PMR's by industries for 1975-76.

INDUSTRY	RACE	MALE			FEMALE			
		PMR	S	SE	NUMBER	PMR	S	SE	NUMBER
IX DISEASES OF DIGESTIVE SYSTEM (ICDA 520-577)								
Construction (SIC 150-179)	W	109	6	2557	132	23	116	
	B	115	13	480	342***	50	35	
CIRRHOSIS OF LIVER (ICDA 571)								
Construction, N.E.C. (SIC 150-179)	W	103	7	841	187***	12	35	
	B	98	16	166	444	156	15	
DISEASES OF MALE GENITAL ORGANS (ICDA 600-607)								
Construction (SIC 150-179)	W	87	40	44	--	-	0	
	B	323***	41	30	--	-	0	

XI. Diseases of the Musculoskeletal System and Connective Tissue
Tissue (ICDA 710-738)

This disease category has too many indications of industry related excess disability to give the same detail in this brief summary that is given in the summaries of most other disease categories. Therefore, only some of the more salient results are presented. Detailed information is available in Tables 33 and 34.

With a few exceptions, industries which are associated with disproportionately high disability for men are not so associated for women, and vice versa. Most of the disproportionately high disability is found in the Construction, Agriculture Production--Crops, and Manufacturing groupings. An examination of the specific disease subgroups suggests that osteoarthritis caused much of the disability in these three groupings. In the Construction industry, displacement of intervertebral disc is also a major cause. The disability found in agriculture involves white men and one possible interpretation appears straight forward, e.g. the effects of strenuous physical labor. The interpretation of the manufacturing and construction disability may be more complicated.

The largest estimated number of disabled workers for musculoskeletal system and connective tissue is found in the manufacturing industry, but the largest estimate of disproportionate excess numbers of disabled workers is found in the construction industry. In the construction industry, there are significant associations with musculoskeletal system and connective tissue disability for men of both races. Associations are found for both black and white men not only for the major rubric but also for osteoarthritis and for displacement of intervertebral disc. In the manufacturing industry, both white men and white women appear to have disproportionately large numbers of workers disabled from musculoskeletal system and connective tissue disease; however, a greater proportion of women are disabled from these causes than is the case for men. White men are disproportionately disabled from this cause in the durable goods manufacturing industry, whereas for white women the non-durable goods manufacturing industry is the locus of the disproportionate disability.

Other noteworthy associations are found. Disproportionately high disability for white men is found in the Transportation and Public Utility groupings. Excess white female disability is found in the Retail Trade groupings. An outstandingly large PMR for black women is found in the Water Transportation as well as the Pipelines Except Natural Gas, and Electric Gas, and Sanitary Services groupings. Women of both races have disproportionately high disability from osteoarthritis in the Services industry and Private Household industry sub categories. Additionally, disproportionate disability for white women is found for other sub-categories within the service industry; i.e., for Health Services for the major musculoskeletal system rubric and for osteoarthritis.

White mine workers also have disproportionate disability for the major musculoskeletal rubric for white women and displacement intervertebral disc for white men.

TABLE 33: Industries with high PMR's for diseases of musculoskeletal system and connective tissue (ICDA 710-738) for 1975-76.

INDUSTRY	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
Agriculture, forestry, and fishing (SIC 011-097)	W	127***	3	7047	114	7	979
	B	97	7	947	84	17	173
Agricultural production - crops (SIC 010-019)	W	125***	3	6217	114	8	860
	B	98	8	844	78	16	146
Mining, N.E.C. (SIC 100-149)	W	123 *	8	850	181***	12	41
	B	98	34	38	--	-	0
Construction (SIC 150-179)	W	140***	1	19111	115 *	6	798
	B	138***	4	3469	91	16	77
Special trade contractors (SIC 171-179)	W	140***	5	4553	87	20	132
	B	131	17	380	98	60	13
Carpentering and Flooring (SIC 175)	W	165***	10	1522	198 *	41	37
	B	121	36	61	0	0	0
Construction, N.E.C. (SIC 150-179)	W	141***	2	13635	134***	7	666
	B	141***	4	2941	89	9	64
Manufacturing (SIC 200-399)	W	109***	1	27032	116***	1	17605
	B	112 *	4	4293	107	5	1657
Manufacturing - durable goods (SIC 240-259, 330-399)	W	115***	2	12239	116 **	4	3693
	B	114	6	2129	106	11	339
Lumber and wood products (SIC 240-249)	W	156***	9	2072	138	21	215
	B	129	15	531	55	34	14
Logging camps & logging contractors (SIC 241)	W	207***	19	761	126	29	20
	B	69	19	73	0	0	0
Manufacturing - nondurable goods (SIC 200-239, 260-319)	W	104	3	8002	119***	2	9167
	B	104	8	1154	106	6	878
Apparel and other textile products (SIC 230-239)	W	105	12	536	133***	4	3463
	B	114	35	72	113	21	323
Manufacturing, N.E.C. (SIC 200-399)	W	104 *	1	6791	112***	2	4745
	B	122 *	7	1010	111	11	440

TABLE 33 (Cont'd.): Industries with high PMR's for diseases of musculoskeletal system and connective tissue (ICDA 710-738) for 1975-76.

INDUSTRY	RACE	MALE			FEMALE			
		PMR	S	SE NUMBER	PMR	S	SE	NUMBER
Transportation and public utilities (400-497)	W	112***	3	8916	93	6	1444	
	B	130 **	7	1674	127	19	174	
Trucking and warehousing (SIC 420-429)	W	121***	4	4086	86	12	198	
	B	131 *	11	654	89	30	35	
Trucking, local & long distance, trucking terminal facilities (SIC 421,421,423)	W	124***	5	3839	80	14	149	
	B	134 *	12	607	102	27	30	
Water transportation (SIC 440-449)	W	151 **	13	948	5	21	2	
	B	127	20	260	286***	27	21	
Pipe lines, except natural gas & electric, gas, and sanitary services (SIC 460, 490)	W	107	8	1192	120	22	160	
	B	120	26	202	268***	31	31	
Wholesale trade, N.E.C. (SIC 500-519)	W	92	12	264	194***	21	134	
	B	62	11	15	0	0	0	
Retail trade (SIC 520-599)	W	90	3	7696	109***	2	11650	
	B	84	9	856	100	6	966	
Personal services (SIC 720-729)	W	95	8	984	123***	5	2203	
	B	98	20	261	109	9	663	
Auto repair, services, and garages (SIC 750-759)	W	137***	6	2850	96	20	108	
	B	111	20	357	91	17	10	
Automotive repair shops (SIC 753)	W	141***	6	2721	79	17	68	
	B	124	19	292	123	16	10	
Health services (SIC 800-809)	W	94	5	1458	115***	2	8105	
	B	79	15	278	122 **	7	1707	
Health services N.E.C. (SIC 800-809)	W	80	6	656	120***	3	4691	
	B	53	21	56	132 **	8	773	

TABLE 34: Industries with high PMR;s for diseases of the musculoskeletal system and connective tissue for 1975-76.

DISABLING CONDITIONS/INDUSTRY	RACE	MALE			FEMALE			
		PMR	S	SE NUMBER	PMR	S	SE	NUMBER
OSTEOARTHRITIS (ICDA 713)								
Agriculture, forestry, and fishing (SIC 011-097)	W	152***	5	2960	151	*	20	440
	B	102	17	388	76		28	67
Agricultural production - crops (SIC 010-019)	W	152***	5	2680	166	*	21	430
	B	106	19	356	69		24	55
Construction (SIC 150-179)	W	144***	4	6404	122		10	289
	B	149***	6	1411	14		1	4
Construction, N.E.C. (SIC 150-179)	W	148***	3	4597	154	**	14	257
	B	151***	7	1197	15		1	4
Manufacturing (SIC 200-399)	W	107	*	3 8940	120***		3	6262
	B	111		7 1562	114		9	708
Manufacturing - nondurable goods (SIC 200-239,260-319)	W	107		5 2771	130***		4	3529
	B	102		16 418	127		13	437
Apparel and other textile products (SIC 230-239)	W	93		26 155	153***		11	1393
	B	164		63 42	166		39	200
Pipe lines, except natural gas & electric, gas, and sanitary services (SIC 460, 490)	W	110		18 416	127		37	56
	B	104		48 71	306***		44	16
Services (SIC 700-899)	W	99		5 4062	115***		2	7124
	B	83		9 774	113***		2	2840
Health services (SIC 800-809)	W	94		11 471	122***		4	3022
	B	62		22 73	79		10	454
Private households (SIC 880-889)	W	140		53 97	158***		13	780
	B	110		31 54	132***		5	1471
OTHER AND UNSPECIFIED ARTHRITIS (ICDA 710-711, 714-715)								
Construction (SIC 150-179)	W	147***	9	827	93		47	30
	B	117	24	139	109		71	5

TABLE 34 (Cont'd.): Industries with high PMR's for diseases of the musculoskeletal system and connective tissue for 1975-76.

DISABLING CONDITIONS/INDUSTRY	RACE	MALE			FEMALE		
		PMR	S	SE NUMBER	PMR	S	SE NUMBER
DISPLACEMENT OF INTERVERTEBRAL DISC (ICDA 725)							
Mining (SIC 100-149)	W	154***	11	688	213	50	32
	B	132	62	30	567	* 146	5
Construction (SIC 150-179)	W	148***	5	4957	147	* 15	188
	B	139***	8	744	218	** 28	33
Construction, N.E.C. (SIC 150-179)	W	153***	5	3649	156	** 14	145
	B	139***	9	617	249***	20	30
Trucking and warehousing (SIC 420-429)	W	141***	9	1179	114	46	51
	B	155	26	176	168	64	10
Trucking, local & long distance, trucking terminal facilities (SIC 421,421,423)	W	146***	10	1122	112	74	41
	B	164	29	169	209	64	10
Retail trade (SIC 520-599)	W	79	4	1671	119***	4	2214
	B	86	15	197	68	15	94
Automotive repair shops (SIC 753)	W	165***	14	788	86	29	14
	B	173	55	86	1060	** 270	10

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

XII. Accidents, Poisonings and Violence (ICDA 800-999).

As in most of the other disease categories, associations for white men dominate the results.

1) Construction (SIC 150-179):

Accidents, poisonings, and violence caused disproportionately high disability for white men and white women as well as black men in the construction industry, including the construction n.e.c. industry. They caused disproportionately high disability for white men in the special trade contractors industry.

2) Logging Camps and Logging Contractors (SIC 241):

Accidents, poisonings, and violence caused disproportionately high disability for white men and black women in the logging camps and logging contractors industry.

3) Transportation and Public Utilities (SIC 400-497):

The major industry and one of its detailed groups are associated with disproportionately high disability due to accidents, poisonings, and violence. They caused disproportionately high disability for white men in transportation and public utilities. Within this major industry group, they caused disproportionately high disability for white men in the trucking and warehousing industry.

TABLE 35: Industries with high PMR's for accidents, poisonings, and violence (ICDA 800-999) for 1975-76.

INDUSTRY	RACE	MALE			FEMALE			
		PMR	S	SE NUMBER	PMR	S	SE	NUMBER
Construction (SIC 150-179)	W	162***	3	7665	259***	21		313
	B	126***	5	1098	98	14		15
Special trade contractors (SIC 171-179)	W	149***	8	1633	200	97		53
	B	140	27	149	0	0		0
Construction, N.E.C. (SIC 150-179)	W	168***	5	5700	285***	19		250
	B	122 **	6	883	125	13		15
Logging camps & logging contractors (SIC 241)	W	181***	18	229	631 *	228		17
	B	236	61	92	623***	50		5
Transportation and public utilities (400-497)	W	122***	4	3211	112	14		298
	B	120	17	552	115	65		24
Trucking and warehousing (SIC 420-429)	W	131***	7	1518	265	78		104
	B	125	20	235	362 **	72		20

THE PMR IS STATISTICALLY SIGNIFICANTLY HIGHER THAN 100 AT THE 1-TAIL

- * .025 LEVEL.
- ** .005 LEVEL.
- *** .0005 LEVEL.

