

Tables

Asbestosis

Table 1 **Page 16**
Estimated numbers of workers with potential exposure to asbestos dust, by state, 1986

Table 2 **Page 17**
Non-mining industries with the highest proportions of workers potentially exposed to asbestos dust, 1986

Table 3 **Page 18**
Non-mining industries with the largest numbers of workers potentially exposed to asbestos dust, 1986

Table 4 **Page 19**
Medicare hospitalizations with any mention of asbestosis, by state, from 1984 to 1989

Table 5 **Page 20**
Asbestosis cases reported to state workers' compensation agencies, by state, from 1980 to 1987

Table 6 **Page 21**
Multiple cause of death listings with any mention of asbestosis in United States residents age 15 and over, from 1968 to 1987

Table 7 **Page 22**
Multiple cause of death listings with any mention of malignant neoplasm of pleura in United States residents age 15 and over, from 1968 to 1987

Table 8 **Page 23**
Multiple cause of death listings with any mention of malignant neoplasm of peritoneum in United States residents age 15 and over, from 1968 to 1987

Table 9 **Page 24**
Multiple cause of death listings with any mention of asbestosis in United States residents age 15 and over, by state, from 1980 to 1987

Table 10 **Page 25**
Multiple cause of death listings with any mention of malignant neoplasm of pleura in United States residents age 15 and over, by state, from 1980 to 1987

Table 11 **Page 26**
Multiple cause of death listings with any mention of malignant neoplasm of peritoneum in United States residents age 15 and over, by state, from 1980 to 1987

Coal Workers' Pneumoconiosis

Table 12 **Page 27**
Mining industries with the largest numbers of workers potentially exposed to coal mine dust, 1989

Table 13 **Page 28**
Estimated numbers of workers with potential exposure to coal mine dust, by state, 1986

Table 14 **Page 29**
Number of discharges with any mention of coal workers' pneumoconiosis from short-stay non-federal hospitals, from 1970 to 1987

Table 15 **Page 30**
Number of cases of pneumoconiosis identified in the Coal Workers' X-ray Surveillance Program (CWXSP) from 1987 to 1989, by tenure (years in coal mining)

Table 16 **Page 31**
Anthracosis (coal workers' pneumoconiosis) cases reported to state workers' compensation agencies, by state, from 1980 to 1987

Table 17 **Page 32**
Medicare hospitalizations with any mention of coal workers' pneumoconiosis, by state, from 1984 to 1989

Table 18 **Page 33**
Number of cases submitted to the National Coal Workers' Autopsy Study (NCWAS), and number diagnosed as having pneumoconiosis, from 1971 to 1989

Table 19 **Page 34**
Multiple cause of death listings with any mention of coal workers' pneumoconiosis in United States residents age 15 and over, from 1968 to 1987

Table 20 **Page 35**
Multiple cause of death listings with any mention of coal workers' pneumoconiosis in United States residents age 15 and over, by state, from 1980 to 1987

Table 21 **Page 36**
Estimated number of underground coal miners and number of miners examined in the Coal Workers' X-ray Surveillance Program (CWXSP), from 1970 to 1987

Silicosis

Table 22 **Page 37**
Non-mining industries with the highest proportions of workers potentially exposed to respirable crystalline silica dust, 1986

Table 23 **Page 38**
Industries with the largest numbers of workers potentially exposed to respirable crystalline silica dust, 1986

Table 24 **Page 39**
Estimated numbers of workers with potential exposure to respirable crystalline silica dust, by state, 1986

Table 25 Page 40
Medicare hospitalizations with any mention of silicosis, by state, from 1984 to 1989

Table 26 Page 41
Silicosis cases reported to state workers' compensation agencies, by state, from 1980 to 1987

Table 27 Page 42
Multiple cause of death listings with any mention of silicosis in United States residents age 15 and over, from 1968 to 1987

Table 28 Page 43
Multiple cause of death listings with any mention of silicosis in United States residents age 15 and over, by state, from 1980 to 1987

Exposure to Cotton Dust

Table 29 Page 44
Industries with the highest proportions of workers potentially exposed to cotton dust, 1986

Table 30 Page 45
Industries with the largest numbers of workers potentially exposed to cotton dust, 1986

Pneumonopathy due to Inhalation of Other Dust

Table 31 Page 46
Medicare hospitalizations with any mention of pneumonopathy due to inhalation of other dust, by state, from 1984 to 1989

Table 32 Page 47
Byssinosis cases reported to state workers' compensation agencies, by state, from 1980 to 1987

Table 33 Page 48
Multiple cause of death listings with any mention of pneumonopathy due to inhalation of other dust (ICD-9 code 504) in United States residents age 15 and over,

from 1979 to 1987

Table 34 Page 49
Multiple cause of death listings with any mention of pneumonopathy due to inhalation of other dust (ICD-9 code 504) in United States residents age 15 and over, by state, from 1980 to 1987

Hypersensitivity Pneumonitis

Table 35 Page 50
Medicare hospitalizations with any mention of hypersensitivity pneumonitis, by state, from 1984 to 1989

Table 36 Page 51
Medicare hospitalizations with any mention of farmers' lung, by state, from 1984 to 1989

Table 37 Page 52
Multiple cause of death listings with any mention of hypersensitivity pneumonitis in United States residents age 15 and over, from 1979 to 1987

Table 38 Page 53
Multiple cause of death listings with any mention of hypersensitivity pneumonitis in United States residents age 15 and over, by state, from 1980 to 1987

Toxic Agents

Table 39 Page 54
Number of reported occupational respiratory conditions due to toxic agents by industry division for the United States, private sector, from 1973 to 1988

Table 40 Page 55
Rate per 10,000 full-time workers of reported occupational respiratory conditions due to toxic agents by industry division for the United States, private sector, from 1973 to 1988

Table 41 Page 56
Cases of toxic lower respiratory conditions reported to state workers' compensation agencies, by state, from 1980 to 1987

Table 42 Page 57
Industries with the highest incidence rates of reported occupational respiratory conditions due to toxic agents, private sector, 1988

Table 43 Page 58
Multiple cause of death listing with any mention of respiratory conditions due to chemical fumes and vapors in United States residents age 15 and over, by state, from 1980 to 1987

Occupational Illness

Table 44 Page 59
Number of reported occupational illnesses by types of illness for the United States, private sector, from 1973 to 1988

Table 45 Page 60
Percent of reported occupational illnesses by type of illness for the United States, private sector, from 1973 to 1988

Table 46 Page 61
Industries with the largest incidence rates of reported occupational illnesses, private sector, 1988

Table 47 Page 62
Rate per 10,000 full-time workers of reported occupational illnesses by industry division for the United States, private sector, from 1973 to 1988

Table 48 Page 63
Number of reported occupational injuries and illnesses by industry division for the United States, private sector, from 1980 to 1987 (in thousands)

Table 49 **Page 64**
Number of reported occupational illnesses by industry division for the United States, private sector, from 1973 to 1988

Dust Diseases of the Lungs

Table 50 **Page 65**
Number of cases of reported occupational dust diseases of the lungs by industry division for the United States, private sector, from 1973 to 1988

Table 51 **Page 66**
Rate per 10,000 full-time workers of reported occupational dust diseases of the lungs by industry division for the United States, private sector, from 1973 to 1988

Table 52 **Page 67**
Industries with the highest incidence rates of reported occupational dust diseases of the lungs, private sector, 1988

Table 53 **Page 68**
Number of occupational respiratory illnesses reported by mine operators, from 1980 to 1988

Dust Exposure Data

Table 54 **Page 69**
Number of dust samples collected by the Mine Safety and Health Administration (MSHA) or Occupational Safety and Health Administration (OSHA) inspectors for selected occupational respiratory hazards, and the percents of these samples that exceed various levels, from 1984 to 1988

Table 55 **Page 70**
Number of dust samples collected by the Mine Safety and Health Administration (MSHA) or Occupational Safety and Health Administration (OSHA) inspectors for selected occupational respiratory

hazards and the percents of these samples that exceed various levels, 1988

Compensation

Table 56 **Page 71**
Old Age, Survivors, Disability Insurance (OASDI) Awards for disabled workers with a respiratory diagnosis, by major industry group, from 1981 to 1987

Table 57 **Page 72**
Number of Black Lung beneficiaries and payments by the Social Security Administration and Department of Labor, from 1980 to 1987

Table 58 **Page 73**
Indemnity compensation for selected occupational respiratory conditions, reported by eight state workers' compensation agencies, 1986

Table 59 **Page 74**
Cases of non-toxic lower respiratory conditions reported to state workers' compensation agencies, by state, from 1980 to 1987

Table 1. Estimated numbers of workers with potential exposure to asbestos dust, by state, 1986

