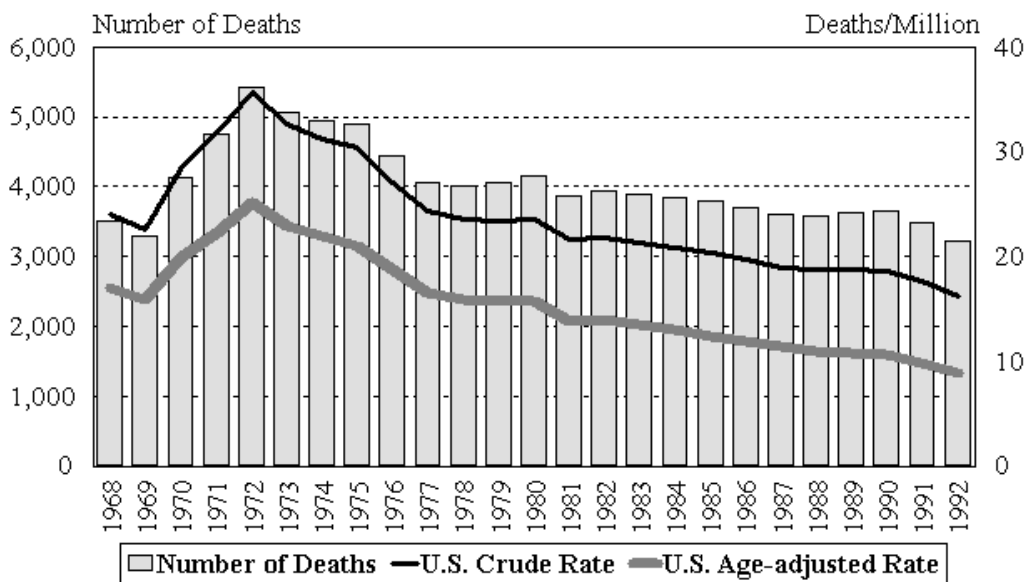
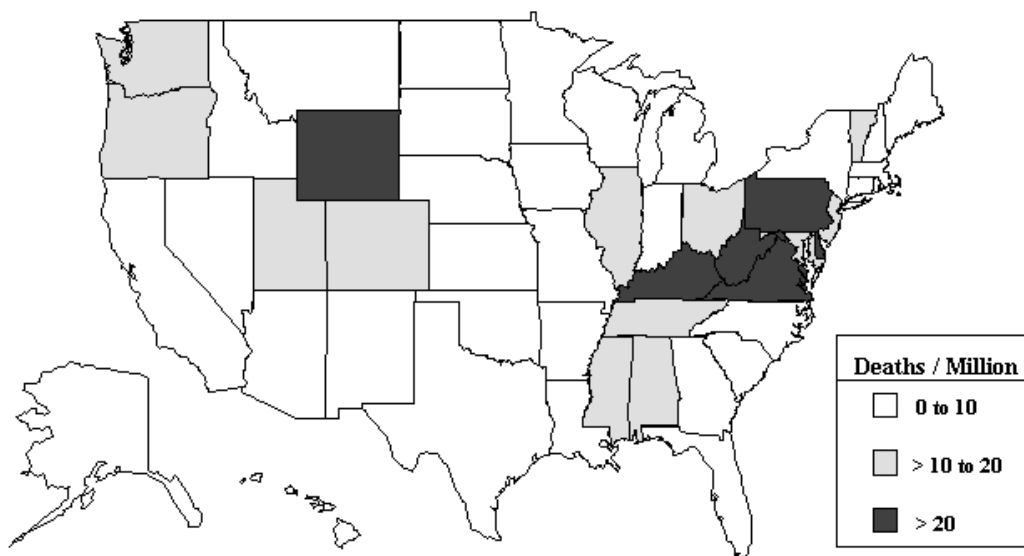


**Figure 6-1. All pneumoconioses: Number of deaths, crude and age-adjusted mortality rates, U.S. residents age 15 and over, 1968-1992**



NOTE: See Appendix A for source description and Appendix B for methods and ICD-8 and ICD-9 codes.  
 SOURCE: National Center for Health Statistics multiple cause of death data. Population estimates from U.S. Bureau of the Census.

**Figure 6-2. All pneumoconioses: Crude mortality rates by state, U.S. residents age 15 and over, 1991-1992**



NOTE: See Appendix A for source description and Appendix B for methods and ICD-8 and ICD-9 codes.  
 SOURCE: National Center for Health Statistics multiple cause of death data. Population estimates from U.S. Bureau of the Census.