GUIDE TO REFERENCE TABLES*

The reference tables are presented on microfiche in a pocket on the inside of the back cover to reduce the bulk of this report. An index to these appears on pages xii to xix. The index presents the location of the tables for each industry rubric or for each disabling condition, respectively, for each race and sex group.

Tables 1-1, 1-2, 2-1, 2-2, 3-1, 3-2, 4-1, and 4-2 present the distribution of disabled workers for the years 1975-1976 by disabling condition, age, sex, and race. The first digit designates race with 1 for white, 2 for black, 3 for other, and 4 for unknown race. The second digit indicates sex with 1 for male and 2 for female.

Tables 5-1 to 8-2 present estimates of age-adjusted PMR's and standard errors and estimates of numbers of disabled workers by age by industry group and disabling condition for each race-sex group. The first digit designates the race group with 5 for white, 6 for black, 7 for other, and 8 for unknown race. Sex is designated with the second digit with 1 for male and 2 for female. There is one table for each industry rubric for each race and sex group. Disabling conditions are the rows of these tables.

Tables 9-1 to 12-2 present estimates of age-adjusted PMR's and standard errors and estimates of numbers of disabled workers by age by disabling condition and industry group for each race-sex group. The first digit designates the race group with 9 for white, 10 for black, 11 for other, and 12 for unknown race. Sex is designated with the second digit with 1 for male and 2 for female. There is one table for each disabling condition for each race and sex group. Industry rubrics are the rows of these tables.

* Copies of these tables can be obtained by request from NIOSH.

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APPENDIX I

TECHNICAL NOTES ON METHODS

1. ESTIMATION OF PROPORTIONAL MORBIDITY RATIOS AND STANDARD ERRORS

Definition of the PMR

The proportional morbidity ratio (PMR) is the measure used in this report to study associations between particular industries and specific disabling conditions. This ratio of an observed number to a number expected if no association existed is multiplied by 100 for more convenient scaling. The observed number in the PMR ratio is the number of workers granted disability benefit allowances for a specific disabling condition. The denominator is the number expected if the proportion of all disability benefit allowances for a specific disabling condition within one particular industry is the same as for all industries combined. Because the age distributions of different industrial groups vary and because the disability condition may be related to age, the PMR is age-adjusted by calculating the expected number of disability allowances for each age group. The denominator is obtained by multiplying the proportion of all disability cases involving a specific disabling condition by the number of disabled workers in the specific industrial group. These are summed to get the total number of expected benefit allowances.

In this study, PMR's are calculated for each sex and race. For the i th industrial group and k th disability group, the proportional morbidity ratio, PMR_{ik} , is mathematically defined as:

$$PMR_{ik} = (O_{ik}/E_{i,k}) \times (100)$$

for $i = 1, 2, \dots, 100$ industrial groups and $k = 1, 2, \dots, 67$ disabling conditions,

where

O_{ik} is the observed number of allowances for industry i and disabling condition k ; and $E_{i,k}$ is the expected number of allowances for industry i and disabling condition k .

The terms in equation (1) are defined as follows:

$$(2) O_{ik} = \sum_{j=1}^7 \sum_{l=1}^{55} \sum_{y=1975}^{1976} D_{ijkl y}$$

where

$D_{ijkl y}$ is the number of disability allowances for industry i , with $i = 1, 2, \dots, 100$ industries; age group of the allowance j , with $j = 1, 2, \dots, 7$, where

$j=1$ represents those younger than 40 years of age, $j=2, 3, \dots, 6$ represents respective 5-year age intervals for those 40 to 64 years of age, and

$j=7$ represents those older than 64 year of age; disabling condition k , with $k = 1, 2, \dots, 67$ disabling conditions;

state or territory, l , in which the allowance is granted, with $l = 1, 2, \dots, 55$;

and year, y , in which the allowance is granted, with $y = 1975$ and 1976.

$$(3) E_{1.k} = \sum_{j=1}^7 E_{jk}$$

where

E_{ijk} is the expected number of disability allowances for industry i , age group j and for disability k (the ranges of subscripts are the same as in equation 2 and are not repeated unless there is a change).

The value of E_{ijk} in equation (3) is defined as:

$$(4) E_{ijk} = D_{ij...} \times D_{.jk..} / D_{.j...}$$

where

"." is used to denote a summation over the detailed categories in the range of the subscript it replaces; thus:

$D_{ij...}$ is the total number of allowances for industry i , for age group j , for all 67 disabling conditions, for all 55 states and territories, and for the entire period from 1975 to 1976;

$D_{jk...}$ is the total allowances for all 100 industries for age group j , for the k th disabling condition, for all 55 states and territories, and for the entire period; and

$D_{j....}$ is the total allowances for all 100 industries for age group j , for all 67 disabling conditions, for all 55 states and territories, and for the entire period.

PMR_{ik} is the measure of the degree to which workers in industry i tend to receive allowances for disabling condition k in greater proportion, if $PMR_{ik} < 100$, or in lesser proportion, if $PMR_{ik} > 100$, or in the same proportion, if $PMR_{ik} = 100$, than workers in all industries, after adjustment for differences in age distributions. The age adjustment used, however, assumes that the association between an industry and a disabling condition does not vary across age groups. If that is not the case, then no single measure is appropriate and each age group should be studied separately.

Estimation of the PMR

The above stated definitions apply to the entire population of disability allowances for the 1975 to 1976 period. Information about the PMR's under study is obtained from a statistically selected sample, as described in Technical Note 2. This required methods for estimating the PMR and its standard error from the sample. The PMR is estimated by a straight-forward application of equations (1) to (3) to the sample data and the use of estimators to replace population values; the standard error of the estimator of the PMR is estimated by a sample replicate procedure.

The estimator of PMR_{ik} is denoted by PMR_{ik} and is given by:

$$(5) \quad PMR_{ik} = (O_{ik}/E_{i,k}) \times (100),$$

where

O_{ik} and $E_{i,k}$ correspond to estimators of the observed and expected, respectively, numbers of disability benefit allowances for industry i and disability condition k for all age groups, for all states and territories, and for the entire period from 1975 to 1976.

The basic "building blocks" for the estimators, O_{ik} and $E_{i,k}$, are the estimators for the D_{ijkly} 's, hereafter designated by D_{ijkly} 's.

D_{ijkly} is defined as:

$$(6) \quad D_{ijkly} = d_{ijkly} \times W_{ly}$$

where

d_{ijkly} is the number of allowances observed in the sample for industry i , for age group j , for disabling condition k , for state or territory l , and for year y ; and W_{ly} is an inflation factor equal to the reciprocal of the sampling fraction multiplied by a ratio estimator adjustment factor. (See Technical Note 2, page 120)

The O_{ik} 's are obtained by replacing each D_{ijkly} in equation (2) by its estimator, D_{ijkly} . Similarly, the $E_{i.k}$'s are obtained by replacing each term, factor, or divisor in equations (3) and (4) with its estimator. Each factor in equation (4) is a particular sum of some of the D_{ijkly} 's and the estimator of such a sum is simply the sum of the estimators of the D_{ijkly} 's in that sum, e.g.,

$$(7) \quad D_{ij\dots} = \sum_{k=1}^{67} \sum_{l=1}^{55} \sum_{y=1975}^{1976} D_{ijkly}.$$

Estimation of the Standard Error of PMR: The Sample Replicate Procedure

It is difficult to obtain an estimator of the standard error of PMR_{ik} . PMR_{ik} is a ratio, and both the numerator and denominator are sums of ratios of the product of two factors to another quantity, and all are subject to sampling errors. Because of these complexities, there is no known expression for the variance of PMR_{ik} involving parameters that are easily estimated. The application of the large sample theory to approximate an estimator of the standard error would be difficult, and the rate of convergence of such estimators to their asymptotic limits is not known. The sample replicate approach (see, for example, Kish, 9) is chosen because it is practical, efficient, and statistically sound. As applied to this study, the sample is randomly divided into R mutually exclusive subsamples that have the same stratification and other design characteristics of the total sample except that the sampling fractions are $(1/R)$ th that of the total sample. A PMR is estimated for each of the R subsamples. These are equivalent to a simple random sample of size R from the total population of PMR estimates from such subsamples. The estimate of standard error is obtained from the "sample" variance of this "sample" by application of the usual formulas.

In this study R is 20. The total sample is randomly divided into 20 subsamples within each stratum so that every possible sample could occur with equal probability. The population is stratified by state and/or territory and by year, which produced 110 strata. Random division into subsamples is done independently in each stratum except any that had been sampled 100%. The strata with 100% samples are included in their entirety in all 20 subsamples.

The estimation procedure described previously is then applied to obtain an estimate of PMR_{ik} in each subsample. For the r th subsample the estimator ${}_r PMR_{ik}$ is given by:

$$(8) \quad {}_r PMR_{ik} = ({}_r O_{ik} / {}_r E_{i.k}) \times (100)$$

where

${}_r O_{ik}$ and ${}_r E_{i.k}$ are, respectively, the estimators of O_{ik} and $E_{i.k}$ from the r th subsample.

Both rO_{ik} and $rE_{i.k}$ are obtained by applying equations (6) and (7) to the r th subsample, except that the weight or inflation factor, rW_{ly} is now:

$$(9) \quad rW_{ly} = 20 W_{ly}$$

because the sampling fraction for any subsample is $(1/R)$ th or $(1/20)$ th that of the total sample. The sample mean of the $rPMR_{ik}$'s is obtained as follows:

$$(10) \quad \overline{PMR}_{ik} = \sum_{r=1}^{20} rPMR_{ik} / 20.$$

The estimator of the variance of PMR_{ik} is obtained by use of the fact that the $R = 20$ values of $rPMR_{ik}$ represent a randomly selected sample of size 20 from the population of values of $rPMR_{ik}$ that would be generated by repeated random sampling, without replacement from the population of disability benefit allowances for the period, with samples of the same size and sampling design as the subsamples. The estimator of the variance of PMR_{ik} for this study is given by

$$(11) \quad V(\overline{PMR}_{ik}) = \sum_{r=1}^{20} \frac{(rPMR_{ik} - \overline{PMR}_{ik})^2}{19 \times 20}$$

This is slightly biased on the high side because it ignores the finite population correction, which cannot be applied because $rPMR_{ik}$ cannot be expressed as a sum of statistics from the individual strata and the finite population correction factors vary by strata. An estimator for the standard error PMR_{ik} is given by

$$(12) \quad S(\overline{PMR}_{ik}) = \sqrt{V(\overline{PMR}_{ik})}$$

This is used as the estimator of the standard error of PMR_{ik} in this report and appears in the tables under the entries labeled $SE(PMR)$. (Note that PMR_{ik} is not identical to \overline{PMR}_{ik} .) Confidence intervals constructed with $S(\overline{PMR}_{ik})$ tend to be somewhat too wide, and Type I error probabilities for statistical test may be actually somewhat lower than the nominal ones.

Confidence Interval Estimation

Because of the large sample size, it is assumed that the sampling distribution of PMR_{ik} is normal. Consequently,

(13) $(PMR_{ik} - \overline{PMR}_{ik}) / S(\overline{PMR}_{ik}) = T_{ik}$
has, approximately a t distribution with 19 degrees of freedom. Thus, a 95 percent confidence interval for PMR_{ik} is given approximately by:

$$(14) PMR_{ik} - 2.09 S(\overline{PMR}_{ik})$$

where

2.09 is the 97.5th percentile of the t distribution with 19 degrees of freedom.