State	Workers with Potential Exposure	
	Estimate # 1	Estimate # 2
Alabama.....	10,306	11,484
Alaska.....	722	1,298
Arizona.....	11,249	12,425
Arkansas.....	6,528	6,953
California.....	76,882	80,448
Colorado.....	7,420	9,794
Connecticut.....	14,045	14,140
District of Columbia.....	807	811
Delaware.....	1,961	1,965
Florida.....	29,715	30,746
Georgia.....	18,198	18,978
Hawaii.....	1,477	1,496
Idaho.....	1,577	1,893
Illinois.....	37,523	39,928
Indiana.....	20,748	21,562
Iowa.....	7,451	7,623
Kansas.....	6,755	8,147
Kentucky.....	10,679	14,475
Louisiana.....	9,344	15,396
Maine.....	3,064	3,080
Maryland.....	11,239	11,509
Massachusetts.....	23,847	24,010
Michigan.....	27,725	28,790
Minnesota.....	10,989	11,578
Mississippi.....	6,743	7,444
Missouri.....	13,753	14,320
Montana.....	990	1,537
Nebraska.....	3,067	3,200
Nevada.....	2,206	2,663
New Hampshire.....	4,633	4,662
New Jersey.....	24,234	24,461
New Mexico.....	2,703	4,473
New York.....	43,104	43,683
North Carolina.....	18,780	19,098
North Dakota.....	936	1,453
Ohio.....	39,745	41,916
Oklahoma.....	6,449	10,561
Oregon.....	6,039	6,224
Pennsylvania.....	36,987	40,296
Rhode Island.....	4,286	4,305
South Carolina.....	10,391	10,550
South Dakota.....	1,251	1,496
Tennessee.....	15,440	16,135
Texas.....	44,031	61,023
Utah.....	4,194	5,000
Vermont.....	1,884	1,955
Virginia.....	17,140	19,067
Washington.....	10,062	10,332
West Virginia.....	3,035	7,054
Wisconsin.....	15,566	15,704
Wyoming.....	829	2,891
TOTAL.....	688,729	760,032

NOTE: Both Estimate # 1 and Estimate # 2 are based on 1986 County Business Patterns and National Occupational Exposure Survey (NOES) estimates of the numbers of workers potentially exposed to asbestos. The differences between the two estimates are for establishments engaged in mining (SICs 10-14). The only NOES estimate used for SICs 10-14 is 0.49% of workers in SIC 1389. Estimate # 1 assumes 0.49% of workers in SIC 138 have potential exposure, but all other workers in SICs 10-14 have 0% potential exposure. Estimate # 2 assumes 10% of all workers in SICs 10-14 (and also SIC 138) have potential exposure to asbestos.

Table 2. Non-mining industries with the highest proportions of workers potentially exposed to asbestos dust, 1986

SIC	Description	Percent exposed (NOES)	Estimated workers exposed (1986)
329	Abrasive, asbestos, and miscellaneous nonmetallic mineral products.....	49.5	55,894
176	Roofing and sheet metal work.....	32.2	64,897
355	Special industry machinery, except metalworking machinery.....	24.2	40,954
363	Household appliances.....	18.8	24,782
179	Miscellaneous special trade contractors.....	16.3	68,288
339	Miscellaneous primary metal products.....	16.1	4,563
335	Rolling, drawing, and extruding of nonferrous metals.....	11.4	18,477
245	Wood buildings and mobile homes.....	11.3	7,340
285	Paints, varnishes, lacquers, enamels, and allied products.....	10.7	5,979
375	Motorcycles, bicycles, and parts.....	10.0	1,228

NOTE: Estimates of the proportion of workers potentially exposed to asbestos dust are based on data from the 1986 County Business Patterns and the National Occupational Exposure Survey (NOES).

Table 3. Non-mining industries with the largest numbers of workers potentially exposed to asbestos dust, 1986

SIC	Description	Percent exposed (NOES)	Estimated workers exposed (1986)
179	Miscellaneous special trade contractors.....	16.3	68,288
176	Roofing and sheet metal work.....	32.2	64,897
329	Abrasive, asbestos, and miscellaneous nonmetallic mineral products.....	49.5	55,894
367	Electronic components and accessories.....	9.7	54,069
355	Special industry machinery, except metalworking machinery.....	24.2	40,954
344	Fabricated structural metal products.....	9.0	35,561
753	Automotive repair shops.....	7.6	32,869
363	Household appliances.....	18.8	24,782
171	Plumbing, heating (except electric), and air conditioning.....	3.7	21,404
335	Rolling, drawing, and extruding of nonferrous metals.....	11.4	18,477

NOTE: Estimates of the number of workers potentially exposed to asbestos dust are based on data from the 1986 County Business Patterns and the National Occupational Exposure Survey (NOES).

Table 4. Medicare hospitalizations with any mention of asbestosis, by state, from 1984 to 1989

State	Number of hospitalizations					
	1984	1985	1986	1987	1988	1989
Alabama.....	60	69	111	136	138	181
Alaska.....	-	3	7	6	-	5
Arizona.....	66	32	51	88	47	64
Arkansas.....	26	12	34	21	53	14
California.....	607	578	587	766	866	884
Colorado.....	16	32	21	45	24	41
Connecticut.....	48	66	64	64	71	117
Delaware.....	30	34	41	52	52	52
District of Columbia.....	11	1	4	11	13	3
Florida.....	199	255	294	319	402	482
Georgia.....	54	40	48	90	84	115
Hawaii.....	17	19	11	12	17	22
Idaho.....	25	28	24	30	11	35
Illinois.....	96	111	200	156	138	220
Indiana.....	16	11	10	24	25	55
Iowa.....	15	8	27	24	22	34
Kansas.....	5	26	20	38	23	31
Kentucky.....	19	26	25	50	34	55
Louisiana.....	94	84	112	89	127	184
Maine.....	81	69	81	103	83	81
Maryland.....	63	96	143	156	175	198
Massachusetts.....	68	158	289	385	346	369
Michigan.....	43	34	36	42	51	71
Minnesota.....	22	47	25	49	70	78
Mississippi.....	70	57	124	150	186	199
Missouri.....	64	65	58	69	98	105
Montana.....	4	13	8	12	21	28
Nebraska.....	14	11	16	35	28	33
Nevada.....	22	25	14	17	30	13
New Hampshire.....	23	37	27	48	49	36
New Jersey.....	326	497	726	612	712	760
New Mexico.....	6	13	10	13	16	27
New York.....	84	193	288	349	401	437
North Carolina.....	52	42	67	110	157	161
North Dakota.....	21	-	-	1	-	9
Ohio.....	38	62	124	145	140	206
Oklahoma.....	15	16	22	15	25	12
Oregon.....	92	107	63	103	108	72
Pennsylvania.....	439	520	512	626	632	826
Rhode Island.....	17	15	8	12	16	22
South Carolina.....	31	55	83	83	96	79
South Dakota.....	1	7	3	6	1	6
Tennessee.....	42	68	95	77	107	76
Texas.....	150	214	213	318	359	529
Utah.....	13	10	18	17	10	10
Vermont.....	3	3	4	5	5	10
Virginia.....	122	114	154	227	301	281
Washington.....	210	160	234	250	265	272
West Virginia.....	32	67	49	99	99	91
Wisconsin.....	34	38	30	45	53	62
Wyoming.....	3	3	10	1	9	-
TOTAL.....	3,626	4,252	5,226	6,203	6,801	7,758

NOTE: Asbestosis = ICD-9CM code 501.

SOURCE: Medicare Provider Analysis and Review (MEDPAR), Office of Statistics and Data Management, Bureau of Data Management and Strategy, Health Care Financing Administration.

- indicates quantity zero.

Table 5. Asbestosis cases reported to state workers' compensation agencies, by state, from 1980 to 1987

State	Number of cases							
	1980	1981	1982	1983	1984	1985	1986	1987
Alabama.....								
Alaska.....		-	-	-	1	2	3	-
Arizona.....	-	-	1	-	-	-	1	-
Arkansas.....	1	-	-	-	-	-	1	-
California.....	11	10	7	25	8	8	28	22
Colorado.....	3	-	-	5	1	5	5	11
Connecticut....								
Delaware.....	2	2	5	6	8	10	15	4
District of Columbia.....								
Florida.....								
Georgia.....								
Hawaii.....	-	-	1	-	1	15	18	29
Idaho.....	-	-						
Illinois.....								
Indiana.....	1	1	1	-	-	1	-	-
Iowa.....	-	3	-	-	1	1	3	1
Kansas.....								
Kentucky.....	3	8	19	3	4	4	5	5
Louisiana.....								8
Maine.....	-	-	8					15
Maryland.....	1	2	4	1	2	3	-	1
Massachusetts..	-							
Michigan.....	-	1	-	1	2	2	1	2
Minnesota.....	6	15	6	12	8			
Mississippi....	1	26	32	163	4	47	32	240
Missouri.....	2	2	1	2	1	1	3	3
Montana.....	-	-	-	-	-	-	-	-
Nebraska.....	1	-	-	1	-	2	4	3
Nevada.....								
New Hampshire..								
New Jersey.....	2							
New Mexico.....	-	-	-	-	-	-	-	-
New York.....	29	16	22	22	22	34	33	48
North Carolina.	8	10	8	19	17	3	4	10
North Dakota...								
Ohio.....	12	34	44	44	45	86	461	1,099
Oklahoma.....								
Oregon.....	-	-	1	4	6	5	-	3
Pennsylvania...								
Rhode Island...								
South Carolina.								
South Dakota...								
Tennessee.....	3	2	16	2	2	9	8	50
Texas.....								
Utah.....	1	1	-	2	2	2		
Vermont.....	2	-	-	-	-	-		
Virginia.....	5		15	21	18	12	2	2
Washington.....	36	42	33	62	51	47	38	28
West Virginia..								
Wisconsin.....	4	6	9	5	7	13	15	21
Wyoming.....	-	-	-	-	-	-	-	-

NOTE: Asbestos = SDS code 283. Statistics for Arkansas, Delaware, New York, and North Carolina are for closed cases. Statistics for other states are for cases that occurred or were received during the year.