**UNITED STATES**

*All Pneumoconioses*

**Table 6-1. All pneumoconioses: Number of deaths by state, U.S. residents age 15 and over, 1968-1992**

State	1968-1978	1979-1990	1991	1992	TOTAL
Alabama	640	608	71	49	1,368
Alaska	14	13	1	2	30
Arizona	293	271	13	13	590
Arkansas	118	142	17	13	290
California	1,138	1,587	155	134	3,014
Colorado	456	402	38	35	931
Connecticut	245	251	19	27	542
Delaware	37	75	18	10	140
District of Columbia	37	24	2	1	64
Florida	540	984	102	91	1,717
Georgia	161	244	18	25	448
Hawaii	14	37	4	4	59
Idaho	96	68	6	6	176
Illinois	1,250	1,301	90	91	2,732
Indiana	422	490	46	31	989
Iowa	110	143	11	19	283
Kansas	141	95	9	10	255
Kentucky	1,956	2,586	150	161	4,853
Louisiana	79	193	31	17	320
Maine	51	126	10	8	195
Maryland	232	380	40	48	700
Massachusetts	317	456	34	55	862
Michigan	769	615	42	47	1,473
Minnesota	167	181	10	26	384
Mississippi	31	128	29	27	215
Missouri	223	259	27	30	539
Montana	145	97	2	7	251
Nebraska	23	25	7	4	59
Nevada	78	64	4	2	148
New Hampshire	40	69	3	6	118
New Jersey	948	1,301	118	105	2,472
New Mexico	132	136	10	11	289
New York	1,007	778	61	46	1,892
North Carolina	285	460	52	54	851
North Dakota	12	14	3	-	29
Ohio	2,124	2,109	183	156	4,572
Oklahoma	106	134	16	13	269
Oregon	111	216	27	26	380
Pennsylvania	27,017	19,524	1,143	1,018	48,702
Rhode Island	31	72	1	7	111
South Carolina	92	173	17	21	303
South Dakota	37	33	-	-	70
Tennessee	533	675	42	39	1,289
Texas	258	575	112	76	1,021
Utah	193	246	18	22	479
Vermont	116	65	2	7	190
Virginia	1,246	2,199	179	196	3,820
Washington	272	487	60	48	867
West Virginia	3,759	4,196	395	359	8,709
Wisconsin	316	260	27	17	620
Wyoming	115	74	11	10	210
<b>TOTAL</b>	<b>48,533</b>	<b>45,641</b>	<b>3,486</b>	<b>3,230</b>	<b>100,890</b>

- indicates no deaths listed.

NOTE: See Appendix A for source description and Appendix B for methods and ICD-8 and ICD-9 codes.

SOURCE: National Center for Health Statistics multiple cause of death data.

*All Pneumoconioses*

**UNITED STATES**

**Table 6-2. All pneumoconioses: Percent of deaths by condition and state, U.S. residents age 15 and over, 1968-1992**

<b>State</b>	<b>Asbestosis</b>	<b>Silicosis</b>	<b>Coal workers' pneumoconiosis</b>	<b>Byssinosis</b>	<b>Unspecified/Other pneumoconioses</b>
Alabama	10.2	17.6	36.9	0.4	35.8
Alaska	30.0	43.3	13.3	-	13.3
Arizona	16.6	44.2	21.4	0.5	19.5
Arkansas	16.2	22.4	35.2	-	26.9
California	43.1	24.1	17.4	0.2	17.2
Colorado	5.6	43.4	34.0	-	18.5
Connecticut	27.1	29.3	19.4	0.2	25.1
Delaware	45.0	9.3	34.3	-	13.6
District of Columbia	14.1	39.1	21.9	-	26.6
Florida	28.6	18.3	38.0	0.1	16.1
Georgia	27.2	35.0	13.4	4.2	20.5
Hawaii	67.8	15.3	6.8	-	13.6
Idaho	25.6	63.6	2.8	-	8.5
Illinois	8.3	13.5	41.0	0.1	38.0
Indiana	6.7	23.9	42.4	0.1	28.1
Iowa	14.1	20.8	46.6	-	18.7
Kansas	13.3	36.1	26.7	0.4	23.9
Kentucky	0.9	6.0	60.5	-	33.5
Louisiana	50.0	26.9	6.9	0.6	17.5
Maine	63.1	21.0	1.5	-	14.9
Maryland	35.9	19.0	28.3	0.3	18.9
Massachusetts	60.2	19.1	5.1	0.8	16.0
Michigan	9.2	40.3	25.5	0.1	26.3
Minnesota	26.6	51.8	4.4	0.3	19.3
Mississippi	69.3	14.9	10.7	-	5.1
Missouri	24.5	35.4	21.7	-	18.6
Montana	15.5	68.5	9.2	-	8.0
Nebraska	45.8	22.0	8.5	-	25.4
Nevada	17.6	60.8	12.2	-	10.1
New Hampshire	49.2	27.1	6.8	1.7	16.1
New Jersey	48.7	16.7	18.8	0.1	17.2
New Mexico	9.3	36.7	25.6	-	29.1
New York	22.7	35.7	18.0	0.1	25.3
North Carolina	24.7	34.5	18.9	8.9	13.9
North Dakota	31.0	27.6	17.2	-	27.6
Ohio	5.6	33.9	36.8	0.1	24.8
Oklahoma	19.7	29.7	30.1	0.4	21.9
Oregon	56.1	24.5	10.8	-	9.5
Pennsylvania	2.0	6.9	81.6	-	10.2
Rhode Island	53.2	24.3	6.3	1.8	18.9
South Carolina	52.1	23.4	11.6	5.0	9.2
South Dakota	4.3	55.7	18.6	-	21.4
Tennessee	7.5	16.0	47.6	0.1	30.0
Texas	52.6	22.6	12.2	0.3	13.7
Utah	4.4	34.4	38.4	-	24.0
Vermont	8.4	68.9	4.2	1.1	18.9
Virginia	10.2	8.7	56.0	0.1	25.8
Washington	59.2	24.2	8.8	0.1	8.7
West Virginia	1.6	7.3	60.1	-	31.7
Wisconsin	14.4	61.5	6.6	0.2	19.5
Wyoming	5.7	11.0	44.8	-	39.5
<b>TOTAL</b>	<b>10.0</b>	<b>14.2</b>	<b>58.6</b>	<b>0.2</b>	<b>17.9</b>

- indicates no deaths listed.

NOTE: Percentages may total more than 100% due to deaths with multiple pneumoconioses. See Appendix A for source description and Appendix B for methods and ICD-8 and ICD-9 codes.

SOURCE: National Center for Health Statistics multiple cause of death data.