To use equation (14) for 95% confidence interval estimate for a particular industry and a selected disability condition, one would find the estimate of PMR_{ik} in Tables 4-1, 4-2, 5-1, 5-2, 6-1, or 6-2 under the entry labeled PMR. The corresponding value for $S(\overline{PMR}_{ik})$ would be found in the same Tables under the entry labeled SE(PMR). These intervals provide approximate information on the value of PMR_{ik} .

Hypothesis Testing

Testing the hypothesis that $PMR_{ik} = 100$ as opposed to the alternative that $PMR_{ik} \neq 100$ may be of interest. An approximate test, ignoring any possible bias in PMR_{ik} , is obtained from the statistic F where:

$$(15) F = ((PMR_{ik} - 100) / S(\overline{PMR}_{ik}))^2$$

which approximates an F distribution with 1 and 19 degrees of freedom under the hypothesis that $PMR_{ik} = 100$.

Values for using equation (15) can be obtained in the same manner as described for confidence interval estimation.

2. CONTINUOUS DISABILITY HISTORY SAMPLE (CDHS)

The Continuous Disability History Sample (CDHS) is a data file that is longitudinal in nature to support various studies of the disability applicant population. This has been described in detail by SSA (10). Data on new applications for disability insurance benefits that meet the selection criteria are added to the file each year at the time such claims are processed. The file is updated annually to accumulate new earnings and entitlement data for each applicant. The CDHS contains data from the several files on disabled workers. The data for this report are obtained from the Disabled Person Record (DPR). This record contains data on allowances and denials from 1967 through the latest update. The DDR's or DPR's for the CDHS represents a statistically selected sample from the Disabled Data Record File of the Bureau of Disability Insurance, which contains all records of workers granted disability benefit allowances. These records are stratified by state, territory, or foreign country and by year. One stratum per year is designated for each state and each territory and one for all foreign territories combined. A sample is selected from each stratum independently by simple random sampling at a rate varying from 10 to 100 percent. Individual stratum rates varied from year to year and depended on the total number of disabled benefit allowances granted the previous year. The sample rate is made inversely proportional to the total allowances for the previous year. Additionally, individual stratum rates are selected so that the overall sampling rate is approximately 20 percent.

Estimation of Numbers of Disabled Workers

The procedure for estimation of national number of cases from the sample required determination of inflation weights to be applied to the sample data. These are termed W_{ly} 's in Technical Note 1 and are developed by a two-step procedure. The reciprocals of the sampling rates are used as initial weights to obtain estimated total numbers of disabled benefit allowances for all types of disabilities, all industries, all races, and both sexes for each stratum. Because these totals are known exactly, the initial weights could be adjusted so that the inflation procedure estimates for the totals would agree with the known totals. The adjusted weights are the one used. Estimates produced are, therefore, ratio estimates.

Sampling Errors of Estimates

Estimates based on samples can be expected to differ from figures that would have been obtained if the entire population had been measured. The particular sample selected for this study is one of many similar probability samples of the same size that might have been selected by chance under the same specifications. Each of the possible samples would yield somewhat different sets of results. The deviation of a sample estimate from the value that would have been obtained if the entire population had been studied is called the sampling error. The standard

error of an estimate is a measure of the variation among the estimates from the possible samples and thus is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples. It is a measure of one component of sampling error. The standard error may be used to define confidence intervals or ranges that would include the average result of all possible samples, as follows with a specified probability:

- a. Approximately 68 percent of the intervals from one standard error below to one standard error above the derived estimate would include the average value of all possible samples.
- b. Approximately 95 percent of the intervals from two standard errors below to two standard errors above the derived estimate would include the average value of all possible samples.
- c. Approximately 99 percent of the intervals from two and one-half standard errors below to two and one-half standard errors above the derived estimate would include the average value of all possible samples.

Standard errors for PMR's are provided in the report tables under the SE(PMR) entries.

Table A-1: Guide for Standard Errors of Numbers of Disabled Workers* Estimated from the Continuous Disability History Sample by Magnitude of the Estimate of Numbers of Disabled Workers

<u>Magnitude of Estimate of Number of Disabled Workers*</u>	<u>Standard Error of the Estimate</u>
1-999	**
1,000	30
2,500	47
5,000	67
7,500	82
10,000	95
25,000	149
50,000	210
75,000	255
100,000	292
250,000	440
500,000	567
750,000	618

*Disabled Workers means workers granted SSA benefit allowances for disabilities.

**For estimated numbers smaller than 1,000, an approximation for the standard error is the square root of the estimate.

Table A-2: Guide for Standard Errors of Percentages of Disabled Workers * Estimated from the Continuous Disability History Sample by Magnitude of the Estimated Percentage and the Base of the Percentage.

Base of Percent	ESTIMATED PERCENTAGE															
	1 or 99	2 or 98	5 or 95	8 or 92	10 or 90	15 or 85	20 or 80	25 or 75	30 or 70	35 or 65	40 or 60	50	55	60	65	
2,500	0.19	0.27	0.42	0.52	0.57	0.68	0.76	0.83	0.87	0.91	0.93	0.95				
5,000	0.13	0.19	0.29	0.37	0.40	0.48	0.54	0.58	0.62	0.64	0.66	0.67				
7,500	0.11	0.15	0.24	0.30	0.33	0.39	0.44	0.48	0.50	0.53	0.54	0.55				
10,000	0.09	0.13	0.21	0.26	0.29	0.34	0.38	0.41	0.44	0.46	0.47	0.48				
25,000	0.06	0.08	0.13	0.16	0.18	0.22	0.24	0.26	0.28	0.29	0.30	0.30				
50,000	0.04	0.06	0.09	0.12	0.13	0.15	0.17	0.18	0.20	0.20	0.21	0.21				
75,000	0.03	0.05	0.08	0.09	0.10	0.12	0.14	0.15	0.16	0.17	0.17	0.17				
100,000	0.03	0.04	0.07	0.08	0.09	0.11	0.12	0.13	0.14	0.14	0.15	0.15				
250,000	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.08	0.09	0.09	0.09	0.10				
500,000	0.01	0.02	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.07	0.07				
750,000	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.05	0.05	0.06				

*Disabled Workers means workers granted SSA benefit allowances for disabilities.

Table A-3: Estimated numbers of workers receiving SSA disability benefits by disabling condition and sex:
SSA Security Disability Awards 1975-1976

Disabling Condition	ICDA	Estimated Number Disabled Workers		
		Total	Male	Female
All disabling conditions.....	000-999	1158439	799488	358951
Infective & parasitic diseases.....	000-136	13045	9617	3428
Tuberculosis.....	010-019	6732	5415	1317
Silicotuberculosis.....	010	78	78	0
Pulmonary tuberculosis.....	011	5351	4500	851
Neoplasms.....	140-239	112709	71988	40721
Malignant neoplasms.....	140-199	95631	60716	34915
Buccal cavity & pharynx.....	140-149	3967	3205	762
Digestive organs & peritoneum....	150-159	19793	13914	5879
Respiratory system.....	160-163	27251	22228	5023
Bone, connective tissue, & skin..	170-173	4787	3208	1579
Breast.....	174	11250	668	10582
Genital organs.....	180-187	10315	4946	5369
Urinary organs.....	188-189	4377	3505	872
Other & unspecified sites.....	190-199	13846	9032	4814
Neoplasms of lymphatic & hematopoietic tissue.....	200-209	13243	8867	4376
Sarcoma(lympho-,reticulo-), other lymphomas.....	200,202	4116	2547	1569
Leukemia.....	204-207	3769	2600	1169
Benign neoplasms.....	210-228	2428	1456	972
Neoplasms of unspecified nature..	230-239	1407	949	458
Endocrine, nutritional, & metabolic diseases.....	240-279	42324	25547	16777
Diabetes mellitus.....	250	29932	19618	10314
Diseases of blood & blood-forming organs.....	280-289	2915	1645	1270
Mental disorders.....	290-315	125132	82847	42285
Schizophrenia.....	295	48722	32881	15841
Neuroses.....	300	26078	14269	11809
Alcoholism.....	303	5628	5008	620
Diseases of nervous system & sense organs.....	320-389	72689	47750	24939
Meningitis.....	320	99	80	19
Multiple sclerosis.....	340	5998	2446	3552
Cataract.....	374	2427	1553	874
Glaucoma.....	375	2697	1838	859
Blindness.....	379	3644	2427	1217
Diseases of circulatory system.....	390-458	330135	244589	85546
Heart & hypertensive disease.....	393-429	259385	194458	64927
Hypertensive disease.....	400-404	22299	13446	8853
Ischemic heart disease.....	410-414	214252	165627	48625
Cerebrovascular disease.....	430-438	37974	28094	9880

Table A-3 (Cont'd)

Disabling Condition	ICDA	Estimated Number Disabled Workers		
		Total	Male	Female
Cerebrovascular hemorrhage.....	431	1376	969	407
Cerebral thrombosis & embolism...433-434		6456	4888	1568
Arteriosclerosis.....	440	9070	7310	1760
Diseases of respiratory system.....	460-519	71492	55011	16481
Bronchitis & asthma.....	490-491,493	11250	6640	4610
Emphysema.....	492	24424	20225	4199
Pneumoconiosis & related diseases..	515-516	2382	2283	99
Pneumoconiosis due to silica & silicates.....	515	2305	2211	94
Other pneumoconioses & related diseases.....	516	77	72	5
Bronchiectasis.....	518	745	402	343
Diseases of digestive system.....	520-577	31268	21917	9351
Peptic ulcer.....	531-533	4300	3053	1247
Chronic enteritis & ulcerative colitis.....	563	3212	1583	1629
Cirrhosis of liver.....	571	13651	10729	2922
Diseases of genitourinary system....	580-629	10159	6422	3737
Nephritis & nephrosis.....	580-584	4530	3231	1299
Chronic nephritis.....	582	4091	2923	1168
Other diseases of urinary system...	590-599	4018	2548	1470
Diseases of male genital organs....	600-607	488	477	11
Diseases of female genital organs..	620-629	520	60	460
Pregnancy, childbirth, & the puerperium.....	630-678	17	5	12
Diseases of skin & subcutaneous tissues.....	680-709	4510	2652	1858
Diseases of musculoskeletal system & connective tissues.....	710-738	205339	128448	76891
Rheumatoid arthritis.....	712	21764	10662	11102
Osteoarthritis.....	713	69913	42608	27305
Other & unspecified arthritis.710-711, 714-715.....		9159	5392	3767
Displacement of intervertebral disc....	725	44440	30955	13485
Congenital anomalies.....	740-759	11694	7796	3898
Symptoms & ill-defined conditions....	780-796	2590	1658	934
Accidents, poisonings, & violence....	800-999	58797	46155	12642
Unknown or not classifiable.....	000-999	63624	45443	18181

Table A-4: Estimated percentages of workers receiving SSA disability benefits by disabling condition and sex:
Social Security Disability Awards 1975-1976