SOURCE: Bureau of Labor Statistics Supplementary Data System.

- indicates quantity zero. Empty space indicates information not available.

Table 6. Multiple cause of death listings with any mention of asbestosis in United States residents age 15 and over, from 1968 to 1987

Year	Number of cases
1968.....	77
1969.....	71
1970.....	87
1971.....	83
1972.....	138
1973.....	117
1974.....	114
1975.....	126
1976.....	143
1977.....	163
1978.....	240
1979.....	309
1980.....	339
1981.....	318
1982.....	428
1983.....	476
1984.....	445
1985.....	534
1986.....	702
1987.....	710

NOTE: Asbestosis = ICD-8 code 515.2 and ICD-9 code 501.

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1968-87.

Table 7. Multiple cause of death listings with any mention of malignant neoplasm of pleura in United States residents age 15 and over, from 1968 to 1987

Year	Number of cases
1968.....	390
1969.....	366
1970.....	424
1971.....	431
1972.....	426
1973.....	394
1974.....	412
1975.....	428
1976.....	446
1977.....	434
1978.....	471
1979.....	448
1980.....	457
1981.....	453
1982.....	504
1983.....	490
1984.....	532
1985.....	467
1986.....	494
1987.....	504

NOTE: Malignant neoplasm of pleura = ICD-8 code 163.0 (malignant neoplasm of pleura) and ICD-9 codes 163.0 (malignant neoplasm of parietal pleura), 163.1 (malignant neoplasm of visceral pleura), and 163.9 (malignant neoplasm of pleura, unspecified).

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1968-87.

Table 8. Multiple cause of death listings with any mention of malignant neoplasm of peritoneum in United States residents age 15 and over, from 1968 to 1987

Year	Number of cases
1968.....	430
1969.....	394
1970.....	444
1971.....	400
1972.....	410
1973.....	409
1974.....	398
1975.....	399
1976.....	409
1977.....	414
1978.....	341
1979.....	281
1980.....	249
1981.....	259
1982.....	257
1983.....	231
1984.....	262
1985.....	255
1986.....	249
1987.....	316

NOTE: Malignant neoplasm of peritoneum = ICD-8 code 158.9 (malignant neoplasm of peritoneum, excluding malignant neoplasm of retroperitoneal tissue) and ICD-9 codes 158.8 (malignant neoplasm of specified parts of peritoneum) and 158.9 (malignant neoplasm of peritoneum, unspecified).

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1968-87.

Table 9. Multiple cause of death listings with any mention of asbestosis in United States residents age 15 and over, by state, from 1980 to 1987

State	Number of cases							
	1980	1981	1982	1983	1984	1985	1986	1987
Alabama.....	2	-	5	4	4	7	9	6
Alaska.....	-	-	-	-	-	-	1	-
Arizona.....	2	2	6	3	7	10	5	8
Arkansas.....	1	2	2	1	3	-	7	10
California.....	59	57	86	67	77	83	112	80
Colorado.....	-	-	-	6	7	3	6	3
Connecticut.....	3	4	2	11	7	8	12	9
Delaware.....	-	-	-	3	-	1	3	3
District of Columbia.....	-	1	-	1	-	-	2	1
Florida.....	10	9	12	20	19	27	35	41
Georgia.....	4	2	8	5	2	4	11	12
Hawaii.....	-	1	3	1	2	5	2	3
Idaho.....	-	-	4	1	2	2	3	6
Illinois.....	8	13	4	11	11	14	15	10
Indiana.....	4	2	6	3	4	3	3	3
Iowa.....	-	1	-	1	1	3	4	6
Kansas.....	-	-	1	1	-	2	3	5
Kentucky.....	-	6	2	-	2	4	4	3
Louisiana.....	3	5	9	9	4	11	11	7
Maine.....	6	11	3	8	3	7	11	9
Maryland.....	2	7	11	12	9	13	16	18
Massachusetts.....	33	14	26	29	16	24	37	31
Michigan.....	4	4	5	8	3	6	6	11
Minnesota.....	6	2	4	9	8	1	5	4
Mississippi.....	2	5	10	4	1	5	8	12
Missouri.....	2	5	8	6	3	9	12	7
Montana.....	-	2	2	2	2	3	2	1
Nebraska.....	-	-	-	-	1	-	4	5
Nevada.....	1	2	1	1	1	3	4	3
New Hampshire.....	5	5	3	5	1	1	9	6
New Jersey.....	46	43	52	51	49	63	82	80
New Mexico.....	1	1	1	1	-	1	1	4
New York.....	13	12	16	25	24	10	25	30
North Carolina.....	8	4	6	9	10	15	13	17
North Dakota.....	2	-	2	1	-	-	-	-
Ohio.....	9	8	10	9	10	17	14	21
Oklahoma.....	-	-	4	6	-	2	2	5
Oregon.....	6	9	8	13	13	10	12	18
Pennsylvania.....	35	32	33	36	60	54	54	65
Rhode Island.....	1	6	4	4	3	2	3	-
South Carolina.....	4	2	4	8	6	9	9	8
South Dakota.....	-	-	-	1	-	1	-	-
Tennessee.....	3	-	10	5	5	8	10	4
Texas.....	8	6	12	19	12	26	25	48
Utah.....	1	2	1	1	1	-	2	2
Vermont.....	-	-	1	1	1	1	1	2
Virginia.....	14	11	11	18	14	27	24	22
Washington.....	23	18	20	24	28	21	47	40
West Virginia.....	4	-	4	6	3	5	11	15
Wisconsin.....	4	2	6	6	6	3	5	4
Wyoming.....	-	-	-	-	-	-	-	2
TOTAL.....	339	318	428	476	445	534	702	710

NOTE: Asbestosis = ICD-9 code 501.

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1980-87.

- indicates quantity zero.

Table 10. Multiple cause of death listings with any mention of malignant neoplasm of pleura in United States residents age 15 and over, by state, from 1980 to 1987

State	Number of cases							
	1980	1981	1982	1983	1984	1985	1986	1987
Alabama.....	9	10	2	3	13	10	8	8
Alaska.....	-	-	-	2	-	-	-	-
Arizona.....	6	-	7	8	5	5	10	7
Arkansas.....	2	4	4	-	1	3	2	6
California.....	38	46	47	42	41	50	45	48
Colorado.....	6	5	4	2	5	5	8	7
Connecticut....	5	7	7	8	6	7	5	5
Delaware.....	1	1	1	3	5	1	3	1
District of								
Columbia.....	3	-	-	-	2	-	2	1
Florida.....	31	33	47	39	57	36	30	58
Georgia.....	1	10	10	2	4	8	7	4
Hawaii.....	-	1	2	-	-	-	3	2
Idaho.....	-	-	-	-	3	2	2	3
Illinois.....	32	30	28	33	29	26	26	21
Indiana.....	8	20	2	5	5	5	10	11
Iowa.....	8	11	11	15	12	7	8	10
Kansas.....	5	2	6	6	10	3	3	7
Kentucky.....	8	-	10	3	9	9	4	5
Louisiana.....	7	12	3	8	6	3	3	4
Maine.....	4	2	3	4	4	-	3	3
Maryland.....	3	9	6	6	6	12	15	5
Massachusetts..	10	10	18	7	18	12	11	6
Michigan.....	13	17	11	24	16	13	21	17
Minnesota.....	9	7	7	11	7	4	6	9
Mississippi....	2	4	4	1	8	4	6	2
Missouri.....	6	10	8	6	6	4	6	8
Montana.....	3	1	2	5	4	3	2	2
Nebraska.....	3	1	2	2	2	2	2	2
Nevada.....	1	-	-	2	1	-	1	-
New Hampshire..	-	1	3	3	4	3	3	-
New Jersey.....	38	34	41	49	44	28	20	17
New Mexico.....	1	3	1	1	2	2	2	1
New York.....	37	50	48	38	52	45	45	65
North Carolina.	13	7	5	6	4	10	8	20
North Dakota...	2	-	-	2	3	3	3	1
Ohio.....	19	12	26	18	26	17	19	19
Oklahoma.....	7	-	4	1	6	5	7	3
Oregon.....	6	4	6	9	4	7	18	9
Pennsylvania...	30	27	26	28	19	29	30	31
Rhode Island...	1	3	2	3	2	1	6	3
South Carolina.	6	8	11	7	6	8	9	7
South Dakota...	1	3	1	-	2	4	-	1
Tennessee.....	5	6	12	11	8	11	12	9
Texas.....	21	12	14	20	12	11	15	11
Utah.....	-	2	-	2	4	2	3	2
Vermont.....	-	2	-	-	1	-	1	-
Virginia.....	7	4	10	10	10	13	5	10
Washington.....	19	8	25	21	20	22	22	24
West Virginia..	5	6	6	4	6	3	1	2
Wisconsin.....	14	7	10	10	11	9	12	7
Wyoming.....	1	1	1	-	1	-	1	-
TOTAL.....	457	453	504	490	532	467	494	504

NOTE: Malignant neoplasm of pleura = ICD-9 codes 163.0 (malignant neoplasm of parietal pleura), 163.1 (malignant neoplasm of visceral pleura), and 163.9 (malignant neoplasm of pleura, unspecified).