Table 6-3. All pneumoconioses: Total number of deaths, crude and age-adjusted mortality rates (per 1,000,000 population), and total years of potential life lost (YPLL) to life expectancy, by state, U.S. residents age 15 and over, 1988-1992

State	Total deaths	Rank	Crude mortality		Age-adjusted mortality		YPLL to life expectancy			
			Rate	Rank	Rate	Rank	Years	Rank	Years/death	Rank
Alabama	303	12	19.16	9	9.89	10	3,388	12	11.2	42
Alaska	7	49	3.48	47	5.61	23	100	50	14.3	3
Arizona	75	31	5.28	40	3.15	40	933	31	12.4	17
Arkansas	59	37	6.43	33	3.16	39	699	36	11.8	28
California	688	6	5.93	37	4.12	33	8,612	6	12.5	15
Colorado	175	20	13.63	12	8.39	11	1,818	20	10.4	47
Connecticut	107	28	8.07	28	4.34	32	1,204	28	11.3	40
Delaware	65	33	24.60	5	16.54	5	895	32	13.8	6
District of Columbia	6	51	2.37	51	1.84	49	126	49	21.0	1
Florida	510	8	9.66	22	4.41	31	6,229	8	12.2	24
Georgia	112	25	4.44	45	3.37	37	1,492	24	13.3	7
Hawaii	20	46	4.58	43	2.91	44	227	46	11.4	36
Idaho	36	41	9.62	23	5.43	24	408	41	11.3	38
Illinois	476	9	10.64	21	5.95	20	5,544	9	11.6	32
Indiana	203	19	9.38	24	5.20	26	2,350	19	11.6	33
Iowa	64	34	5.90	38	2.67	45	701	35	11.0	44
Kansas	41	38	4.28	46	2.25	48	513	38	12.5	16
Kentucky	871	4	60.22	3	34.22	3	10,380	4	11.9	26
Louisiana	123	23	7.73	29	5.41	25	1,751	21	14.2	4
Maine	63	36	13.00	13	7.11	15	725	34	11.5	34
Maryland	206	18	10.84	20	7.65	13	2,642	17	12.8	10
Massachusetts	223	17	9.16	26	4.94	27	2,514	18	11.3	39
Michigan	245	14	6.78	31	4.12	33	3,029	15	12.4	19
Minnesota	81	30	4.79	41	2.98	43	1,023	30	12.6	12
Mississippi	113	24	11.59	17	7.10	16	1,423	25	12.6	13
Missouri	127	21	6.34	34	3.36	38	1,560	22	12.3	21
Montana	37	40	12.10	16	6.79	17	454	39	12.3	22
Nebraska	20	46	3.29	48	1.68	50	225	47	11.3	41
Nevada	22	45	4.59	42	3.15	40	259	45	11.8	30
New Hampshire	26	44	5.96	36	3.96	35	321	43	12.3	20
New Jersey	643	7	20.68	7	11.88	7	7,801	7	12.1	25
New Mexico	64	34	11.25	19	6.52	19	678	37	10.6	45
New York	320	11	4.45	44	2.56	46	3,913	11	12.2	23
North Carolina	244	15	9.21	25	5.92	21	3,113	14	12.8	11
North Dakota	8	48	3.27	49	2.33	47	155	48	19.4	2
Ohio	840	5	19.77	8	10.96	9	9,882	5	11.8	31
Oklahoma	73	32	5.98	35	3.00	42	839	33	11.5	35
Oregon	126	22	11.27	18	5.65	22	1,400	26	11.1	43
Pennsylvania	5,926	1	124.28	2	54.98	2	62,129	1	10.5	46
Rhode Island	35	42	8.61	27	4.78	30	435	40	12.4	18
South Carolina	97	29	7.12	30	4.81	28	1,285	27	13.2	8
South Dakota	7	49	2.66	50	1.14	51	69	51	9.9	49
Tennessee	265	13	13.69	11	7.76	12	3,129	13	11.8	29
Texas	426	10	6.59	32	4.81	28	5,537	10	13.0	9
Utah	111	26	18.67	10	11.88	7	1,119	29	10.1	48
Vermont	28	43	12.67	15	6.73	18	274	44	9.8	50
Virginia	980	3	39.76	4	28.00	4	12,282	3	12.5	14
Washington	243	16	12.77	14	7.54	14	2,755	16	11.3	37
West Virginia	1,878	2	262.60	1	132.76	1	22,378	2	11.9	27
Wisconsin	109	27	5.73	39	3.64	36	1,513	23	13.9	5
Wyoming	41	38	24.17	6	12.77	6	382	42	9.3	51

NOTE: Ranks are based on unrounded values. See Appendix A for source description and Appendix B for methods and ICD-8 and ICD-9 codes.

SOURCE: National Center for Health Statistics multiple cause of death data. Population estimates from U.S. Bureau of the Census.

**Table 6-4. All pneumoconioses: Proportionate mortality ratio (PMR) by usual occupation, selected states and years, U.S. residents age 15 and over, 1985-1992**