Disabling Condition	ICDA	Estimated Percentage Disabled Workers		
		Total	Male	Female
All disabling conditions.....	000-999	100.00	100.00	100.00
Infective & parasitic diseases.....	000-136	1.13	1.20	0.96
Tuberculosis.....	010-019	0.58	0.68	0.37
Silicotuberculosis.....	010	0.01	0.01	0.00
Pulmonary tuberculosis.....	011	0.46	0.56	0.24
Neoplasms.....	140-239	9.73	9.00	11.34
Malignant neoplasms.....	140-199	8.26	7.59	9.73
Buccal cavity & pharynx.....	140-149	0.34	0.40	0.21
Digestive organs & peritoneum.....	150-159	1.71	1.74	1.64
Respiratory system.....	160-163	2.35	2.78	1.40
Bone, connective tissue, & skin.....	170-173	0.41	0.40	0.44
Breast.....	174	0.97	0.08	2.95
Genital organs.....	180-187	0.89	0.62	1.50
Urinary organs.....	188-189	0.38	0.44	0.24
Other & unspecified sites.....	190-199	1.20	1.13	1.34
Neoplasms of lymphatic & hematopoietic tissue.....	200-209	1.14	1.11	1.22
Sarcoma(lympho-,reticulo-), other lymphomas.....	200,202	0.36	0.32	0.44
Leukemia.....	204-207	0.33	0.33	0.33
Benign neoplasms.....	210-228	0.21	0.18	0.27
Neoplasms of unspecified nature.....	230-239	0.12	0.12	0.13
Endocrine, nutritional, & metabolic diseases.....	240-279	3.65	3.20	4.67
Diabetes mellitus.....	250	2.58	2.45	2.87
Diseases of blood & blood-forming organs.....	280-289	0.25	0.21	0.35
Mental disorders.....	290-315	10.80	10.36	11.78
Schizophrenia.....	295	4.21	4.11	4.41
Neuroses.....	300	2.25	1.78	3.29
Alcoholism.....	303	0.49	0.63	0.17
Diseases of nervous system & sense organs.....	320-389	6.27	5.97	6.95
Meningitis.....	320	0.01	0.01	0.01
Multiple sclerosis.....	340	0.52	0.31	0.99
Cataract.....	374	0.21	0.19	0.24
Glaucoma.....	375	0.23	0.23	0.24
Blindness.....	379	0.31	0.30	0.34
Diseases of circulatory system.....	390-458	28.50	30.59	23.83
Heart & hypertensive disease.....	393-429	22.39	24.32	18.09

Table A-4 (Cont'd)

Disabling Condition	ICDA	Estimated Percentage Disabled Workers		
		Total	Male	Female
Hypertensive disease.....	400-404	1.92	1.68	2.47
Ischemic heart disease.....	410-414	18.49	20.72	13.55
Cerebrovascular disease.....	430-438	3.28	3.51	2.75
Cerebral hemorrhage.....	431	0.12	0.12	0.11
Cerebral thrombosis & embolism.....	433-434	0.56	0.61	0.44
Arteriosclerosis.....	440	0.78	0.91	0.49
Diseases of respiratory system.....	460-519	6.17	6.88	4.59
Bronchitis & asthma.....	490-491, 493	0.97	0.83	1.28
Emphysema.....	492	2.11	2.53	1.17
Pneumoconiosis & related diseases.....	515-516	0.21	0.29	0.03
Pneumoconiosis due to silica & silicates.....	515	0.20	0.28	0.03
Other pneumoconioses & related diseases.....	516	0.01	0.01	0.00
Bronchiectasis.....	518	0.06	0.05	0.10
Diseases of digestive system.....	520-577	2.70	2.74	2.61
Peptic ulcer.....	531-533	0.37	0.38	0.35
Chronic enteritis & ulcerative colitis....	563	0.28	0.20	0.45
Cirrhosis of liver.....	571	1.18	1.34	0.81
Diseases of genitourinary system.....	580-629	0.88	0.80	1.04
Nephritis & nephrosis.....	580-584	0.39	0.40	0.36
Chronic nephritis.....	582	0.35	0.37	0.33
Other diseases of urinary system.....	590-599	0.35	0.32	0.41
Diseases of male genital organs.....	600-607	0.04	0.06	0.00
Diseases of female genital organs.....	620-629	0.04	0.01	0.13
Pregnancy, childbirth, & the puerperium	630-678	0.00	0.00	0.00
Diseases of skin & subcutaneous tissues	680-709	0.39	0.33	0.52
Diseases of musculoskeletal system & connective tissues.....	710-738	17.73	16.07	21.42
Rheumatoid arthritis.....	712	1.88	1.33	3.09
Osteoarthritis.....	713	6.04	5.33	7.61
Other & unspecified arthritis.....	710-711, 714-715	0.79	0.67	1.05
Displacement of intervertebral disc.....	725	3.84	3.87	3.76
Congenital anomalies.....	740-759	1.01	0.98	1.09
Symptoms & ill-defined conditions.....	780-796	0.22	0.21	0.26
Accidents, poisonings, & violence (N)...	800-999	5.08	5.77	3.52
Unknown or not classifiable.....	000-999	5.49	5.68	5.07

Table A-5: Estimated numbers of workers receiving SSA disability benefits by disabling condition and race:
Social Security Disability Awards 1975-76

Disabling Condition	ICDA	Estimated Numbers Disabled Workers				
		White	Black	Other	Unknown	Total
All disabling conditions.....	000-999	969894	166621	15929	5995	1158439
Infective & parasitic diseases.....	000-136	9191	3443	304	107	13045
Tuberculosis.....	010-019	4089	2379	204	60	6732
Silicotuberculosis.....	010	38	40	0	0	78
Pulmonary tuberculosis.....	011	3131	2000	171	49	5351
Neoplasms.....	140-239	98298	12615	1360	436	112709
Malignant neoplasms.....	140-199	83158	11093	066	314	95631
Buccal cavity & pharynx....	140-149	3445	443	62	17	3967
Digestive organs & peritoneum.....	150-159	16843	2582	324	44	19793
Respiratory system.....	160-163	23767	3180	222	82	27251
Bone, connective tissue, & skin	170-173	4295	391	81	20	4787
Breast.....	174	9845	1229	131	45	11250
Genital organs.....	180-187	8678	1473	121	43	10315
Urinary organs.....	188-189	3939	409	19	10	4377
Other & unspecified sites..	190-199	12311	1376	106	53	13846
Neoplasms of lymphatic & hematopoietic tissue.....	200-209	11901	1029	231	82	13243
Sarcoma(lympho-, reticulo-), other lymphomas.....	200,202	3887	198	26	5	4116
Leukemia.....	204-207	3340	300	86	43	3769
Benign neoplasms.....	210-228	2016	340	32	40	2428
Neoplasms of unspecified nature	230-239	1223	153	31	0	1407
Endocrine, nutritional, & metabolic diseases.....	240-279	32724	8475	928	197	42324
Diabetes mellitus.....	250	23137	5913	728	154	29932
Diseases of blood & blood-forming organs.....	280-289	1836	1042	33	4	2915
Mental disorders.....	290-315	101636	19932	2293	1271	125132
Schizophrenia.....	295	37795	9109	1130	688	48722
Neuroses.....	300	23148	2443	361	126	26078
Alcoholism.....	303	4389	1131	87	21	5628
Diseases of nervous system & sense organs.....	320-389	60831	10292	1033	533	72689
Meningitis.....	320	95	4	0	0	99
Multiple sclerosis.....	340	5413	468	52	65	5998
Cataract.....	374	2099	300	28	0	2427
Glaucoma.....	375	1683	981	28	5	2697
Blindness.....	379	2888	641	72	43	3644
Diseases of circulatory system.....	390-458	275682	49895	3413	1145	330135
Heart & hypertensive disease.....	393-429	216857	39040	2672	816	259385

Table A-5 (Cont'd)

Disabling Condition	ICDA	Estimated Numbers Disabled Workers				
		White	Black	Other	Unknown	Total
Hypertensive disease.....	400-404	13448	8408	337	106	22299
Ischemic heart disease.....	410-414	184404	27162	2045	641	214252
Cerebrovascular disease.....	430-438	30695	6692	412	175	37974
Cerebral hemorrhage.....	431	979	356	20	21	1376
Cerebral thrombosis & embolism.....	433-434	5053	1314	64	25	6456
Arteriosclerosis.....	440	7832	1178	46	14	9070
Diseases of respiratory system.....	460-519	63774	6773	616	329	71492
Bronchitis & asthma.....	490-491,493	9432	1520	236	62	11250
Emphysema.....	492	22212	1965	138	109	24424
Pneumoconiosis & related diseases.....	515-516	2232	132	8	10	2382
Pneumoconiosis due to silica & silicates.....	515	2165	122	8	10	2305
Other pneumoconioses & related diseases.....	516	67	10	0	0	77
Bronchiectasis.....	518	668	73	4	0	745
Diseases of digestive system.....	520-577	26630	3991	504	143	31268
Peptic ulcer.....	531-533	3606	613	81	0	4300
Chronic enteritis & ulcerative colitis.....	563	2925	211	24	52	3212
Cirrhosis of liver.....	571	11507	1838	260	46	13651
Diseases of genitourinary system	580-629	7942	1958	170	89	10159
Nephritis & nephrosis.....	584	3388	983	104	55	4530
Chronic nephritis.....	582	3048	918	70	55	4091
Other diseases of urinary system.....	590-599	3186	752	46	34	4018
Diseases of male genital organs	600-607	409	66	13	0	488
Diseases of female genital organs.....	620-629	422	93	5	0	520
Pregnancy, childbirth, & the puerperium.....	630-678	5	12	0	0	17
Diseases of skin & subcutaneous tissues.....	680-709	3694	680	91	45	4510
Diseases of musculoskeletal system & connective tissues.....	710-738	173417	28016	3061	845	205339
Rheumatoid arthritis.....	712	19165	2200	314	85	21767
Osteoarthritis.....	713	57731	10860	1077	245	69913
Other & unspecified arthritis	710-711,714-715	7528	1488	112	31	9159
Displacement of intervertebral disc.....	725	38364	5285	627	164	44440
Congenital anomalies.....	740-759	10125	1282	204	84	11694

Table A-5 (Cont'd)

Disabling Condition	ICDA	Estimated Numbers Disabled Workers				Total
		White	Black	Other	Unknown	
Symptoms & ill-defined conditions.....	780-796	2191	363	17	19	2590
Accidents, poisonings, & violence	800-999	49494	7974	929	400	58797
Unknown or not classifiable....	000-999	52424	9879	973	348	63624

Table A-6: Estimated percentages of workers receiving SSA disability benefits by disabling condition and race:
Social Security Disability Awards 1975-1976

Disabling Condition	ICDA	Estimated Percentages Disabled Workers				Total
		White	Black	Other	Unknown	
All disabling conditions.....	000-999	100.00	100.00	100.00	100.00	100.00
Infective & parasitic diseases..	000-136	0.95	2.07	1.91	1.78	1.13
Tuberculosis.....	010-019	0.42	1.43	1.28	1.00	0.58
Silicotuberculosis.....	010	0.00	0.02	0.00	0.00	0.01
Pulmonary tuberculosis.....	011	0.32	1.20	1.07	0.82	0.46
Neoplasms.....	140-239	10.13	7.57	8.54	7.27	9.73
Malignant neoplasms.....	140-199	8.57	6.66	6.69	5.24	8.26
Buccal cavity & pharynx.....	140-149	0.36	0.27	0.39	0.28	0.34
Digestive organs & peritoneum.....	150-159	1.74	1.55	2.03	0.73	1.71
Respiratory system.....	160-163	2.45	1.91	1.39	1.37	2.35
Bone, connective tissue, & skin.....	170-173	0.44	0.23	0.51	0.33	0.41
Breast.....	174	1.02	0.74	0.82	0.75	0.97
Genital organs.....	180-187	0.89	0.88	0.76	0.72	0.89
Urinary organs.....	188-189	0.41	0.25	0.12	0.17	0.38
Other & unspecified sites...	190-199	1.27	0.83	0.67	0.88	1.20
Neoplasms of lymphatic & hematopoietic tissue....	200-209	1.23	0.62	1.45	1.37	1.14
Sarcoma(lympho-, reticulo-), other lymphomas.....	200,202	0.40	0.12	0.16	0.08	0.36
Leukemia.....	204-207	0.34	0.18	0.54	0.72	0.33
Benign neoplasms.....	210-228	0.21	0.20	0.20	0.67	0.21
Neoplasms of unspecified nature.....	230-239	0.13	0.09	0.19	0.00	0.12
Endocrine, nutritional, & metabolic diseases.....	240-279	3.37	5.09	5.83	3.29	3.65
Diabetes mellitus.....	250	2.39	3.55	4.57	2.57	2.58
Diseases of blood & blood-forming organs.....	280-289	0.19	0.63	0.21	0.07	0.25
Mental disorders.....	290-315	10.48	11.96	14.40	21.20	10.80
Schizophrenia.....	295	3.90	5.47	7.09	11.48	4.21
Neuroses.....	300	2.39	1.47	2.27	2.10	2.25
Alcoholism.....	303	0.45	0.68	0.55	0.35	0.49
Diseases of nervous system & sense organs.....	320-389	6.27	6.18	6.49	8.89	6.27
Meningitis.....	320	0.01	0.00	0.00	0.00	0.01
Multiple sclerosis.....	340	0.56	0.28	0.33	1.08	0.52
Cataract.....	374	0.22	0.18	0.18	0.00	0.21
Glaucoma.....	375	0.17	0.59	0.18	0.08	0.23
Blindness.....	379	0.30	0.38	0.45	0.72	0.31
Diseases of circulatory system..	390-458	28.42	29.95	21.43	19.10	28.50
Heart & hypertensive disease..	393-429	22.36	23.43	16.77	13.61	22.39
Hypertensive disease.....	400-404	1.39	5.05	2.12	1.77	1.92