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1980-87.

- indicates quantity zero.

Table 11. Multiple cause of death listings with any mention of malignant neoplasm of peritoneum in United States residents age 15 and over, by state, from 1980 to 1987

State	Number of cases							
	1980	1981	1982	1983	1984	1985	1986	1987
Alabama.....	6	4	2	2	1	6	1	2
Alaska.....	-	-	-	-	-	1	-	-
Arizona.....	-	-	-	2	-	1	1	6
Arkansas.....	3	2	-	1	2	1	-	2
California.....	21	34	20	19	20	16	23	32
Colorado.....	1	1	1	-	1	-	4	5
Connecticut....	1	3	3	-	3	4	5	8
Delaware.....	-	1	1	-	-	1	-	1
District of Columbia.....	1	1	-	2	1	-	-	-
Florida.....	14	10	12	12	18	10	13	25
Georgia.....	9	4	2	4	5	2	1	3
Hawaii.....	-	1	2	-	1	-	-	1
Idaho.....	2	-	2	-	1	1	1	1
Illinois.....	21	20	20	23	20	26	22	24
Indiana.....	4	6	2	4	4	2	8	2
Iowa.....	2	9	2	6	6	5	2	3
Kansas.....	3	7	1	3	3	2	5	2
Kentucky.....	5	2	-	1	2	4	2	3
Louisiana.....	1	5	1	3	3	5	3	2
Maine.....	1	-	-	2	1	-	1	-
Maryland.....	5	4	3	4	1	8	13	7
Massachusetts..	3	9	10	14	6	3	9	11
Michigan.....	6	6	6	7	11	11	11	9
Minnesota.....	1	4	3	2	4	4	4	1
Mississippi....	4	2	3	-	2	4	-	2
Missouri.....	6	7	4	4	7	4	4	1
Montana.....	-	2	-	-	3	2	-	-
Nebraska.....	1	1	3	-	-	1	2	3
Nevada.....	1	1	3	-	1	-	2	-
New Hampshire..	-	3	1	1	-	4	-	4
New Jersey.....	15	15	13	13	12	4	7	10
New Mexico.....	-	1	-	1	-	2	1	1
New York.....	34	29	31	25	33	26	22	34
North Carolina.	8	4	4	7	7	6	6	7
North Dakota...	1	-	2	-	-	-	1	2
Ohio.....	10	11	22	14	12	9	9	14
Oklahoma.....	1	2	4	4	3	3	2	4
Oregon.....	1	1	-	1	1	1	-	7
Pennsylvania...	13	20	24	18	19	17	15	13
Rhode Island...	2	-	-	1	3	1	2	2
South Carolina.	3	3	1	2	5	4	2	6
South Dakota...	-	-	-	-	-	-	1	-
Tennessee.....	7	2	2	4	4	4	6	6
Texas.....	14	4	22	13	12	15	9	29
Utah.....	-	-	1	-	1	-	1	-
Vermont.....	-	-	-	2	-	1	1	-
Virginia.....	2	7	9	4	8	7	6	7
Washington.....	5	7	8	2	7	6	7	5
West Virginia..	2	-	2	2	1	6	2	-
Wisconsin.....	9	4	5	2	7	15	11	8
Wyoming.....	-	-	-	-	-	-	1	1
TOTAL.....	249	259	257	231	262	255	249	316

NOTE: Malignant neoplasm of peritoneum = ICD-9 codes 158.8 (malignant neoplasm of specified parts of peritoneum) and 158.9 (malignant neoplasm of peritoneum, unspecified).

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1980-87.

- indicates quantity zero.

Table 12. Mining Industries with the largest numbers of workers potentially exposed to coal mine dust, 1989

Industry	Estimated workers exposed (1989)
Anthracite mining.....	2,220
Bituminous coal and lignite mining.....	135,610
Total (SIC 111 and 121).....	137,830

NOTE: Estimates are based on Mine Safety and Health Administration Informational Report for 1989, assuming that 100% of non-office workers in these industries have potential exposure to coal mine dust.

Table 13. Estimated numbers of workers with potential exposure to coal mine dust, by state, 1986

State	Workers with Potential Exposure	
	Estimate # 1	Estimate # 2
Alabama.....	7,307	8,468
Alaska.....	106	175
Arizona.....	907	1,750
Arkansas.....	55	26
California.....	-	10
Colorado.....	2,245	3,895
Connecticut.....	-	60
District of Columbia.....	-	10
Delaware.....	-	10
Florida.....	-	175
Georgia.....	-	60
Hawaii.....	-	-
Idaho.....	-	10
Illinois.....	14,254	15,579
Indiana.....	4,482	3,750
Iowa.....	188	194
Kansas.....	140	175
Kentucky.....	36,170	37,500
Louisiana.....	55	60
Maine.....	-	-
Maryland.....	587	598
Massachusetts.....	-	60
Michigan.....	-	10
Minnesota.....	-	10
Mississippi.....	-	10
Missouri.....	1,131	1,750
Montana.....	997	1,750
Nebraska.....	-	-
Nevada.....	-	175
New Hampshire.....	-	10
New Jersey.....	-	10
New Mexico.....	1,676	1,702
New York.....	-	60
North Carolina.....	-	60
North Dakota.....	1,064	1,750
Ohio.....	8,685	10,892
Oklahoma.....	789	744
Oregon.....	-	-
Pennsylvania.....	21,544	23,430
Rhode Island.....	-	-
South Carolina.....	-	60
South Dakota.....	-	10
Tennessee.....	2,571	3,750
Texas.....	3,614	3,750
Utah.....	2,376	3,358
Vermont.....	-	-
Virginia.....	13,800	15,709
Washington.....	762	750
West Virginia.....	33,535	37,500
Wisconsin.....	-	10
Wyoming.....	4,291	5,708
Total Workers Employed by Mine Operators.....	163,331	
Total Workers Employed by Mine Contractors.....	12,269	
TOTAL.....	175,600	185,533

NOTE: Estimate # 1 = from MSHA informational reports, excludes office workers.
 Estimate # 2 = from County Business Patterns for SIC 111 and SIC 121.
 For additional details, see Appendix.

- indicates quantity zero. Empty space indicates information not available.

Table 14. Number of discharges with any mention of coal workers' pneumoconiosis from short-stay nonfederal hospitals, from 1970 to 1987

Year	Number of discharges
1970.....	6,000
1971.....	8,000
1972.....	11,000
1973.....	13,000
1974.....	14,000
1975.....	17,000
1976.....	18,000
1977.....	18,000
1978.....	13,000
1979.....	18,000
1980.....	17,000
1981.....	14,000
1982.....	17,000
1983.....	22,000
1984.....	23,000
1985.....	18,000
1986.....	16,000
1987.....	17,000

NOTE: Number of discharges have been rounded off to nearest thousand.

SOURCE: National Center for Health Statistics National Hospital Discharge Survey.

Table 15. Number of cases of pneumoconiosis identified in the Coal Workers' X-ray Surveillance Program (CWXSPP) from 1987 to 1989, by tenure (years in coal mining)

Years in coal mining	1987			1988			1989		
	X-rays taken	ILO Cat \geq 1/0 (N)	(%)	X-rays taken	ILO Cat \geq 1/0 (N)	(%)	X-rays taken	ILO Cat \geq 1/0 (N)	(%)
0.....	396	-	0.0	377	3	0.8	547	2	0.4
1.....	72	-	0.0	71	-	0.0	87	-	0.0
2-4.....	274	-	0.0	200	1	0.5	197	3	1.5
5-9.....	716	7	1.0	629	12	1.9	402	8	2.0
10-14.....	749	22	2.9	1,049	35	3.3	699	24	3.4
15-19.....	360	23	6.4	609	37	6.1	339	14	4.1
20-24.....	106	11	10.6	185	17	9.2	132	14	10.6
25-29.....	48	7	14.6	61	14	23.0	42	7	16.7
30+.....	70	12	17.1	108	20	18.5	32	9	28.1
Total.....	2,791	82	2.9	3,289	139	4.2	2,477	81	3.3

NOTE: Pneumoconiosis = International Labour Office small opacity profusion category \geq 1/0. For miners with more than one chest radiograph on file between 1987 to 1989, statistics in this table were calculated based on the most recent radiograph.

SOURCE: Examination Processing Branch, DRDS, NIOSH.

- indicates quantity zero.