COC	Occupation	Number of deaths	PMR	95% confidence interval	
				LCL	UCL
616	Mining machine operators	3,506	62.26	60.21	64.38
593	Insulation workers	111	61.57	50.06	74.90
725	Miscellaneous metal and plastic machine operators	13	23.96	12.74	40.96
615	Explosives workers	8	17.15	7.39	33.76
643	Boilermakers	56	12.64	9.36	16.68
768	Crushing and grinding machine operators	31	9.19	6.21	13.13
675	Hand molders and shapers, except jewelers	20	8.75	5.34	13.52
046	Mining engineer	6	7.61	2.79	16.58
853	Excavating and loading machine operators	13	7.40	3.94	12.65
719	Molding and casting machine operators	52	6.83	5.06	9.01
646	Lay-out workers	9	6.65	3.05	12.62
613	Supervisors, extractive occupations	13	6.13	3.26	10.48
787	Hand molding, casting, and forming occupations	14	5.87	3.21	9.85
617	Mining occupations, n.e.c.	22	4.98	3.11	7.55
585	Plumbers, pipefitters, and steamfitters	174	4.76	4.05	5.55
653	Sheet metal workers	44	3.52	2.51	4.80
859	Miscellaneous material moving equipment operators	21	3.42	2.11	5.23
575	Electricians	137	3.31	2.74	3.96
516	Heavy equipment mechanics	32	3.21	2.17	4.59
824	Locomotive operating occupations	27	2.70	1.78	3.93
584	Plasterers	7	2.68	1.08	5.53
783	Welders and cutters	95	2.62	2.11	3.22
534	Heating, air conditioning, and refrigeration mechanics	11	2.52	1.26	4.51
599	Construction trades, n.e.c.	17	2.49	1.45	3.98
849	Crane and tower operators	28	2.43	1.62	3.51
544	Millwrights	28	2.35	1.57	3.40
563	Brickmasons and stonemasons	45	2.29	1.67	3.07
759	Painting, paint spray machine operators	16	2.25	1.29	3.65
766	Furnace, kiln, oven operators, except food	28	2.22	1.48	3.21
518	Industrial machinery repairers	39	2.00	1.39	2.78
709	Grinding, abrading, buffing, and polishing machine operators	18	1.96	1.16	3.10
547	Specified mechanics and repairers, n.e.c.	21	1.86	1.15	2.84
844	Operating engineers	53	1.85	1.37	2.44
779	Machine operators, not specified	117	1.70	1.38	2.07
549	Not specified mechanics and repairers	29	1.62	1.09	2.33
889	Laborers, except construction	365	1.45	1.30	1.61
869	Construction laborers	110	1.37	1.11	1.67
633	Supervisors, production occupations	122	1.33	1.10	1.59
637	Machinists	106	1.29	1.05	1.57

COC - 1980 Census Occupation Code    n.e.c. - not elsewhere classified    LCL - low er confidence limit    UCL - upper confidence limit

NOTE: See Appendix A for source description, Appendix B for methods and ICD-8 and ICD-9 codes, and Appendix C for list of 25 states reporting usual occupation and years reporting.

SOURCE: National Center for Health Statistics multiple cause of death data.

**Table 6-5. All pneumoconioses: Proportionate mortality ratio (PMR) by usual industry, selected states and years, U.S. residents age 15 and over, 1985-1992**

CIC	Industry	Number of deaths	PMR	95% confidence interval	
				LCL	UCL
041	Coal mining	3,694	62.50	60.44	64.63
262	Miscellaneous nonmetallic mineral and stone products	128	15.16	12.57	18.13
040	Metal mining	107	11.43	9.29	13.91
360	Ship and boat building and repairing	170	9.58	8.15	11.18
050	Nonmetallic mining and quarrying, except fuel	66	8.06	6.15	10.37
271	Iron and steel foundries	72	5.58	4.36	7.05
252	Structural clay products	33	5.29	3.57	7.56
261	Pottery and related products	27	4.56	3.00	6.64
192	Industrial and miscellaneous chemicals	95	2.70	2.18	3.32
282	Fabricated structural metal products	44	2.08	1.49	2.83
270	Blast furnaces, steelworks, rolling and finishing mills	179	1.98	1.69	2.31
300	Miscellaneous fabricated metal products	40	1.81	1.29	2.47
060	Construction	754	1.68	1.56	1.81
211	Other rubber products, and plastics footwear and belting	33	1.65	1.11	2.36
250	Glass and glass products	31	1.54	1.04	2.20
392	Not specified manufacturing industries	148	1.24	1.04	1.46

CIC - 1980 Census Industry Code LCL - lower confidence limit UCL - upper confidence limit

NOTE: See Appendix A for source description, Appendix B for methods and ICD-8 and ICD-9 codes, and Appendix C for list of 25 states reporting usual industry and years reporting.

SOURCE: National Center for Health Statistics multiple cause of death data.

Figure 6-3. All pneumoconioses: Total number of deaths by county,  
U.S. residents age 15 and over, 1983-1992