Table A-6 (Cont'd)

Disabling Condition	ICDA	Estimated Percentages Disabled Workers				
		White	Black	Other	Unknown	Total
Ischemic heart disease.....	410-414	19.01	16.30	12.84	10.69	18.49
Cerebrovascular disease.....	430-438	3.16	4.02	2.59	2.92	3.28
Cerebral hemorrhage.....	431	0.10	0.21	0.13	0.35	0.12
Cerebral thrombosis & embolism.....	433-434	0.52	0.79	0.40	0.42	0.56
Arteriosclerosis.....	440	0.81	0.71	0.29	0.23	0.78
Diseases of respiratory system..	460-519	6.58	4.06	3.87	5.49	6.17
Bronchitis & asthma.....	490-491,493	0.97	0.91	1.48	1.03	0.97
Emphysema.....	492	2.29	1.18	0.87	1.82	2.11
Pneumoconiosis & related diseases.....	515-516	0.23	0.08	0.05	0.17	0.21
Pneumoconiosis due to silica & silicates.....	515	0.22	0.07	0.05	0.17	0.20
Other pneumoconioses & related diseases.....	516	0.01	0.01	0.00	0.00	0.01
Bronchiectasis.....	518	0.07	0.04	0.03	0.00	0.06
Diseases of digestive system....	520-577	2.75	2.40	3.16	2.39	2.70
Peptic ulcer.....	531-533	0.37	0.37	0.51	0.00	0.37
Chronic enteritis & ulcerative colitis.....	563	0.30	0.13	0.15	0.87	0.28
Cirrhosis of liver.....	571	1.19	1.10	1.63	0.77	1.18
Diseases of genitourinary system	580-629	0.82	1.18	1.07	1.48	0.88
Nephritis & nephrosis.....	580-584	0.35	0.59	0.65	0.92	0.39
Chronic nephritis.....	582	0.31	0.55	0.44	0.92	0.35
Other diseases of urinary system	590-599	0.33	0.45	0.29	0.57	0.35
Diseases of male genital organs.....	600-607	0.04	0.04	0.08	0.00	0.04
Diseases of female genital organs	620-629	0.04	0.06	0.03	0.00	0.04
Pregnancy, childbirth, & the puerperium.....	630-678	0.00	0.01	0.00	0.00	0.00
Diseases of skin & subcutaneous tissues.....	680-709	0.38	0.41	0.57	0.75	0.39
Diseases of musculoskeletal system & connective tissue....	710-738	17.88	16.81	19.22	14.10	17.73
Rheumatoid arthritis.....	712	1.98	1.32	1.97	1.42	1.88
Osteoarthritis.....	713	5.95	6.52	6.67	4.09	6.04
Other & unspecified arthritis	710-711,714-715	0.78	0.89	0.70	0.5	0.79
Displacement of intervertebral disc.....	725	3.96	3.17	3.94	2.74	3.84
Congenital anomalies.....	740-759	1.04	0.77	1.28	1.40	1.01
Symptoms & ill-defined conditions.....	780-796	0.23	0.22	0.11	0.32	0.22
Accidents, poisonings, & violence.....	800-999	5.10	4.79	5.83	6.67	5.08
Unknown or not classifiable.....	000-999	5.41	5.93	6.11	5.80	5.49

Table A-7: Estimated numbers of workers in U.S. receiving SSA disability benefits by industry and sex:
Social Security Disability Awards, 1975-1976

Industry/SIC	Estimated Numbers Disabled Workers		
	Total	Male	Female
All	1158439	799488	358951
Agriculture, forestry, & fishing (SIC 011-097)	47418	42214	5204
Agricultural production - crops (SIC 010-019)	42360	37726	4634
Agricultural services (SIC 071-078)	2880	2530	350
Agricultural production - livestock, forestry, fishing, and trapping (SIC 021-029, 081-097)	1751	1562	189
Agriculture, n.e.c. (SIC 011-097)	427	396	31
Mining (SIC 100-149)	12917	12508	409
Bituminous, lignite, & anthracite coal mining (SIC 110-121)	4613	4517	96
Oil & gas extraction (SIC 130-138)	2408	2261	147
Metal mining, & nonmetallic minerals, except fuels (SIC 100-109, 140-149)	1240	1179	61
Mining, n.e.c. (SIC 100-149)	4656	4551	105
Construction (SIC 150-179)	105930	102193	3737
General building contractors (SIC 152-154)	2021	1933	88
Heavy construction contractors (SIC 161-162)	3778	3659	119
Highway & street construction (SIC 161)	1408	1366	42
Heavy construction, except highway (SIC 162)	2370	2293	77
Special trade contractors (SIC 171-179)	23027	22232	795
Plumbing, heating, air conditioners (SIC 171)	3958	3786	172
Painting, paper hanging, decorating (SIC 172)	3276	3210	66
Electrical work (SIC 173)	2271	2178	93
Masonry, stonework, & plastering (SIC 174)	1592	1553	39
Carpentering & flooring (SIC 175)	6228	6103	125
Roofing & sheet metal work (SIC 176)	1199	1164	35
Other & miscellaneous special trade contractors (SIC 170,177-179)	4503	4238	265
Construction, n.e.c. (SIC 150-179)	77104	74369	2735
Manufacturing (SIC 200-399)	258418	108376	78042
Manufacturing - durable goods (SIC 240-259, 330-399)	94937	78455	16482
Lumber & wood products (SIC 240-249)	11756	10919	837
Logging camps & logging contractors (SIC 241)	3100	2988	112
Sawmills & planing mills (SIC 242)	3950	3746	204
Other, miscellaneous, n.e.c. lumber & wood products (SIC 240,243-245,249)	4706	4185	521
Furniture & fixtures (SIC 250-259)	3296	2495	801

Table A-7 (Cont'd)

Industry/SIC	Estimated Numbers Disabled Workers		
	Total	Male	Female
Primary metal industries (SIC 331-339)	23713	22301	1412
Blast furnace & basic steel products (SIC 331)	2888	2672	216
Iron & steel foundries (SIC 332)	12836	12224	612
Nonferrous metal industries (SIC 333-336)	1327	1161	166
Other & n.e.c. primary metal industries (SIC 330,339)	6662	6244	418
Fabricated metal products (SIC 340-349)	4712	3848	864
Machinery, except electrical (SIC 350-359)	9903	8728	1175
Electric & electronic equipment (SIC 360-369)	13246	7037	6209
Transportation equipment (SIC 370-379)	24695	21145	3550
Motor vehicles & equipment (SIC 371)	14955	12740	2215
Aircraft & parts (SIC 372)	6284	5232	1052
Ship & boat building & repairing (SIC 373)	2332	2157	175
Other & n.e.c. transportation equipment (SIC 370,374-379)	1124	1016	108
Instruments & related products (SIC 380-387)	1370	863	507
Miscellaneous manufacturing industries (SIC 390-399)	2246	1119	1127
Manufacturing - nondurable goods (SIC 200-239,260-319)	95161	55415	39746
Food & kindred products (SIC 200-209)	22543	15255	7288
Meat products (SIC 201)	6244	4217	2027
Dairy products (SIC 202)	1553	1380	173
Bakery products (SIC 205)	3331	2340	991
Beverages (SIC 208)	2472	2198	274
Other & miscellaneous food & kindred products (SIC 200,203,204,206,207,209)	8943	5120	3823
Tobacco manufactures (SIC 210-219)	1390	539	851
Textile mill products (SIC 220-229)	18347	8856	9491
Apparel & other textile products (230-239)	17197	3640	13557
Paper & allied products (SIC 260-269)	5151	4134	1017
Printing & publishing (SIC 270-279)	9177	6569	2608
Chemicals & allied products (SIC 280-289)	5877	4553	1324
Petroleum & coal products (SIC 290-299)	3735	3462	273
Rubber & miscellaneous plastics products (SIC 300-307)	4532	3294	1238
Leather & leather products (SIC 310-319)	2187	1110	1077
Stone, clay, & glass products (SIC 320-329)	5025	4003	1022
Manufacturing, n.e.c. (SIC 200-399)	68320	46506	21814
Transportation & public utilities (SIC 400-497)	66024	58069	7955

Table A-7 (Cont'd)

Industry/SIC	Estimated Numbers Disabled Workers		
	Total	Male	Female
Railroad transportation (SIC 400-409)	2661	2439	222
Local & interurban passenger transit (SIC 410-419)	7215	6398	817
Trucking & warehousing (SIC 420-429)	25685	24399	1286
Trucking, local & long distance, trucking terminal facilities (SIC 421,422,423)	23308	22267	1041
Public warehousing (SIC 422)	2377	2132	245
U.S. Postal Service (SIC 430-439)	1641	1315	326
Water transportation (SIC 440-449)	5510	5297	213
Transportation by air (SIC 450-459)	2089	1822	267
Pipe lines, except natural gas & electric, gas, & sanitary services (SIC 460,490)	8723	8041	682
Transportation services (SIC 470-479)	1030	845	185
Communication (SIC 480-489)	7349	3986	3363
Transportation & public utilities, n.e.c. (SIC 400-497)	4121	3527	594
Wholesale trade (SIC 500-519)	12216	10068	2148
Wholesale trade - durable goods (SIC 500-509)	4755	4134	621
Wholesale trade - nondurable goods (SIC 510-519)	5161	3969	1192
Wholesale trade, n.e.c. (SIC 500-519)	2300	1965	335
Retail trade (SIC 520-599)	115310	61548	53762
General merchandise stores (SIC 530-539)	6955	1936	5019
Food stores (SIC 540-549)	14060	8882	5178
Grocery stores (SIC 541)	10440	6431	4009
Other & miscellaneous food stores (SIC 542-549)	3620	2451	1169
Automotive dealers & service stations (SIC 550-559)	14130	13349	781
New & used car dealers, used car dealers (SIC 551,552)	2833	2545	288
Gasoline service stations(SIC 554)	8012	7741	271
Other, misc., and n.e.c. automotive dealers & service stations (SIC 550-559)	3285	3063	222
Furniture & home furnishings stores (SIC 547-579)	2324	1959	365
Eating & drinking places (SIC 580-589)	41289	16164	25125
Other, miscellaneous, & n.e.c. retail trade (SIC 520,560-569,590-591)	36552	19258	17294
Finance, insurance, & real estate (SIC 600-679)	21701	12860	8841
Banking (SIC 600-609)	5482	2107	3375
Insurance carriers (SIC 630-639)	5447	3535	1912
Insurance agents, brokers & service (SIC 640-649)	2777	1849	928

Table A-7 (Cont'd)