Table 16. Anthracosis (coal workers' pneumoconiosis) cases reported to state workers' compensation agencies, by state, from 1980 to 1987

State	Number of cases							
	1980	1981	1982	1983	1984	1985	1986	1987
Alabama.....								
Alaska.....	-	-	-	-	-	-	-	-
Arizona.....	-	-	-	-	-	-	-	-
Arkansas.....	-	-	-	-	-	-	-	-
California.....	-	-	-	-	-	-	-	-
Colorado.....	1	-	1	-	-	-	3	3
Connecticut....								
Delaware.....	-	-	-	-	-	-	-	-
District of Columbia.....								
Florida.....								
Georgia.....								
Hawaii.....	-	-	-	-	-	-	-	-
Idaho.....	-	-	-	-	-	-	-	-
Illinois.....								
Indiana.....	1	-	2	-	-	-	1	-
Iowa.....	3	-	-	-	-	1	-	-
Kansas.....								
Kentucky.....	888	521	396	723	754	676	731	838
Louisiana.....								
Maine.....	-	-	-	-	-	-	-	-
Maryland.....	-	-	1	-	-	-	-	-
Massachusetts..	-	-	-	-	-	-	-	-
Michigan.....	-	-	-	-	-	-	-	-
Minnesota.....	-	-	-	-	-	-	-	-
Mississippi....	-	-	-	-	-	-	-	-
Missouri.....	-	-	-	-	-	-	-	-
Montana.....	-	-	-	-	-	-	-	-
Nebraska.....	-	-	-	-	-	-	-	-
Nevada.....								
New Hampshire..								
New Jersey.....	-	-	-	-	-	-	-	-
New Mexico.....	-	-	-	-	-	-	-	-
New York.....	-	1	-	-	-	-	-	-
North Carolina.	-	-	-	-	-	-	-	-
North Dakota...								
Ohio.....	12	10	3	7	7	6	10	8
Oklahoma.....								
Oregon.....	-	-	-	-	-	-	-	-
Pennsylvania...								
Rhode Island...								
South Carolina.								
South Dakota...								
Tennessee.....	3	4	4	-	-	2	3	3
Texas.....								
Utah.....	-	1	-	-	-	-	-	-
Vermont.....	-	-	-	-	-	-	-	-
Virginia.....	10	-	-	-	-	75	4	6
Washington.....	-	-	-	-	-	-	-	-
West Virginia..								
Wisconsin.....	-	-	-	-	-	-	-	-
Wyoming.....	-	-	-	-	-	-	-	-

NOTE: Anthracosis = SDS code 282. Statistics for Arkansas, Delaware, New York, and North Carolina are for closed cases. Statistics for other states are for cases that occurred or were received during the year.

SOURCE: Bureau of Labor Statistics Supplementary Data System.

- indicates quantity zero. Empty space indicates information not available.

Table 17. Medicare hospitalizations with any mention of coal workers' pneumoconiosis, by state, from 1984 to 1989

State	Number of hospitalizations					
	1984	1985	1986	1987	1988	1989
Alabama.....	247	328	453	664	662	493
Alaska.....	-	-	5	-	-	2
Arizona.....	73	53	57	45	53	50
Arkansas.....	38	36	39	30	27	21
California.....	248	139	193	170	128	146
Colorado.....	72	86	87	84	62	71
Connecticut....	49	46	34	42	44	30
Delaware.....	12	2	11	18	21	19
District of Columbia..	21	14	24	18	13	10
Florida.....	300	365	285	367	359	294
Georgia.....	29	59	38	49	42	24
Hawaii.....	1	-	-	4	-	-
Idaho.....	11	6	5	6	3	7
Illinois.....	480	438	450	424	330	293
Indiana.....	162	169	142	179	231	192
Iowa.....	29	30	33	48	43	24
Kansas.....	21	23	30	17	38	10
Kentucky.....	1,163	1,449	1,251	1,398	1,407	1,257
Louisiana.....	22	31	21	35	40	16
Maine.....	8	7	3	1	-	4
Maryland.....	71	144	110	108	75	101
Massachusetts..	23	41	13	35	36	40
Michigan.....	163	154	178	170	149	139
Minnesota.....	9	6	15	5	8	12
Mississippi....	11	9	9	8	21	18
Missouri.....	70	76	65	72	65	50
Montana.....	5	11	7	11	7	8
Nebraska.....	11	4	5	8	2	1
Nevada.....	17	11	5	7	10	4
New Hampshire..	1	1	-	5	-	-
New Jersey.....	100	131	148	150	182	112
New Mexico.....	30	52	40	32	48	26
New York.....	71	125	131	179	145	168
North Carolina.	79	80	126	135	122	120
North Dakota...	1	5	5	2	4	7
Ohio.....	431	560	736	885	799	667
Oklahoma.....	23	41	37	35	48	23
Oregon.....	29	24	31	32	27	21
Pennsylvania... 4,312	4,046	4,161	4,055	3,987	3,258	
Rhode Island... 3	4	3	-	-	3	
South Carolina.	10	13	20	9	27	48
South Dakota... 1	9	-	1	5	1	
Tennessee..... 400	560	590	532	467	352	
Texas.....	140	96	107	102	97	85
Utah.....	87	182	179	161	164	131
Vermont.....	1	2	-	-	1	1
Virginia.....	1,329	1,677	1,226	1,734	1,628	1,440
Washington..... 51	44	27	27	27	48	
West Virginia.. 2,089	2,151	1,828	2,212	2,254	2,111	
Wisconsin..... 16	10	3	18	29	24	
Wyoming.....	6	20	36	53	34	55
TOTAL.....	12,585	13,574	13,005	14,387	13,979	12,042

NOTE: Coal workers' pneumoconiosis = ICD-9CM code 500.

SOURCE: Medicare Provider Analysis and Review (MEDPAR), Office of Statistics and Data Management, Bureau of Data Management and Strategy, Health Care Financing Administration.

- indicates quantity zero.

Table 18. Number of cases submitted to the National Coal Workers' Autopsy Study (NCWAS), and the number diagnosed as having pneumoconiosis, from 1971 to 1989

Year	Number of cases submitted to NCWAS program	Diagnosed as having pneumoconiosis by submitting pathologist	
		n	%
1971.....	68	58	85.3
1972.....	313	287	91.7
1973.....	291	267	91.8
1974.....	628	563	89.6
1975.....	389	321	82.5
1976.....	376	321	85.4
1977.....	345	304	88.1
1978.....	320	254	79.4
1979.....	322	258	80.1
1980.....	314	259	82.5
1981.....	255	**	**
1982.....	235	**	**
1983.....	310	**	**
1984.....	259	**	**
1985.....	249	**	**
1986.....	231	**	**
1987.....	220	**	**
1988.....	183	**	**
1989.....	191	**	**

NOTE: Pneumoconiosis = ICD-8 code 515 (pneumoconiosis due to silica and silicates), including: silicosis (515.0); anthracosilicosis (515.1); asbestosis (515.2); and other, including pneumoconiosis unspecified (515.9).

SOURCE: Examination Processing Branch, DRDS, NIOSH.

** This information is not currently available beyond 1980.

Table 19. Multiple cause of death listings with any mention of coal workers' pneumoconiosis in United States residents age 15 and over, from 1968 to 1987

Year	Number of cases
1968.....	1,775
1969.....	1,534
1970.....	2,189
1971.....	2,544
1972.....	2,870
1973.....	2,670
1974.....	2,732
1975.....	2,708
1976.....	2,481
1977.....	2,340
1978.....	2,280
1979.....	2,417
1980.....	2,576
1981.....	2,554
1982.....	2,753
1983.....	2,701
1984.....	2,683
1985.....	2,615
1986.....	2,443
1987.....	2,257

NOTE: Coal workers' pneumoconiosis = ICD-8 code 515.1 and ICD-9 code 500.

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1968-87.

Table 20. Multiple cause of death listings with any mention of coal workers' pneumoconiosis in United States residents age 15 and over, by state, from 1980 to 1987

State	Number of cases							
	1980	1981	1982	1983	1984	1985	1986	1987
Alabama.....	13	18	40	32	26	30	32	23
Alaska.....	-	-	-	-	1	-	1	-
Arizona.....	8	14	10	9	10	8	7	2
Arkansas.....	7	4	8	8	4	9	6	7
California.....	24	24	21	25	24	20	23	18
Colorado.....	10	16	15	10	25	22	15	15
Connecticut....	7	3	1	4	7	6	3	3
Delaware.....	3	3	-	4	3	1	4	1
District of Columbia..	-	1	1	1	-	-	-	-
Florida.....	32	52	26	35	32	20	38	34
Georgia.....	2	4	2	1	4	3	6	2
Hawaii.....	-	1	1	-	-	-	1	-
Idaho.....	-	-	-	-	-	2	-	1
Illinois.....	41	86	68	68	83	78	64	63
Indiana.....	22	24	16	22	25	21	22	25
Iowa.....	5	11	6	8	6	10	8	3
Kansas.....	1	1	3	2	6	6	7	2
Kentucky.....	130	159	242	196	177	195	182	161
Louisiana.....	-	-	-	3	2	2	1	2
Maine.....	-	-	-	-	-	1	-	-
Maryland.....	8	13	19	19	3	5	8	8
Massachusetts..	3	1	2	-	-	-	1	-
Michigan.....	15	19	23	24	14	17	16	21
Minnesota.....	1	-	4	1	1	-	-	-
Mississippi....	-	2	2	-	1	1	-	1
Missouri.....	5	9	10	5	2	5	4	7
Montana.....	-	2	-	-	1	2	3	1
Nebraska.....	-	-	1	-	-	-	-	-
Nevada.....	-	1	2	1	3	2	-	-
New Hampshire..	-	-	-	-	-	-	-	-
New Jersey.....	17	15	18	21	22	11	12	18
New Mexico.....	2	2	4	6	4	5	4	2
New York.....	24	16	15	15	6	11	16	13
North Carolina..	12	9	8	15	4	7	10	12
North Dakota...	-	-	-	-	-	-	1	1
Ohio.....	92	105	86	105	93	105	92	91
Oklahoma.....	2	10	4	6	3	4	5	8
Oregon.....	3	1	4	3	2	-	2	3
Pennsylvania... 1,719	1,602	1,594	1,515	1,552	1,488	1,303	1,211	
Rhode Island...	-	-	-	-	-	-	-	-
South Carolina..	4	1	1	2	1	2	1	2
South Dakota...	1	2	1	1	1	-	1	-
Tennessee.....	25	35	33	37	41	40	39	39
Texas.....	4	5	12	7	8	11	7	1
Utah.....	1	6	14	4	17	14	16	12
Vermont.....	-	-	-	1	-	1	-	1
Virginia.....	56	66	110	129	133	167	169	150
Washington.....	7	2	6	4	4	3	7	6
West Virginia..	262	204	315	345	326	281	302	284
Wisconsin.....	2	3	3	3	1	1	-	1
Wyoming.....	6	2	2	4	5	6	4	2
TOTAL.....	2,576	2,554	2,753	2,701	2,683	2,615	2,443	2,257