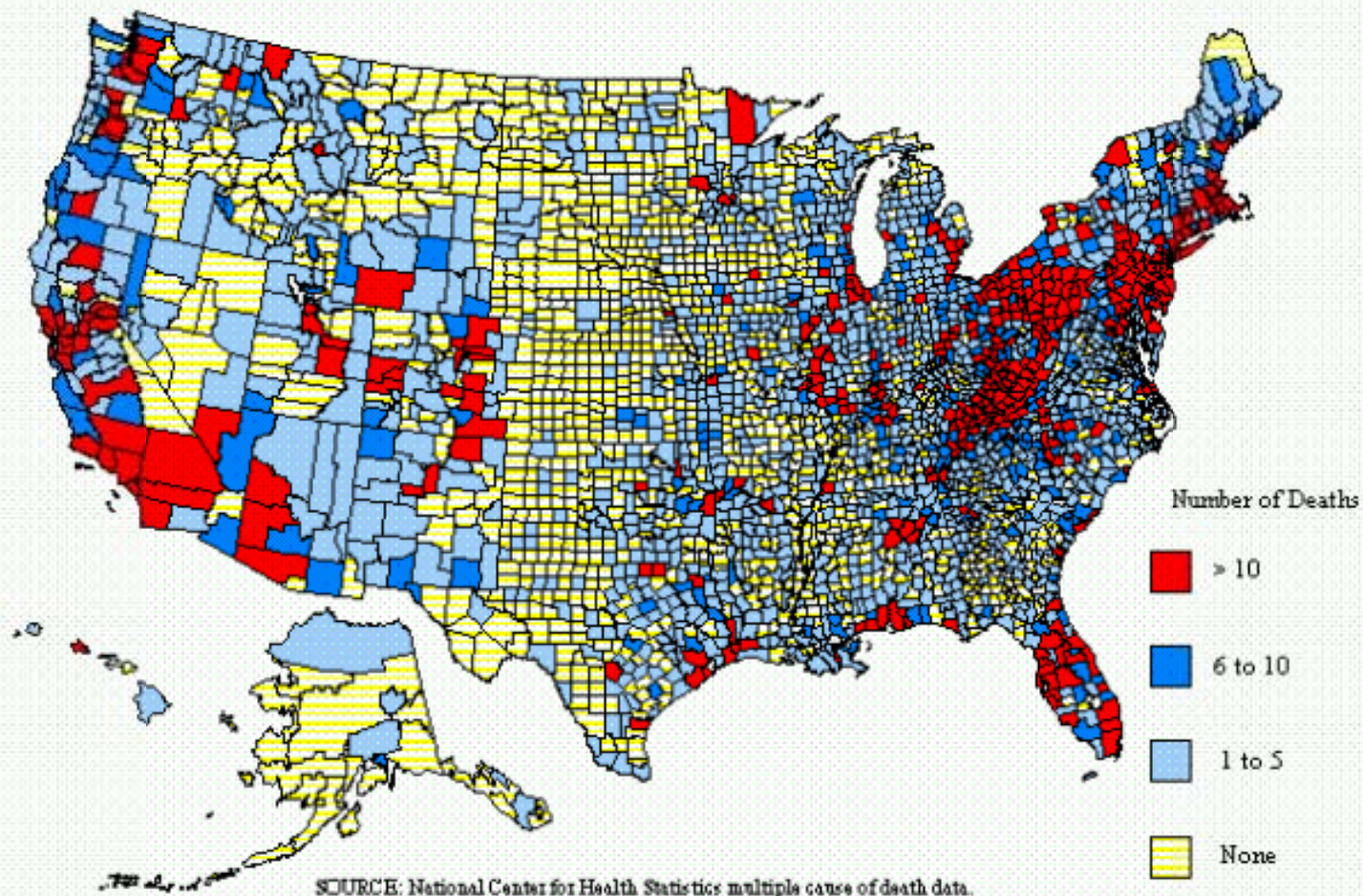
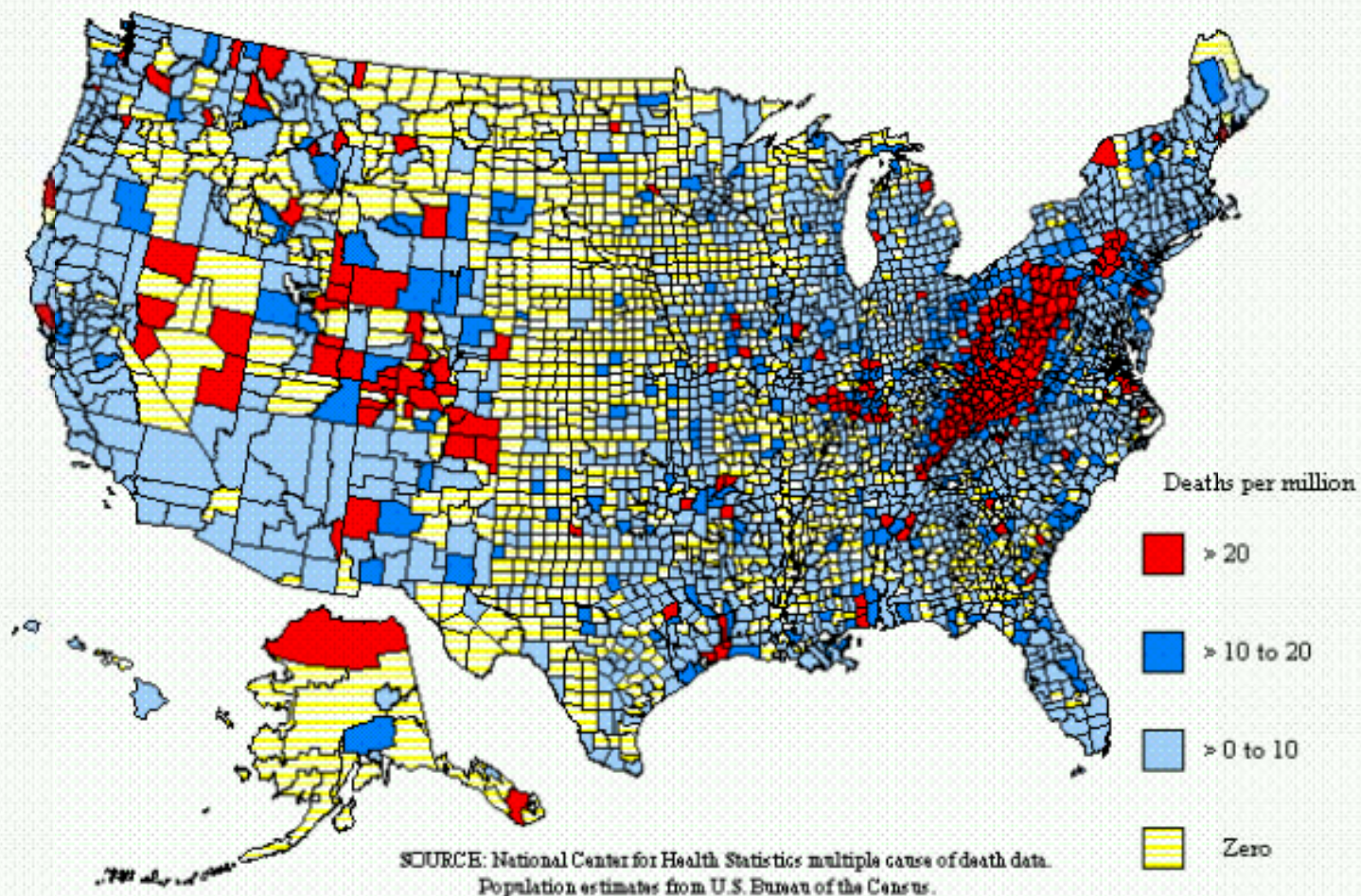