Industry/SIC	Estimated Numbers Disabled Workers		
	Total	Male	Female
Real estate, combined real estate, insurance, etc. (SIC 651-661)	5208	3642	1566
Other & n.e.c. finance, insurance, & real estate (SIC 600,610-628,670-699)	2787	1727	1060
Services (SIC 700-899)	212229	99049	113180
Hotels & other lodging places (SIC 700-709)	20704	8800	11904
Personal services (SIC 720-729)	19679	8223	11456
Business services (SIC 730-739)	13139	9364	3775
Auto repair, services, & garages (SIC 750-759)	15742	15147	595
Automotive repair shops (SIC 753)	14073	13630	443
Other auto repair, services, & garages (SIC 751,752,754)	1669	1517	152
Miscellaneous repair services (SIC 760-769)	20393	15707	4686
Motion pictures, amusement & recreation services (SIC 781-799)	5685	4321	1364
Health services (SIC 800-809)	52913	12276	40637
Nursing & personal care facilities (SIC 805)	6000	1070	4930
Hospitals (SIC 806)	19595	5276	14319
Health services, n.e.c. (SIC 800-809)	27318	5930	21388
Educational services (SIC 820-829)	24218	11214	13004
Elementary & secondary schools (SIC 821)	5112	2009	3103
Colleges & universities (SIC 822)	2737	1634	1103
Other educational services (SIC 823-829)	16369	7571	8798
Social services (SIC 830-839)	7895	4007	3888
Membership organizations (SIC 860-869)	3544	2568	976
Private households (SIC 880-889)	19987	2089	17898
Other, miscellaneous, & n.e.c. services (SIC 700,811,841,842,891-899)	8330	5333	2997
Public administration (SIC 901-972)	43562	36465	7097
Non-manufacturing, n.e.c.	2244	1731	513
Nonclassifiable establishments & unknown (SIC 990-999)	260470	182407	78063

Table A-8: Estimated percentages of workers in U.S. receiving SSA disability benefits by industry and Sex:
Social Security Disability Awards, 1975-76

Industry/SIC	Estimated Percentages Disabled Workers		
	Total	Male	Female
All	100.00	100.00	100.00
Agriculture, forestry, & fishing (SIC 011-097)	4.09	5.28	1.45
Agricultural production - crops (SIC 010-019)	3.66	4.72	1.29
Agricultural services (SIC 071-078)	0.25	0.32	0.10
Agricultural production - livestock, forestry, fishing, and trapping (SIC 021-029, 081-097)	0.15	0.20	0.05
Agriculture, n.e.c. (SIC 011-097)	0.04	0.05	0.01
Mining (SIC 100-149)	1.12	1.56	0.11
Bituminous, lignite, & anthracite coal mining (SIC 110-121)	0.40	0.56	0.03
Oil & gas extraction (SIC 130-138)	0.21	0.28	0.04
Metal mining, & nonmetallic minerals, except fuels (SIC 100-109, 140-149)	0.11	0.15	0.02
Mining, n.e.c. (SIC 100-149)	0.40	0.57	0.03
Construction (SIC 150-179)	9.14	12.78	1.04
General building contractors (SIC 152-154)	0.17	0.24	0.02
Heavy construction contractors (SIC 161-162)	0.33	0.46	0.03
Highway & street construction (SIC 161)	0.12	0.17	0.01
Heavy construction, except highway (SIC 162)	0.20	0.29	0.02
Special trade contractors (SIC 171-179)	1.99	2.78	0.22
Plumbing, heating, air conditioners (SIC 171)	0.34	0.47	0.05
Painting, paper hanging, decorating (SIC 172)	0.28	0.40	0.02
Electrical work (SIC 173)	0.20	0.27	0.03
Masonry, stonework, & plastering (SIC 174)	0.14	0.19	0.01
Carpentering & flooring (SIC 175)	0.54	0.76	0.03
Roofing & sheet metal work (SIC 176)	0.10	0.15	0.01
Other & miscellaneous special trade contractors (SIC 170,177-179)	0.39	0.53	0.07
Construction, n.e.c. (SIC 150-179)	6.66	9.30	0.76
Manufacturing (SIC 200-399)	22.31	22.56	21.74
Manufacturing - durable goods (SIC 240-259,330-399)	8.20	9.81	4.59
Lumber & wood products (SIC 240-249)	1.01	1.37	0.23
Logging camps & logging contractors (SIC 241)	0.27	0.37	0.03
Sawmills & planing mills (SIC 242)	0.34	0.47	0.06
Other, miscellaneous, n.e.c. lumber & wood products (SIC 240,243-245,249)	0.41	0.52	0.15
Furniture & fixtures (SIC 250-259)	0.28	0.31	0.22
Primary metal industries (SIC 331-339)	2.05	2.79	0.39
Blast furnace & basic steel products (SIC 331)	0.25	0.33	0.06
Iron & steel foundries (SIC 332)	1.11	1.53	0.17
Nonferrous metal industries (SIC 333-336)	0.11	0.15	0.05
Other & n.e.c. primary metal industries (SIC 330,339)	0.58	0.78	0.12

Table A-8 (Cont'd)

Industry/SIC	Estimated Percentages Disabled Workers		
	Total	Male	Female
Fabricated metal products (SIC 340-349)	0.41	0.48	0.24
Machinery, except electrical (SIC 350-359)	0.85	1.09	0.33
Electric & electronic equipment (SIC 360-369)	1.14	0.88	1.73
Transportation equipment (SIC 370-379)	2.13	2.64	0.99
Motor vehicles & equipment (SIC 371)	1.29	1.59	0.62
Aircraft & parts (SIC 372)	0.54	0.65	0.29
Ship & boat building & repairing (SIC 373)	0.20	0.27	0.05
Other & n.e.c. transportation equipment (SIC 370,374-379)	0.10	0.13	0.03
Instruments & related products (SIC 380-387)	0.12	0.11	0.14
Miscellaneous manufacturing industries (SIC 390-399)	0.19	0.14	0.31
Manufacturing - nondurable goods (SIC 200-239, 260-319)	8.21	6.93	11.07
Food & kindred products (SIC 200-209)	1.95	1.91	2.03
Meat products (SIC 201)	0.54	0.53	0.56
Dairy products (SIC 202)	0.13	0.17	0.05
Bakery products (SIC 205)	0.29	0.29	0.28
Beverages (SIC 208)	0.21	0.27	0.08
Other & miscellaneous food & kindred products (SIC 200,203,204,206,207,209)	0.77	0.64	1.07
Tobacco manufactures (SIC 210-219)	0.12	0.07	0.24
Textile mill products (SIC 220-229)	1.58	1.11	2.64
Apparel & other textile products (SIC 230-239)	1.48	0.46	3.78
Paper & allied products (SIC 260-269)	0.44	0.52	0.28
Printing & publishing (SIC 270-279)	0.79	0.82	0.73
Chemicals & allied products (SIC 280-289)	0.51	0.57	0.37
Petroleum & coal products (SIC 290-299)	0.32	0.43	0.08
Rubber & miscellaneous plastics products (SIC 300-307)	0.39	0.41	0.34
Leather & leather products (SIC 310-319)	0.19	0.14	0.30
Stone, clay, & glass products (SIC 320-329)	0.43	0.50	0.28
Manufacturing, n.e.c. (SIC 200-399)	5.90	5.82	6.08
Transportation & public utilities (SIC 400-497)	5.70	7.26	2.22
Railroad transportation (SIC 400-409)	0.23	0.31	0.06
Local & interurban passenger transit (SIC 410-419)	0.62	0.80	0.23
Trucking & warehousing (SIC 420-429)	2.22	3.05	0.36
Trucking, local & long distance, trucking terminal facilities (SIC 421,422,423)	2.01	2.79	0.29
Public warehousing (SIC 422)	0.21	0.27	0.07
U.S. Postal Service (SIC 430-439)	0.14	0.16	0.09
Water transportation (SIC 440-449)	0.48	0.66	0.06
Transportation by air (SIC 450-459)	0.18	0.23	0.07
Pipe lines, except natural gas & electric, gas, & sanitary services (SIC 460,490)	0.75	1.01	0.19

Table A-8 (Cont'd)

Industry/SIC	Estimated Percentages Disabled Workers		
	Total	Male	Female
Transportation services (SIC 470-479)	0.09	0.11	0.05
Communication (SIC 480-489)	0.63	0.50	0.94
Transportation & public utilities, n.e.c. (SIC 400-497)	0.36	0.44	0.17
Wholesale trade (SIC 500-519)	1.05	1.26	0.60
Wholesale trade - durable goods (SIC 500-509)	0.41	0.52	0.17
Wholesale trade - nondurable goods (SIC 510-519)	0.45	0.50	0.33
Wholesale trade, n.e.c. (SIC 500-519)	0.20	0.25	0.09
Retail trade (SIC 520-599)	9.95	7.70	14.98
General merchandise stores (SIC 530-539)	0.60	0.24	1.40
Food stores (SIC 540-549)	1.21	1.11	1.44
Grocery stores (SIC 541)	0.90	0.80	1.12
Other & miscellaneous food stores (SIC 542-549)	0.31	0.31	0.33
Automotive dealers & service stations (SIC 550-559)	1.22	1.67	0.22
New & used car dealers, used car dealers (SIC 551,552)	0.24	0.32	0.08
Gasoline service stations(SIC 554)	0.69	0.97	0.08
Other, misc., and n.e.c. automotive dealers & service stations (SIC 550-559)	0.28	0.38	0.06
Furniture & home furnishings stores (SIC 547-579)	0.20	0.25	0.10
Eating & drinking places (SIC 580-589)	3.56	2.02	7.00
Other, miscellaneous, & n.e.c. retail trade (SIC 520,560-569,590-591)	3.16	2.41	4.82
Finance, insurance, & real estate (SIC 600-679)	1.87	1.61	2.46
Banking (SIC 600-609)	0.47	0.26	0.94
Insurance carriers (SIC 630-639)	0.47	0.44	0.53
Insurance agents, brokers & service (SIC 640-649)	0.24	0.23	0.26
Real estate, combined real estate, insurance, etc. (SIC 651-661)	0.45	0.46	0.44
Other & n.e.c. finance, insurance, & real estate (SIC 600,610-628,670-699)	0.24	0.22	0.30

Table A-8 (Cont'd)

Industry/SIC	Estimated Percentages Disabled Workers		
	Total	Male	Female
Services (SIC 700-899)	18.32	12.39	31.53
Hotels & other lodging places (SIC 700-709)	1.79	1.10	3.32
Personal services (SIC 720-729)	1.70	1.03	3.19
Business services (SIC 730-739)	1.13	1.17	1.05
Auto repair, services, & garages (SIC 750-759)	1.36	1.89	0.17
Automotive repair shops (SIC 753)	1.21	1.70	0.12
Other auto repair, services, & garages (SIC 751, 752, 754)	0.14	0.19	0.04
Miscellaneous repair services (SIC 760-769)	1.76	1.96	1.31
Motion pictures, amusement & recreation services (SIC 781-799)	0.49	0.54	0.38
Health services (SIC 800-809)	4.57	1.54	11.32
Nursing & personal care facilities (SIC 805)	0.52	0.13	1.37
Hospitals (SIC 806)	1.69	0.66	3.99
Health services, n.e.c. (SIC 800-809)	2.36	0.74	5.96
Educational services (SIC 820-829)	2.09	1.40	3.62
Elementary & secondary schools (SIC 821)	0.44	0.25	0.86
Colleges & universities (SIC 822)	0.24	0.20	0.31
Other educational services (SIC 823-829)	1.41	0.95	2.45
Social services (SIC 830-839)	0.68	0.50	1.08
Membership organizations (SIC 860-869)	0.31	0.32	0.27
Private households (SIC 880-889)	1.73	0.26	4.99
Other, miscellaneous, & n.e.c. services (SIC 700, 811, 841, 842, 891-899)	0.72	0.67	0.83
Public administration (SIC 901-972)	3.76	4.56	1.98
Non-manufacturing, n.e.c.	0.19	0.22	0.14
Nonclassifiable establishments & unknown (SIC 990-999)	22.48	22.82	21.75