NOTE: Coal workers' pneumoconiosis = ICD-9 code 500.

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1980-87.

- indicates quantity zero.

Table 21. Estimated number of underground coal miners and number of miners examined in the Coal Workers' X-ray Surveillance Program (CWSP), from 1970 to 1987

Years	Estimated number of underground coal miners	Total miners x-rayed
1970-73.....	101,000	80,521
1973-78.....	150,000	124,441
1978-81.....	142,000	63,324
1982-87.....	102,000	41,157

NOTE: Miners x-rayed as part of the National Study for Coal Workers' Pneumoconiosis are included in the CWSP total.

SOURCE: Mine Safety and Health Administration informational reports on coal mining and Examination Processing Branch, DRDS, NIOSH

Table 22. Non-mining industries with the highest proportions of workers potentially exposed to respirable crystalline silica dust, 1986

SIC	Description	Percent exposed (NOES)	Estimated workers exposed (1986)
326	Pottery and related products.....	81.7	29,772
295	Paving and roofing materials.....	65.3	17,352
321	Flat glass.....	39.5	8,570
327	Concrete, gypsum, and plaster products.....	33.3	63,456
174	Masonry, stonework, tile setting, and plastering.....	32.7	131,986
807	Medical and dental laboratories.....	30.0	37,063
289	Miscellaneous chemical products.....	28.1	24,401
176	Roofing and sheet metal work.....	25.3	51,153
493	Combination electric and gas, and other utilities services.....	21.2	35,074
329	Abrasive, asbestos, and miscellaneous non-metallic mineral products.....	17.8	20,063

NOTE: Estimates of the number of workers potentially exposed to the hazards of flint, quartz, sand, or silica powder are based on data from the 1986 County Business Patterns and the National Occupational Exposure Survey (NOES). For SICs where the estimates differed for individual hazards, the highest percentage was used for that SIC.

Table 23. Industries with the largest numbers of workers potentially exposed to respirable crystalline silica dust, 1986

SIC	Description	Percent exposed (NOES)	Estimated workers exposed (1986)
174	Masonry, stonework, tile setting, and plastering.....	32.7	131,986
734	Services to dwellings and other buildings.....	10.3	65,812
327	Concrete, gypsum, and plaster products.....	33.3	63,456
176	Roofing and sheet metal work.....	25.3	51,153
356	General industrial machinery and equipment.....	16.2	44,991
807	Medical and dental laboratories.....	30.0	37,063
493	Combination electric and gas, and other utilities services.....	21.2	35,074
179	Miscellaneous special trade contractors.....	7.8	32,615
753	Automotive repair shops.....	7.1	30,826
326	Pottery and related products.....	81.7	29,772

NOTE: Estimates of the numbers of workers potentially exposed to the hazards of flint, quartz, sand, or silica powder are based on data from the 1986 County Business Patterns and the National Occupational Exposure Survey (NOES). For SICs where the estimates differed for individual hazards, the highest percentage was used for that SIC. If the above list had included mining industries and if the percent of mining industry workers with potential silica exposure is assumed to be 100%, the following would be listed.

13	Oil and gas extraction	100.0	408,175
12	Bituminous coal and lignite mining	100.0	174,131
14	Mining and quarrying of nonmetallic minerals, except fuels	100.0	100,546
10	Metal mining	100.0	39,856

Table 24. Estimated numbers of workers with potential exposure to respirable crystalline silica dust, by state, 1986

State	Workers with Potential Exposure
Alabama.....	26,172
Alaska.....	7,128
Arizona.....	28,690
Arkansas.....	11,553
California.....	145,722
Colorado.....	38,789
Connecticut.....	17,934
District of Columbia.....	2,994
Delaware.....	3,204
Florida.....	55,384
Georgi.....	33,640
Hawaii.....	2,737
Idaho.....	5,172
Illinois.....	73,606
Indiana.....	32,135
Iowa.....	10,778
Kansas.....	23,748
Kentucky.....	49,389
Louisiana.....	75,832
Maine.....	3,754
Maryland.....	25,284
Massachusetts.....	27,725
Michigan.....	46,669
Minnesota.....	22,289
Mississippi.....	14,856
Missouri.....	26,015
Montana.....	7,318
Nebraska.....	5,806
Nevada.....	8,532
New Hampshire.....	5,998
New Jersey.....	38,715
New Mexico.....	22,584
New York.....	71,660
North Carolina.....	30,074
North Dakota.....	6,700
Ohio.....	75,206
Oklahoma.....	53,002
Oregon.....	11,296
Pennsylvania.....	86,866
Rhode Island.....	4,099
South Carolina.....	18,366
South Dakota.....	3,953
Tennessee.....	27,715
Texas.....	241,694
Utah.....	13,865
Vermont.....	2,492
Virginia.....	44,333
Washington.....	16,585
West Virginia.....	45,359
Wisconsin.....	21,543
Wyoming.....	22,115
TOTAL.....	1,697,075

NOTE: Estimates of the number of workers potentially exposed to the hazards of flint, quartz, sand, or silica powder are based on data from the 1986 County Business Patterns and the National Occupational Exposure Survey (NOES).

Table 25. Medicare hospitalizations with any mention of silicosis, by state, from 1984 to 1989

State	Number of hospitalizations					
	1984	1985	1986	1987	1988	1989
Alabama.....	34	40	59	42	58	48
Alaska.....	4	10	8	7	2	1
Arizona.....	88	45	63	58	33	42
Arkansas.....	17	10	17	19	13	15
California.....	151	152	107	141	120	113
Colorado.....	35	57	76	52	38	57
Connecticut.....	28	25	22	26	12	15
Delaware.....	-	1	-	-	6	4
District of Columbia...	4	-	4	10	3	6
Florida.....	76	62	83	80	95	62
Georgia.....	60	73	97	68	61	36
Hawaii.....	2	6	-	-	-	-
Idaho.....	22	14	4	18	16	18
Illinois.....	94	92	129	95	87	70
Indiana.....	69	78	35	31	30	22
Iowa.....	12	12	15	14	13	12
Kansas.....	14	15	6	15	7	8
Kentucky.....	42	24	29	50	72	50
Louisiana.....	50	49	48	36	32	37
Maine.....	13	9	13	17	7	-
Maryland.....	8	22	36	29	25	24
Massachusetts....	14	42	47	44	27	21
Michigan.....	81	136	96	128	88	89
Minnesota.....	35	33	34	44	42	44
Mississippi.....	13	19	10	12	4	14
Missouri.....	60	95	80	55	77	89
Montana.....	9	12	30	22	10	17
Nebraska.....	9	1	-	1	3	6
Nevada.....	22	9	15	24	10	13
New Hampshire....	12	8	2	5	25	4
New Jersey.....	64	50	101	88	88	64
New Mexico.....	16	41	27	14	16	16
New York.....	54	91	121	115	135	103
North Carolina...	62	90	75	86	77	69
North Dakota.....	5	-	1	-	-	3
Ohio.....	197	195	228	270	220	191
Oklahoma.....	11	13	18	28	16	16
Oregon.....	12	18	21	12	8	12
Pennsylvania.....	422	432	375	325	310	345
Rhode Island.....	9	11	21	1	2	3
South Carolina...	34	17	9	11	21	19
South Dakota.....	19	7	4	7	5	7
Tennessee.....	46	70	39	63	35	36
Texas.....	97	79	73	88	90	69
Utah.....	30	52	49	13	17	54
Vermont.....	20	11	12	26	12	10
Virginia.....	87	52	74	61	60	58
Washington.....	38	51	54	41	44	38
West Virginia....	42	45	42	33	37	44
Wisconsin.....	76	91	90	77	90	54
Wyoming.....	6	4	5	4	4	4
TOTAL.....	2,428	2,573	2,605	2,506	2,303	2,152

NOTE: Silicosis = ICD-9CM code 502.