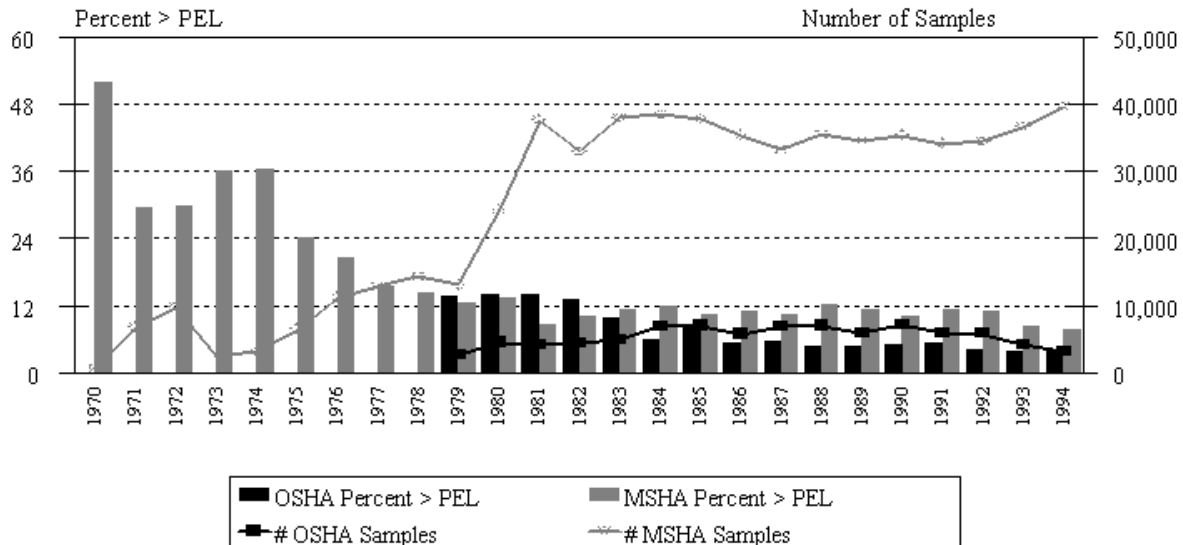


Figure 6-4. All pneumoconioses: Age-adjusted mortality rates by county,  
U.S. residents age 15 and over, 1983-1992



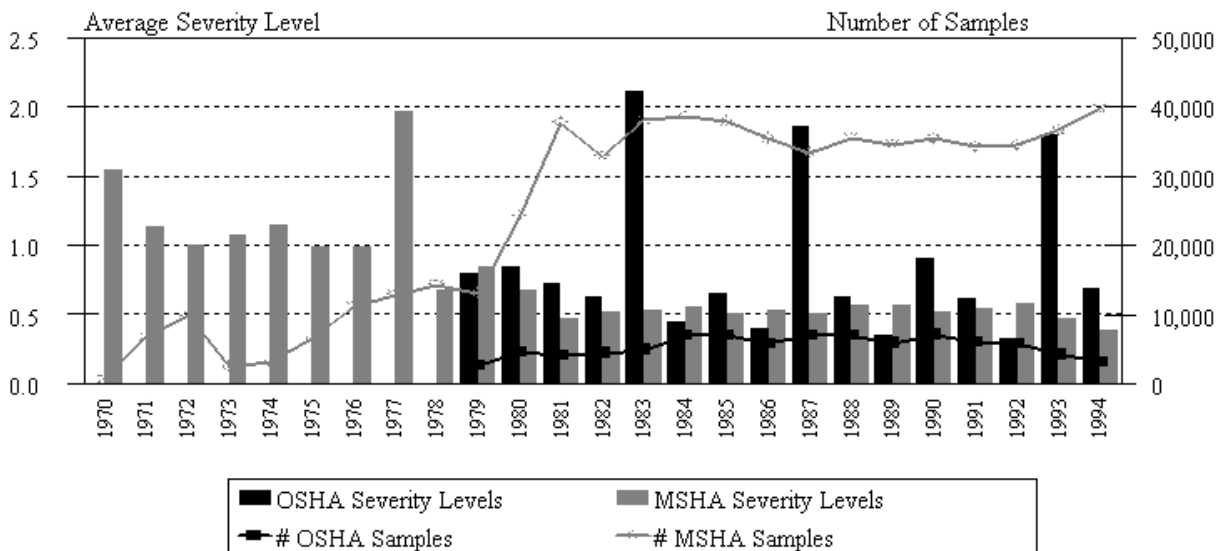


**Figure 6-5. Pneumoconiotic agents: Number of MSHA and OSHA inspector samples and percent exceeding the permissible exposure limit (PEL), 1970-1994**



NOTE: See Appendix A for source description, Appendix B for methods, and Appendix D for agents.  
 SOURCE: Mine Safety and Health Administration: respirable coal mine dust data and respirable coal mine quartz data. Bureau of Mines: Mine Inspection Data Analysis System. Occupational Safety and Health Administration: Integrated Management Information System.

**Figure 6-6. Pneumoconiotic agents: Number of MSHA and OSHA inspector samples and average severity levels, 1970-1994**



NOTE: See Appendix A for source description, Appendix B for methods, and Appendix D for agents.  
 SOURCE: Mine Safety and Health Administration: respirable coal mine dust data and respirable coal mine quartz data. Bureau of Mines: Mine Inspection Data Analysis System. Occupational Safety and Health Administration: Integrated Management Information System.