Table A-9: Estimated numbers of workers in U.S. receiving SSA disability benefits by industry, and race:
Social Security Disability Awards, 1975-1976

Industry/SIC	Estimated Numbers Disabled Workers in U.S.				
	White	Black	Other	Unknown	Total
All	969894	166621	15929	5995	1158439
Agriculture, forestry, & fishing(SIC 011-097)	38460	7070	1665	223	47418
Agricultural production - crops (SIC 010-019)	34416	6259	1482	203	42360
Agricultural services (SIC 071-078)	2278	505	92	5	2880
Agricultural production - livestock, forestry, fishing, and trapping (SIC 021-029, 081-097)	1427	239	70	15	1751
Agriculture, n.e.c. (SIC 011-097)	339	67	21	0	427
Mining (SIC 100-149)	12026	746	124	21	12917
Bituminous, lignite, & anthracite coal mining (SIC 110-121)	4350	228	35	0	4613
Oil & gas extraction (SIC 130-138)	2215	170	9	14	2408
Metal mining, & nonmetallic minerals, except fuels (SIC 100-109, 140-149)	1097	114	22	7	1240
Mining, n.e.c. (SIC 100-149)	4364	234	58	0	4656
Construction (SIC 150-179)	88086	15973	1564	307	105930
General building contractors (SIC 152-154)	1846	161	4	10	2021
Heavy construction contractors (SIC 161-162)	3104	622	42	10	3778
Highway & street construction (SIC 161)	1216	185	7	0	1408
Heavy construction, except highway (SIC 162)	1888	437	35	10	2370
Special trade contractors (SIC 171-179)	20899	1897	219	12	23027
Plumbing, heating, air conditioners (SIC 171)	3594	331	33	0	3958
Painting, paper hanging, decorating (SIC 172)	3083	179	14	0	3276
Electrical work (SIC 173)	2165	96	10	0	2271
Masonry, stonework, & plastering (SIC 174)	1172	393	17	10	1592
Carpentering & flooring (SIC 175)	5807	355	66	0	6228
Roofing & sheet metal work (SIC 176)	1028	154	17	0	1199
Other & miscellaneous special trade contractors (SIC 170,177-179)	4050	389	62	2	4503
Construction, n.e.c. (SIC 150-179)	62237	13293	1299	275	77104

Table A-9 (Cont'd)

Industry/SIC	Estimated Numbers Disabled Workers in U.S.				
	White	Black	Other	Unknown	Total
Manufacturing (SIC 200-399)	222185	32462	2761	1010	258418
Manufacturing - durable goods (SIC 240-259, 330-399)	80189	13458	988	302	94937
Lumber & wood products (SIC 240-249)	8932	2674	128	22	11756
Logging camps & logging contractors (SIC 241)	2366	697	25	12	3100
Sawmills & planing mills (SIC 242)	2854	1036	50	10	3950
Other, miscellaneous, n.e.c. lumber & wood products (SIC 240, 243-245, 249)	3712	941	53	0	4706
Furniture & fixtures (SIC 250-259)	2744	450	81	21	3296
Primary metal industries (SIC 331-339)	19277	4128	173	45	23713
Blast furnace & basic steel products (SIC 331)	2303	554	31	0	2888
Iron & steel foundries (SIC 332)	10481	2258	77	20	12836
Nonferrous metal industries (SIC 333-336)	1127	188	12	0	1327
Other & n.e.c. primary metal industries (SIC 330, 339)	5366	1218	53	25	6662
Fabricated metal products (SIC 340-349)	4273	371	42	26	4712
Machinery, except electrical (SIC 350-359)	9124	664	70	45	9903
Electric & electronic equipment (SIC 360-369)	11949	1100	141	56	13246
Transportation equipment (SIC 370-379)	20765	3592	264	74	24695
Motor vehicles & equipment (SIC 371)	12185	2644	95	31	14955
Aircraft & parts (SIC 372)	5744	401	107	32	6284
Ship & boat building & repairing (SIC 373)	1844	448	40	0	2332
Other & n.e.c. transportation equipment (SIC 370, 374-379)	992	99	22	11	1124
Instruments & related products (SIC 380-387)	1253	80	26	11	1370
Miscellaneous manufacturing industries (SIC 390-399)	1872	309	63	2	2246
Manufacturing - nondurable goods (SIC 200-239, 260-319)	82067	11507	1189	398	95161

Table A-9 (Cont'd)

Industry/SIC	Estimated Numbers Disabled Workers in U.S.				
	White	Black	Other	Unknown	Total
Food & kindred products (SIC 200-209)	18334	3611	494	104	22543
Meat products (SIC 201)	4775	1340	86	43	6244
Dairy products (SIC 202)	1514	26	11	2	1553
Bakery products (SIC 205)	2813	501	17	0	3331
Beverages (SIC 208)	2176	238	48	10	2472
Other & miscellaneous food & kindred products (SIC 200, 203,204,206,207,209)	7056	1506	332	49	8943
Tobacco manufactures (SIC 210-219)	976	373	35	6	1390
Textile mill products (SIC 220-229)	16144	2066	94	43	18347
Apparel & other textile products (230-239)	14829	1945	307	116	17197
Paper & allied products (SIC 260-269)	4487	626	36	2	5151
Printing & publishing (SIC 270-279)	8329	760	44	44	9177
Chemicals & allied products (SIC 280-289)	5006	811	35	25	5877
Petroleum & coal products (SIC 290-299)	3594	111	20	10	3735
Rubber & miscellaneous plastics products (SIC 300-307)	3978	504	28	22	4532
Leather & leather products (SIC 310-319)	1979	154	54	0	2187
Stone, clay, & glass products (SIC 320-329)	4411	546	42	26	5025
Manufacturing, n.e.c. (SIC 200-399)	59929	7497	584	310	68320
Transportation & public utilities (SIC 400-497)	56297	8761	706	260	66024
Railroad transportation (SIC 400-409)	2068	529	50	14	2661
Local & interurban passenger transit (SIC 410-419)	6113	988	64	50	7215
Trucking & warehousing (SIC 420-429)	22010	3348	232	95	25685
Trucking, local & long distance, trucking terminal facilities (SIC 421,422,423)	20030	2989	205	84	23308
Public warehousing (SIC 422)	1980	359	27	11	2377
U.S. Postal Service (SIC 430-439)	1434	177	20	10	1641

Table A-9 (Cont'd)

Industry/SIC	Estimated Numbers Disabled Workers in U.S.				
	White	Black	Other	Unknown	Total
Water transportation (SIC 440-449)	4065	1282	150	13	5510
Transportation by air (SIC 450-459)	1886	168	20	15	2089
Pipe lines, except natural gas & electric, gas, & sanitary services (SIC 460,490)	7529	1088	79	27	8723
Transportation services (SIC 470-479)	905	113	12	0	1030
Communication (SIC 480-489)	6673	588	54	34	7349
Transportation & public utilities, n.e.c. (SIC 400-497)	3614	480	25	2	4121
Wholesale trade (SIC 500-519)	10785	1263	120	48	12216
Wholesale trade - durable goods (SIC 500-509)	4155	550	32	18	4755
Wholesale trade - nondurable goods (SIC 510-519)	4531	544	66	20	5161
Wholesale trade, n.e.c. (SIC 500-519)	2099	169	22	10	2300
Retail trade (SIC 520-599)	101219	11817	1575	699	115310
General merchandise stores (SIC 530-539)	6206	682	37	30	6955
Food stores (SIC 540-549)	12973	866	160	61	14060
Grocery stores (SIC 541)	9723	563	103	51	10440
Other & miscellaneous food stores (SIC 542-549)	3250	303	57	10	3620
Automotive dealers & service stations (SIC 550-559)	12479	1433	162	56	14130
New & used car dealers, used car dealers (SIC 551,552)	2603	219	11	0	2833
Gasoline service stations(SIC 554)	6929	931	114	38	8012
Other, misc., and n.e.c. automotive dealers & service stations (SIC 550-559)	2947	283	37	18	3285
Furniture & home furnishings stores (SIC 547-579)	2103	188	11	22	2324
Eating & drinking places (SIC 580-589)	33905	6204	867	313	41289
Other, miscellaneous, & n.e.c. retail trade (SIC 520,560-569, 590-591)	33553	2444	338	217	36552

Table A-9 (Cont'd)

Industry/SIC	Estimated Numbers Disabled Workers in U.S.				
	White	Black	Other	Unknown	Total
Finance, insurance, & real estate (SIC 600-679)	19865	1490	156	190	21701
Banking (SIC 600-609)	4996	354	45	87	5482
Insurance carriers (SIC 630-639)	5185	226	16	20	5447
Insurance agents, brokers & service (SIC 640-649)	2585	167	25	0	2777
Real estate, combined real estate, insurance, etc. (SIC 651-661)	4526	592	37	53	5208
Other & n.e.c. finance, insurance, & real estate (SIC 600,610-628, 670-699)	2573	151	33	30	2787
Services (SIC 700-899)	162524	45685	2646	1374	212229
Hotels & other lodging places (SIC 700-709)	16275	3945	374	110	20704
Personal services (SIC 720-729)	14435	4817	360	67	19679
Business services (SIC 730-739)	10991	1970	110	68	13139
Auto repair, services, & garages (SIC 750-759)	13474	2052	175	41	15742
Automotive repair shops (SIC 753)	12394	1496	147	36	14073
Other auto repair, services, & garages (SIC 751,752,754)	1080	556	28	5	1669
Miscellaneous repair services (SIC 760-769)	16828	3205	252	108	20393
Motion pictures, amusement & recreation services (SIC 781-799)	4964	606	77	38	5685
Health services (SIC 800-809)	41809	10052	590	462	52913
Nursing & personal care facilities (SIC 805)	4462	1446	60	32	6000
Hospitals (SIC 806)	14561	4635	254	145	19595
Health services, n.e.c. (SIC 800-809)	22786	3971	276	285	27318
Educational services (SIC 820-829)	20046	3765	275	132	24218
Elementary & secondary schools (SIC 821)	4245	769	52	46	5112
Colleges & universities (SIC 822)	2211	460	45	21	2737
Other educational services (SIC 823-829)	13590	2536	178	65	16369
Social services (SIC 830-839)	6303	1313	131	148	7895
Membership organizations (SIC 860-869)	2998	481	27	38	3544
Private households (SIC 880-889)	6996	12622	237	132	19987
Other, miscellaneous, & n.e.c. services (SIC 700,811,841,842, 891-899)	7405	857	38	30	8330
Public administration (SIC 901-972)	36841	5635	848	238	43562
Non-manufacturing, n.e.c.	2043	153	18	30	2244
Nonclassifiable establishments & unknown (SIC 990-999)	219563	35566	3746	1595	260470

Table A-10: Estimated percentages of workers in U.S. receiving SSA disability benefits by industry and race:
Social Security Disability Awards, 1975-1976