SOURCE: Medicare Provider Analysis and Review (MEDPAR), Office of Statistics and Data Management, Bureau of Data Management and Strategy, Health Care Financing Administration.

- indicates quantity zero.

Table 26. Silicosis cases reported to state workers' compensation agencies, by state, from 1980 to 1987

State	Number of cases							
	1980	1981	1982	1983	1984	1985	1986	1987
Alabama.....								
Alaska.....		-	-	1	1	-	-	-
Arizona.....	2	-	-	-	-	-	-	-
Arkansas.....	2	2	-	-	-	-	-	-
California.....	-	2	-	-	-	4	2	6
Colorado.....	10	16	29	13	18	20	16	7
Connecticut.....								
Delaware.....	-	-	-	-	-	-	-	-
District of Columbia.....								
Florida.....								
Georgia.....								
Hawaii.....	-	-	-	-	-	-	-	-
Idaho.....	-	-	-	-	-	-	-	-
Illinois.....								
Indiana.....	1	-	2	2	1	1	2	-
Iowa.....	-	2	-	1	-	2	2	-
Kansas.....								
Kentucky.....	91	31	36	36	51	21	16	22
Louisiana.....						-	-	2
Maine.....	-	-	-	-	-	-	-	-
Maryland.....	2	-	-	-	-	-	1	-
Massachusetts...								
Michigan.....	1	1	-	-	2	-	2	-
Minnesota.....	-	-	-	-	3	-	-	-
Mississippi.....	1	-	-	-	-	-	-	2
Missouri.....	4	1	1	1	2	1	-	-
Montana.....	-	-	-	-	-	-	-	-
Nebraska.....	2	-	-	-	-	-	-	-
Nevada.....								
New Hampshire...								
New Jersey.....	-	-	-	-	-	3	-	-
New Mexico.....								
New York.....	52	36	47	30	26	30	28	34
North Carolina..	9	9	9	17	10	8	1	3
North Dakota....								
Ohio.....	57	54	46	37	37	57	37	20
Oklahoma.....								
Oregon.....	1	-	-	-	-	-	-	-
Pennsylvania....								
Rhode Island....								
South Carolina..								
South Dakota....								
Tennessee.....	4	3	2	2	1	1	2	3
Texas.....								
Utah.....	1	-	-	-	2	-	-	-
Vermont.....	1	1	1	-	-	-	-	-
Virginia.....	6	-	3	-	39	-	-	-
Washington.....	1	-	1	2	1	-	-	1
West Virginia...								
Wisconsin.....	11	15	9	25	22	19	21	33
Wyoming.....	-	1	-	1	-	-	-	-

NOTE: Silicosis = SDS code 286. Statistics for Arkansas, Delaware, New York, and North Carolina are for closed cases. Statistics for other states are for cases that occurred or were received during the year.

SOURCE: Bureau of Labor Statistics Supplementary Data System

- indicates quantity zero. Empty space indicates information not available.

Table 27. Multiple cause of death listings with any mention of silicosis in United States residents age 15 and over, from 1968 to 1987

Year	Number of cases
1968.....	1,157
1969.....	1,143
1970.....	1,086
1971.....	925
1972.....	982
1973.....	850
1974.....	789
1975.....	728
1976.....	671
1977.....	562
1978.....	538
1979.....	452
1980.....	448
1981.....	378
1982.....	390
1983.....	359
1984.....	381
1985.....	334
1986.....	318
1987.....	342

NOTE: Silicosis = ICD-8 codes 515.0 and 010, and ICD-9 code 502.

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1968-87.

Table 28. Multiple cause of death listings with any mention of silicosis in United States residents age 15 and over, by state, from 1980 to 1987

State	Number of cases							
	1980	1981	1982	1983	1984	1985	1986	1987
Alabama.....	5	2	4	4	4	1	7	6
Alaska.....	-	-	2	-	-	1	2	-
Arizona.....	11	12	10	9	7	3	7	5
Arkansas.....	2	4	2	4	-	2	-	2
California.....	29	22	26	19	22	22	14	17
Colorado.....	8	16	7	13	10	7	8	8
Connecticut.....	6	3	7	4	9	6	3	2
Delaware.....	1	-	1	-	-	-	-	-
District of Columbia...	1	1	3	-	1	-	1	-
Florida.....	13	17	6	11	10	10	14	11
Georgia.....	1	6	2	7	5	9	9	6
Hawaii.....	-	-	1	-	1	-	1	-
Idaho.....	1	2	2	1	2	1	-	4
Illinois.....	15	11	21	11	17	15	11	15
Indiana.....	9	6	6	8	7	3	6	8
Iowa.....	3	1	1	3	2	2	3	5
Kansas.....	1	3	4	2	-	2	-	5
Kentucky.....	4	4	12	6	3	10	5	2
Louisiana.....	2	6	2	5	2	5	3	5
Maine.....	3	1	1	-	1	1	1	3
Maryland.....	6	6	3	4	2	3	2	2
Massachusetts...	8	5	4	2	2	3	5	5
Michigan.....	23	15	21	17	12	15	14	16
Minnesota.....	10	11	9	3	13	9	11	2
Mississippi.....	3	2	1	1	1	2	-	1
Missouri.....	9	6	5	2	9	7	2	7
Montana.....	3	2	4	4	2	5	5	3
Nebraska.....	-	-	-	-	-	-	-	-
Nevada.....	1	1	2	2	2	4	2	3
New Hampshire...	-	-	3	1	1	1	1	1
New Jersey.....	13	13	10	10	17	8	9	12
New Mexico.....	10	4	3	1	2	2	2	1
New York.....	17	20	11	22	17	16	9	27
North Carolina..	8	9	4	11	11	12	9	12
North Dakota....	-	-	-	-	1	1	-	-
Ohio.....	42	38	50	32	47	31	41	29
Oklahoma.....	1	-	-	2	2	-	3	4
Oregon.....	5	3	4	3	2	1	-	2
Pennsylvania....	94	75	64	68	60	55	49	52
Rhode Island....	1	-	4	1	1	1	1	1
South Carolina..	2	4	4	3	1	3	3	2
South Dakota....	2	2	3	1	1	2	2	-
Tennessee.....	8	6	4	11	9	5	5	6
Texas.....	16	-	12	8	11	5	14	10
Utah.....	5	3	6	4	9	9	4	2
Vermont.....	4	2	2	3	5	3	-	3
Virginia.....	8	10	7	7	7	5	8	11
Washington.....	10	2	10	6	1	8	6	6
West Virginia...	7	9	7	4	12	5	3	7
Wisconsin.....	17	13	12	18	17	12	10	10
Wyoming.....	-	-	1	1	1	1	3	1
TOTAL.....	448	378	390	359	381	334	318	342

NOTE: Silicosis = ICD-9 code 502.

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1980-87.

- indicates quantity zero.

Table 29. Industries with the highest proportions of workers potentially exposed to cotton dust, 1986

SIC	DESCRIPTION	Percent exposed (NOES)	Estimated workers exposed (1986)
225	Knitting mills.....	43.1	88,875
228	Yarn and thread mills.....	28.6	28,717
232	Men's, youths', and boys' furnishings, work clothing, and allied garments.....	25.7	72,129
221	Broad woven fabric mills, cotton.....	25.6	15,223
224	Narrow fabrics and other smallwares mills: cotton, wool, silk, and man-made fiber.....	18.0	3,278
233	Women's, misses', and juniors outerwear.....	12.8	41,968
239	Miscellaneous fabricated textile products.....	10.7	19,527
223	Broad woven fabric mills, wool (including dyeing and finishing).....	7.0	799
283	Drugs.....	6.4	11,183
251	Household furniture.....	3.2	8,803

NOTE: Estimates of numbers of workers potentially exposed to cotton dust are based on data from the 1986 County Business Patterns and the National Occupational Exposure Survey (NOES).

Table 30. Industries with the largest numbers of workers potentially exposed to cotton dust, 1986

SIC	DESCRIPTION	Percent exposed (NOES)	Estimated workers exposed (1986)
225	Knitting mills.....	43.1	88,875
232	Men's, youths', and boys' furnishings, work clothing, and allied garments.....	25.7	72,129
233	Women's, misses', and juniors outerwear.....	12.8	41,968
228	Yarn and thread mills.....	28.6	28,717
239	Miscellaneous fabricated textile products.....	10.7	19,527
221	Broad woven fabric mills, cotton.....	25.6	15,223
283	Drugs.....	6.4	11,183
251	Household furniture.....	3.2	8,803
222	Broad woven fabric mills, man-made fiber, silk.....	3.1	3,468
224	Narrow fabrics and other smallwares mills: cotton, wool, silk, and man-made fiber.....	18.0	3,278

NOTE: Estimates of the numbers of workers potentially exposed to cotton dust are based on data from the 1986 County Business Patterns and the National Occupational Exposure Survey (NOES).