**Table 6-6. Pneumoconiotic agents: Number of MSHA and OSHA inspector samples, percent exceeding the permissible exposure limit (PEL) and average severity level, by industry, 1993-1994**

CIC	Industries most frequently recorded on 1991-1992 death certificates with any pneumoconiosis	Number of samples	% > PEL	Average severity
041	Coal Mining	45,132	9.6	0.47
060	Construction	844	5.6	1.51
270	Blast furnaces, steelworks, rolling and finishing mills	139	0.0	0.02
360	Ship and boat building and repairing	101	7.9	1.00
392	Not specified manufacturing industries	0	-	-
262	Miscellaneous nonmetallic mineral and stone products	181	8.3	0.34
192	Industrial and miscellaneous chemicals	43	4.7	4.19
400	Railroads	2	0.0	0.03
901	General government, n.e.c.	20	0.0	0.05
142	Yarn, thread, and fabric mills	77	18.2	0.69
	All other industries	36,857	5.4	0.53
	Industry not reported	79	2.5	0.13
	<b>TOTAL</b>	<b>83,475</b>	<b>7.7</b>	<b>0.51</b>

CIC - 1980 Census Industry Code      n.e.c. - not elsewhere classified      - indicates incalculable field

NOTE: See Appendix A for source description, Appendix B for methods, Appendix C for list of 25 states reporting usual industry and years reporting, and Appendix D for agents.

SOURCE: Mine Safety and Health Administration: respirable coal mine dust data and respirable coal mine quartz data. Bureau of Mines: Mine Inspection Data Analysis System. Occupational Safety and Health Administration: Integrated Management Information System. National Center for Health Statistics: multiple cause of death data.

**Table 6-7. Pneumoconiotic agents: Number of MSHA and OSHA inspector samples, percent exceeding the permissible exposure limit (PEL) and average severity level, by industry, 1993-1994**

CIC	Industries most frequently sampled in 1993-1994	Number of samples	% > PEL	Average severity
041	Coal mining	45,132	9.6	0.47
050	Nonmetallic mining	27,900	5.7	0.38
040	Metal mining	3,069	6.6	0.28
060	Construction	844	5.6	1.51
300	Miscellaneous fabricated metal products	602	4.3	1.59
280	Other primary metal industries	587	3.6	0.18
271	Iron and steel foundries	570	9.5	1.24
282	Fabricated structural metal products	496	2.6	10.29
351	Motor vehicles and motor vehicle equipment	458	1.3	0.26
331	Machinery, except electrical, n.e.c.	294	3.1	0.15
	All other industries	3,444	3.3	0.41
	Industry not reported	79	2.5	0.13
	<b>TOTAL</b>	<b>83,475</b>	<b>7.7</b>	<b>0.51</b>

CIC - 1980 Census Industry Code      n.e.c. - not elsewhere classified

NOTE: See Appendix A for source description, Appendix B for methods, and Appendix D for agents.

SOURCE: Mine Safety and Health Administration: respirable coal mine dust data and respirable coal mine quartz data. Bureau of Mines: Mine Inspection Data Analysis System. Occupational Safety and Health Administration: Integrated Management Information System.

**UNITED STATES**

*Pneumoconiotic Agents: Exposure*

**Table 6-8 (page 1 of 2). Pneumoconiotic agents: Number of MSHA inspector samples, percent exceeding the permissible exposure limit (PEL) and average severity levels (Avg. Sev.), by state, 1970-1994**

State	1970-1984				1985-1994				1993-1994			
	Total samples		Samples > PEL		Total samples		Samples > PEL		Total samples		Samples > PEL	
	Number	Avg. Sev.	%	Avg. Sev.	Number	Avg. Sev.	%	Avg. Sev.	Number	Avg. Sev.	%	Avg. Sev.
Alabama	5,472	0.56	12.4	2.29	10,394	0.50	11.1	2.00	2,990	0.44	8.7	2.03
Alaska	107	0.54	9.3	3.40	303	0.71	7.6	7.72	141	0.25	2.8	5.25
Arizona	3,997	1.06	15.3	5.35	2,546	0.75	14.3	3.78	800	0.44	9.6	2.62
Arkansas	954	1.40	33.4	3.60	1,545	0.64	15.5	3.02	563	0.35	9.1	2.26
California	2,068	1.59	14.7	9.20	4,912	0.55	10.7	3.34	1,238	0.28	4.0	3.56
Colorado	5,711	0.89	22.7	2.76	7,635	0.60	14.3	2.27	1,292	0.51	11.4	2.08
Connecticut	410	1.11	22.2	4.01	439	0.48	12.3	2.66	76	0.18	2.6	2.27
Delaware	10	0.19	0.0	-	46	0.23	0.0	-	3	0.02	0.0	-
District of Columbia	0	-	-	-	0	-	-	-	0	-	-	-
Florida	1,153	4.30	5.2	80.01	1,855	0.16	2.4	2.51	511	0.09	1.8	1.42
Georgia	2,426	0.57	12.7	2.63	3,494	0.44	9.1	3.08	832	0.38	6.4	4.01
Hawaii	6	0.18	0.0	-	146	0.18	2.1	5.85	88	0.19	1.1	13.99
Idaho	1,999	1.08	15.9	5.11	1,900	0.68	9.3	5.66	663	0.22	4.5	2.11
Illinois	11,544	0.85	20.1	2.75	14,338	0.51	10.0	1.82	3,320	0.38	5.3	1.83
Indiana	4,796	0.37	6.7	2.70	4,939	0.34	6.0	2.41	1,221	0.30	5.2	1.80
Iowa	1,231	0.51	10.2	2.63	1,343	0.24	5.1	1.76	370	0.16	1.1	1.95
Kansas	1,640	0.51	13.2	1.97	1,516	0.42	8.0	2.68	428	0.26	5.1	1.85
Kentucky	36,519	0.63	14.6	2.42	67,710	0.56	12.3	2.38	14,468	0.49	10.7	2.06
Louisiana	372	0.68	12.4	4.23	1,922	0.16	3.1	2.36	834	0.14	2.6	1.89
Maine	441	0.59	15.4	2.03	282	0.31	6.0	1.95	79	0.23	3.8	1.42
Maryland	1,290	0.46	7.8	2.62	1,917	0.40	6.9	2.69	478	0.42	6.9	2.93
Massachusetts	574	1.46	19.0	6.16	621	0.38	9.0	2.39	168	0.29	6.5	2.01
Michigan	2,662	3.49	11.0	29.65	3,328	0.46	9.9	3.03	1,078	0.32	7.8	2.20
Minnesota	4,947	0.47	8.1	3.54	3,723	0.32	7.0	2.45	863	0.27	5.2	2.28
Mississippi	433	0.53	7.6	4.64	932	0.32	6.4	2.88	371	0.46	8.1	3.60
Missouri	3,553	1.18	13.1	7.25	5,487	0.89	9.2	7.48	1,769	0.30	5.1	2.73
Montana	1,786	0.47	10.4	2.43	2,962	0.52	9.6	3.54	538	0.38	8.2	2.52