Industry/SIC	Estimated Percentages Disabled Workers in U.S.				
	White	Black	Other	Unknown	Total
All	100.00	100.00	100.00	100.00	100.00
Agriculture, forestry, & fishing(SIC 011-097)	3.97	4.24	10.45	3.72	4.09
Agricultural production - crops (SIC 010-019)	3.55	3.76	9.30	3.39	3.66
Agricultural services (SIC 071-078)	0.23	0.30	0.58	0.08	0.25
Agricultural production - livestock, forestry, fishing, and trapping (SIC 021-029, 081-097)	0.15	0.14	0.44	0.25	0.15
Agriculture, n.e.c. (SIC 011-097)	0.03	0.04	0.13	0.00	0.04
Mining (SIC 100-149)	1.24	0.45	0.78	0.35	1.12
Bituminous, lignite, & anthracite coal mining (SIC 110-121)	0.45	0.14	0.22	0.0	0.40
Oil & gas extraction (SIC 130-138)	0.23	0.10	0.06	0.23	0.21
Metal mining, & nonmetallic minerals, except fuels (SIC 100-109, 140-149)	0.11	0.07	0.14	0.12	0.11
Mining, n.e.c. (SIC 100-149)	0.45	0.14	0.36	0.0	0.40
Construction (SIC 150-179)	9.08	9.59	9.82	5.12	9.14
General building contractors (SIC 152-154)	0.19	0.10	0.03	0.17	0.17
Heavy construction contractors (SIC 161-162)	0.32	0.37	0.26	0.17	0.33
Highway & street construction (SIC 161)	0.13	0.11	0.04	0.0	0.12
Heavy construction, except highway (SIC 162)	0.19	0.26	0.22	0.17	0.20
Special trade contractors (SIC 171-179)	2.15	1.14	1.37	0.20	1.99
Plumbing, heating, air conditioners (SIC 171)	0.37	0.20	0.21	0.0	0.34
Painting, paper hanging, decorating (SIC 172)	0.32	0.11	0.09	0.0	0.28
Electrical work (SIC 173)	0.22	0.06	0.06	0.0	0.20
Masonry, stonework, & plastering (SIC 174)	0.12	0.24	0.11	0.17	0.14
Carpentering & flooring (SIC 175)	0.60	0.21	0.41	0.0	0.54
Roofing & sheet metal work (SIC 176)	0.11	0.09	0.11	0.0	0.10
Other & miscellaneous special trade contractors (SIC 170,177-179)	0.42	0.23	0.39	0.03	0.39
Construction, n.e.c. (SIC 150-179)	6.42	7.98	8.15	4.59	6.66

Table A-10 (Cont'd)

Industry/SIC	Estimated Percentages Disabled Workers in U.S.				Total
	White	Black	Other	Unknown	
Manufacturing (SIC 200-399)	22.91	19.48	17.33	16.85	22.31
Manufacturing - durable goods (SIC 240-259, 330-399)	8.27	8.08	6.20	5.04	8.20
Lumber & wood products (SIC 240-249)	0.92	1.60	0.80	0.37	1.01
Logging camps & logging contractors (SIC 241)	0.24	0.42	0.16	0.20	0.27
Sawmills & planing mills (SIC 242)	0.29	0.62	0.31	0.17	0.34
Other, miscellaneous, n.e.c. lumber & wood products (SIC 240, 243-245, 249)	0.38	0.56	0.33	0.0	0.41
Furniture & fixtures (SIC 250-259)	0.28	0.27	0.51	0.35	0.28
Primary metal industries (SIC 331-339)	1.99	2.53	1.09	0.75	2.05
Blast furnace & basic steel products (SIC 331)	0.24	0.33	0.19	0.0	0.25
Iron & steel foundries (SIC 332)	1.08	1.36	0.48	0.33	1.11
Nonferrous metal industries (SIC 333-336)	0.12	0.11	0.08	0.0	0.11
Other & n.e.c. primary metal industries (SIC 330, 339)	0.55	0.73	0.33	0.42	0.58
Fabricated metal products (SIC 340-349)	0.44	0.22	0.26	0.43	0.41
Machinery, except electrical (SIC 350-359)	0.94	0.40	0.44	0.75	0.85
Electric & electronic equipment (SIC 360-369)	1.23	0.66	0.89	0.93	1.14
Transportation equipment (SIC 370-379)	2.14	2.16	1.66	1.23	2.13
Motor vehicles & equipment (SIC 371)	1.26	1.59	0.60	0.52	1.29
Aircraft & parts (SIC 372)	0.59	0.24	0.67	0.53	0.54
Ship & boat building & repairing (SIC 373)	0.19	0.27	0.25	0.0	0.20
Other & n.e.c. transportation equipment (SIC 370, 374-379)	0.10	0.06	0.14	0.18	0.10
Instruments & related products (SIC 380-387)	0.13	0.05	0.16	0.18	0.12
Miscellaneous manufacturing industries (SIC 390-399)	0.19	0.19	0.40	0.03	0.19

Table A-10 (Cont'd)

Industry/SIC	Estimated Percentages Disabled Workers in U.S.				
	White	Black	Other	Unknown	Total
Manufacturing - nondurable goods (SIC 200-239,260-319)	8.46	6.91	7.46	6.64	8.21
Food & kindred products (SIC 200-209)	1.89	2.17	3.10	1.73	1.95
Meat products (SIC 201)	0.49	0.80	0.54	0.72	0.54
Dairy products (SIC 202)	0.16	0.02	0.07	0.03	0.13
Bakery products (SIC 205)	0.29	0.30	0.11	0.0	0.29
Beverages (SIC 208)	0.22	0.14	0.30	0.17	0.21
Other & miscellaneous food & kindred products (SIC 200, 203,204,206,207,209)	0.73	0.90	2.08	0.82	0.77
Tobacco manufactures (SIC 210-219)	0.10	0.22	0.22	0.10	0.12
Textile mill products (SIC 220-229)	1.66	1.24	0.59	0.72	1.58
Apparel & other textile products (SIC 230-239)	1.53	1.17	1.93	1.93	1.48
Paper & allied products (SIC 260-269)	0.46	0.38	0.23	0.03	0.44
Printing & publishing (SIC 270-279)	0.86	0.46	0.28	0.73	0.79
Chemicals & allied products (SIC 280-289)	0.52	0.49	0.22	0.42	0.51
Petroleum & coal products (SIC 290-299)	0.37	0.07	0.13	0.17	0.32
Rubber & miscellaneous plastics products (SIC 300-307)	0.41	0.30	0.18	0.37	0.39
Leather & leather products (SIC 310-319)	0.20	0.09	0.34	0.0	0.19
Stone, clay, & glass products (SIC 320-329)	0.45	0.33	0.26	0.43	0.43
Manufacturing, n.e.c. (SIC 200-399)	6.18	4.50	3.67	5.17	5.90
Transportation & public utilities (SIC 400-497)	5.80	5.26	4.43	4.34	5.70
Railroad transportation (SIC 400-409)	0.21	0.32	0.31	0.23	0.23
Local & interurban passenger transit (SIC 410-419)	0.63	0.59	0.40	0.83	0.62
Trucking & warehousing (SIC 420-429)	2.27	2.01	1.46	1.58	2.22
Trucking, local & long distance, trucking terminal facilities (SIC 421,422,423)	2.07	1.79	1.29	1.40	2.01
Public warehousing (SIC 422)	0.20	0.22	0.17	0.18	0.21

Table A-10 (Cont'd)

Industry/SIC	Estimated Percentages Disabled Workers in U.S.				Total
	White	Black	Other	Unknown	
U.S. Postal Service (SIC 430-439)	0.15	0.11	0.13	0.17	0.14
Water transportation (SIC 440-449)	0.42	0.77	0.94	0.22	0.48
Transportation by air (SIC 450-459)	0.19	0.10	0.13	0.25	0.18
Pipe lines, except natural gas & electric, gas, & sanitary services (SIC 460,490)	0.78	0.65	0.50	0.45	0.75
Transportation services (SIC 470-479)	0.09	0.07	0.08	0.00	0.09
Communication (SIC 480-489)	0.69	0.35	0.34	0.57	0.63
Transportation & public utilities, n.e.c. (SIC 400-497)	0.37	0.29	0.16	0.03	0.36
Wholesale trade (SIC 500-519)	1.11	0.76	0.75	0.80	1.05
Wholesale trade - durable goods (SIC 500-509)	0.43	0.33	0.20	0.30	0.41
Wholesale trade - nondurable goods (SIC 510-519)	0.47	0.33	0.41	0.33	0.45
Wholesale trade, n.e.c. (SIC 500-519)	0.22	0.10	0.14	0.17	0.20
Retail trade (SIC 520-599)	10.44	7.09	9.89	11.66	9.95
General merchandise stores (SIC 530-539)	0.64	0.41	0.23	0.50	0.60
Food stores (SIC 540-549)	1.34	0.52	1.00	1.02	1.21
Grocery stores (SIC 541)	1.00	0.34	0.65	0.85	0.90
Other & miscellaneous food stores (SIC 542-549)	0.34	0.18	0.36	0.17	0.31
Automotive dealers & service stations (SIC 550-559)	1.29	0.86	1.02	0.93	1.22
New & used car dealers, used car dealers (SIC 551,552)	0.27	0.13	0.07	0.00	0.24
Gasoline service stations(SIC 554)	0.71	0.56	0.72	0.63	0.69
Other, misc., and n.e.c. automotive dealers & service stations (SIC 550-559)	0.30	0.17	0.23	0.30	0.28
Furniture & home furnishings stores (SIC 547-579)	0.22	0.11	0.07	0.37	0.20
Eating & drinking places (SIC 580-589)	3.50	3.72	5.44	5.22	3.56
Other, miscellaneous, & n.e.c. retail trade (SIC 520,560-569, 590-591)	3.46	1.47	2.12	3.62	3.16
Finance, insurance, & real estate (SIC 600-679)	2.05	0.89	0.98	3.17	1.87
Banking (SIC 600-609)	0.52	0.21	0.28	1.45	0.47
Insurance carriers (SIC 630-639)	0.53	0.14	0.10	0.33	0.47

Table A-10 (Cont'd)

Industry/SIC	Estimated Percentages Disabled Workers in U.S.				Total
	White	Black	Other	Unknown	
Insurance agents, brokers & service (SIC 640-649)	0.27	0.10	0.16	0.0	0.24
Real estate, combined real estate, insurance, etc. (SIC 651-661)	0.47	0.36	0.23	0.88	0.45
Other & n.e.c. finance, insurance, & real estate (SIC 600,610-628, 670-699)	0.27	0.09	0.21	0.50	0.24
Services (SIC 700-899)	16.76	27.42	16.61	22.92	18.32
Hotels & other lodging places (SIC 700-709)	1.68	2.37	2.35	1.83	1.79
Personal services (SIC 720-729)	1.49	2.89	2.26	1.12	1.70
Business services (SIC 730-739)	1.13	1.18	0.69	1.13	1.13
Auto repair, services, & garages (SIC 750-759)	1.39	1.23	1.10	0.68	1.36
Automotive repair shops (SIC 753)	1.28	0.90	0.92	0.60	1.21
Other auto repair, services, & garages (SIC 751,752,754)	0.11	0.33	0.18	0.08	0.14
Miscellaneous repair services (SIC 760-769)	1.74	1.92	1.58	1.80	1.76
Motion pictures, amusement & recreation services (SIC 781-799)	0.51	0.36	0.48	0.63	0.49
Health services (SIC 800-809)	4.31	6.03	3.70	7.71	4.57
Nursing & personal care facilities (SIC 805)	0.46	0.87	0.38	0.53	0.52
Hospitals (SIC 806)	1.50	2.78	1.59	2.42	1.69
Health services, n.e.c. (SIC 800-809)	2.35	2.38	1.73	4.75	2.36
Educational services (SIC 820-829)	2.07	2.26	1.73	2.20	2.09
Elementary & secondary schools (SIC 821)	0.44	0.46	0.33	0.77	0.44
Colleges & universities (SIC 822)	0.23	0.28	0.28	0.35	0.24
Other educational services (SIC 823-829)	1.40	1.52	1.12	1.08	1.41
Social services (SIC 830-839)	0.65	0.79	0.82	2.47	0.68
Membership organizations (SIC 860-869)	0.31	0.29	0.17	0.63	0.31
Private households (SIC 880-889)	0.72	7.58	1.49	2.20	1.73
Other, miscellaneous, & n.e.c. services (SIC 700,811,841,842, 891-899)	0.76	0.51	0.24	0.50	0.72
Public administration (SIC 901-972)	3.80	3.38	5.32	3.97	3.76
Non-manufacturing, n.e.c.	0.21	0.09	0.11	0.50	0.19
Nonclassifiable establishments & unknown (SIC 990-999)	22.64	21.35	23.52	26.61	22.48