Table 31. Medicare hospitalizations with any mention of pneumonopathy due to inhalation of other dust, by state, from 1984 to 1989

State	Number of hospitalizations					
	1984	1985	1986	1987	1988	1989
Alabama.....	8	18	11	7	11	8
Alaska.....	-	-	-	6	-	-
Arizona.....	-	4	5	4	3	-
Arkansas.....	3	-	-	-	1	1
California.....	6	4	4	7	4	8
Colorado.....	2	-	1	5	6	3
Connecticut.....	-	-	-	-	-	3
Delaware.....	-	-	-	-	6	-
District of Columbia.....	1	-	-	-	-	-
Florida.....	3	4	1	-	4	1
Georgia.....	23	22	32	39	30	21
Hawaii.....	-	-	-	-	-	-
Idaho.....	-	-	-	-	-	-
Illinois.....	3	3	1	1	3	3
Indiana.....	-	4	-	6	1	1
Iowa.....	3	-	-	-	-	-
Kansas.....	-	-	-	2	3	-
Kentucky.....	-	1	1	-	-	-
Louisiana.....	3	-	1	2	3	3
Maine.....	1	-	5	3	-	1
Maryland.....	3	1	1	6	5	10
Massachusetts...	1	5	8	2	3	3
Michigan.....	-	1	5	1	-	-
Minnesota.....	1	-	-	-	-	-
Mississippi.....	1	-	3	7	2	3
Missouri.....	1	-	-	-	-	-
Montana.....	3	-	1	-	-	3
Nebraska.....	-	-	-	-	3	-
Nevada.....	-	-	-	1	-	-
New Hampshire...	1	3	-	-	1	-
New Jersey.....	3	2	-	4	-	1
New Mexico.....	-	-	-	-	-	3
New York.....	3	8	6	11	11	-
North Carolina..	47	64	65	61	49	84
North Dakota....	-	-	-	-	-	-
Ohio.....	10	1	1	2	4	-
Oklahoma.....	-	4	-	-	-	1
Oregon.....	-	-	1	1	-	1
Pennsylvania....	11	12	8	6	6	-
Rhode Island....	1	-	-	-	-	-
South Carolina..	12	7	12	11	14	13
South Dakota....	-	-	-	-	-	-
Tennessee.....	6	3	2	3	3	6
Texas.....	5	6	9	14	6	3
Utah.....	-	-	1	-	-	-
Vermont.....	-	-	-	-	3	-
Virginia.....	6	16	12	4	4	8
Washington.....	6	2	3	-	-	-
West Virginia...	1	3	1	-	3	-
Wisconsin.....	1	-	1	1	7	1
Wyoming.....	-	-	-	-	-	-
TOTAL.....	182	198	202	217	199	193

NOTE: Pneumonopathy due to inhalation of other dust = ICD-9CM code 504 (includes bysionosis).

SOURCE: Medicare Provider Analysis and Review (MEDPAR), Office of Statistics and Data Management, Bureau of Data Management and Strategy, Health Care Financing Administration.

- indicates quantity zero.

Table 32. Byssinosis cases reported to state workers' compensation agencies, by state, from 1980 to 1987

State	Number of cases							
	1980	1981	1982	1983	1984	1985	1986	1987
Alabama.....								
Alaska.....		-	-	-	-	-	-	-
Arizona.....	-	1	-	-	-	-	-	-
Arkansas.....	-	-	-	-	-	-	1	-
California.....	-	-	2	-	-	-	-	-
Colorado.....	-	-	-	-	-	-	-	-
Connecticut....								
Delaware.....	-	-	-	-	-	-	-	-
District of Columbia.....								
Florida.....								
Georgia.....								
Hawaii.....	-	-	-	-	-	-	-	-
Idaho.....	-	-	-	-	-	-	-	-
Illinois.....								
Indiana.....	-	-	-	-	-	-	-	-
Iowa.....	-	-	-	-	-	-	-	-
Kansas.....								
Kentucky.....	6	2	-	-	-	-	-	-
Louisiana.....								
Maine.....								
Maryland.....	-	-	-	-	-	-	-	-
Massachusetts..								
Michigan.....	-	-	-	-	-	-	-	-
Minnesota.....	-	-	-	-	-	-	-	-
Mississippi.....	-	1	4	-	1	1	-	-
Missouri.....	-	-	-	-	-	-	-	-
Montana.....	-	-	-	-	-	-	-	-
Nebraska.....	-	-	-	-	-	-	-	-
Nevada.....								
New Hampshire..								
New Jersey.....	-	-	-	-	-	-	-	-
New Mexico.....	-	-	-	-	-	-	-	-
New York.....	-	-	-	-	-	1	-	1
North Carolina..	-	306	312	232	138	148	110	138
North Dakota...								
Ohio.....	1	3	-	-	-	-	-	-
Oklahoma.....								
Oregon.....	-	-	-	-	-	-	-	-
Pennsylvania...								
Rhode Island...								
South Carolina..								
South Dakota...								
Tennessee.....	2	-	-	-	1	2	-	1
Texas.....								
Utah.....	-	-	-	-	-	-	-	-
Vermont.....	-	-	-	-	-	-	-	-
Virginia.....	2	-	-	3	-	-	-	-
Washington.....	-	-	-	-	-	-	-	-
West Virginia..								
Wisconsin.....	-	-	-	-	-	-	-	-
Wyoming.....	-	-	-	-	-	-	-	-

NOTE: Byssinosis = SDS code 284. Statistics for Arkansas, Delaware, New York, and North Carolina are for closed cases. Statistics for other states are for cases that occurred or were received during the year.

SOURCE: Bureau of Labor Statistics Supplementary Data Systems.

- indicates quantity zero. Empty space indicates information not available.

Table 33. Multiple cause of death listings with any mention of pneumonopathy due to inhalation of other dust (ICD-9 code 504) in United States residents age 15 and over, from 1979 to 1987

Year	Number of cases
1979.....	10
1980.....	9
1981.....	13
1982.....	4
1983.....	16
1984.....	18
1985.....	14
1986.....	16
1987.....	16

NOTE: Pneumonopathy due to inhalation of other dust = ICD-9 code 504. Examples of conditions listed under this code include byssinosis and flax-dressers' disease.

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1979-87.

Table 34. Multiple cause of death listings with any mention of pneumonopathy due to inhalation of other dust (ICD-9 code 504) in United States residents age 15 and over, by state, from 1980 to 1987

State	Number of cases							
	1980	1981	1982	1983	1984	1985	1986	1987
Alabama.....	1	-	-	-	-	-	1	-
Alaska.....	-	-	-	-	-	-	-	-
Arizona.....	-	-	-	-	1	-	-	-
Arkansas.....	-	-	-	-	-	-	-	-
California.....	-	-	2	-	-	1	-	-
Colorado.....	-	-	-	-	-	-	-	-
Connecticut....	-	-	-	-	1	-	-	-
Delaware.....	-	-	-	-	-	-	-	-
District of Columbia.....	-	-	-	-	-	-	-	-
Florida.....	-	-	-	-	-	-	-	-
Georgia.....	-	2	-	3	5	1	2	4
Hawaii.....	-	-	-	-	-	-	-	-
Idaho.....	-	-	-	-	-	-	-	-
Illinois.....	1	-	-	-	-	-	1	-
Indiana.....	-	-	-	-	-	-	-	-
Iowa.....	-	-	-	-	-	-	-	-
Kansas.....	-	-	-	-	-	-	-	-
Kentucky.....	-	-	-	-	-	-	-	-
Louisiana.....	-	1	-	-	-	-	-	-
Maine.....	-	-	-	-	-	-	-	-
Maryland.....	-	-	-	-	-	-	1	-
Massachusetts..	1	-	1	2	-	1	-	-
Michigan.....	-	-	-	-	-	-	-	-
Minnesota.....	-	-	-	-	-	-	-	-
Mississippi....	-	-	-	-	-	-	-	-
Missouri.....	-	-	-	-	-	-	-	-
Montana.....	-	-	-	-	-	-	-	-
Nebraska.....	-	-	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	-	-
New Hampshire..	-	-	-	-	1	-	-	-
New Jersey.....	-	-	1	-	-	1	-	-
New Mexico.....	-	-	-	-	-	-	-	-
New York.....	-	-	-	-	-	-	1	-
North Carolina.	3	7	-	7	4	7	7	9
North Dakota...	-	-	-	-	-	-	-	-
Ohio.....	-	-	-	-	-	-	-	-
Oklahoma.....	-	-	-	-	-	-	-	-
Oregon.....	-	-	-	-	-	-	-	-
Pennsylvania...	1	3	-	1	-	1	-	-
Rhode Island...	-	-	-	1	1	-	-	-
South Carolina.	1	-	-	2	4	-	1	1
South Dakota...	-	-	-	-	-	-	-	-
Tennessee.....	-	-	-	-	-	-	1	-
Texas.....	-	-	-	-	1	-	1	-
Utah.....	-	-	-	-	-	-	-	-
Vermont.....	-	-	-	-	-	1	-	1
Virginia.....	-	-	-	-	-	1	-	1
Washington.....	-	-	-	-	-	-	-	-
West Virginia..	1	-	-	-	-	-	-	-
Wisconsin.....	-	-	-	-	-	-	-	-
Wyoming.....	-	-	-	-	-	-	-	-
TOTAL.....	9	13	4	16	18	14	16	16

NOTE: Pneumonopathy due to inhalation of other dust = ICD-9 code 504. Examples of conditions listed under this code include byssinosis and flax-dressers' disease.

SOURCE: Tabulations are based on National Center for Health Statistics multiple cause of death data tapes, 1980-87.

- indicates quantity zero.