See footnotes at end of table.

**UNITED STATES**

*Pneumoconiotic Agents: Exposure*

**Table 6-8 (page 2 of 2). Pneumoconiotic agents: Number of MSHA inspector samples, percent exceeding the permissible exposure limit (PEL) and average severity levels (Avg. Sev.), by state, 1970-1994**

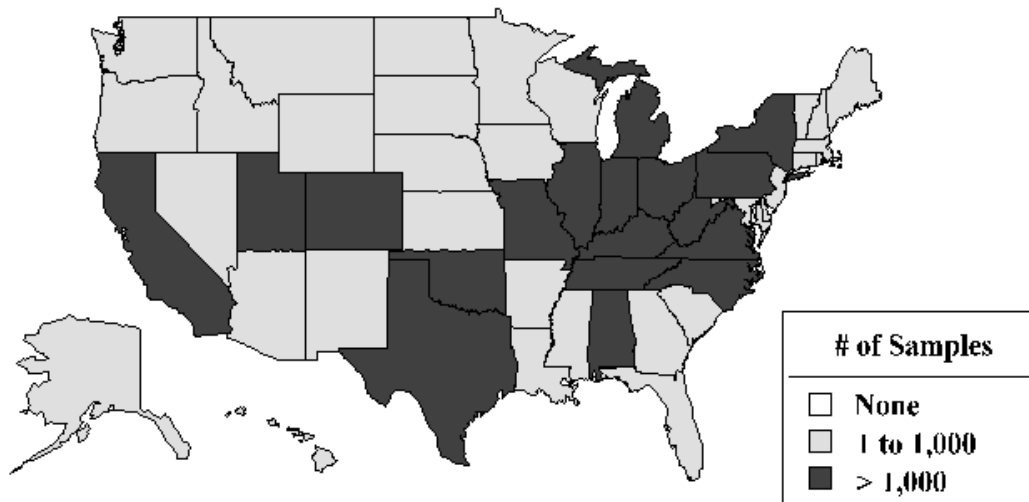
State	1970-1984				1985-1994				1993-1994			
	Total samples		Samples > PEL		Total samples		Samples > PEL		Total samples		Samples > PEL	
	Number	Avg. Sev.	%	Avg. Sev.	Number	Avg. Sev.	%	Avg. Sev.	Number	Avg. Sev.	%	Avg. Sev.
Nebraska	146	0.46	9.6	2.83	484	0.17	2.5	2.18	174	0.13	1.7	2.75
Nevada	1,018	2.44	23.9	9.23	2,260	0.85	19.6	3.18	563	0.40	9.9	2.44
New Hampshire	214	1.04	23.8	3.20	231	0.37	8.7	1.70	58	0.41	12.1	1.74
New Jersey	1,023	0.80	22.1	2.55	1,239	0.60	13.3	2.88	194	0.30	7.2	1.67
New Mexico	1,845	0.59	10.8	3.78	3,128	0.61	12.4	3.15	946	0.55	10.8	3.29
New York	1,758	0.79	11.5	4.97	4,169	0.41	6.6	3.63	1,065	0.29	5.1	3.00
North Carolina	2,877	0.82	10.4	5.75	4,757	0.38	5.5	4.48	1,260	0.23	4.3	2.75
North Dakota	568	0.38	6.9	2.39	722	0.19	2.1	2.34	128	0.12	0.0	-
Ohio	12,194	0.71	18.8	2.22	15,819	0.40	7.2	2.33	3,014	0.29	4.9	2.03
Oklahoma	2,221	0.55	11.6	3.29	4,023	0.56	8.7	4.33	1,066	0.43	4.4	6.58
Oregon	351	0.47	5.7	4.86	1,716	1.26	4.7	23.90	716	2.40	2.4	96.11
Pennsylvania	37,716	0.50	9.7	2.43	31,159	0.45	8.7	2.21	6,588	0.39	7.0	2.46
Rhode Island	71	0.82	18.3	2.69	84	0.55	11.9	2.95	24	0.49	16.7	2.04
South Carolina	1,012	2.90	21.2	12.54	2,892	0.31	6.8	2.62	995	0.28	2.3	7.39
South Dakota	1,434	0.82	16.0	3.47	1,650	0.47	7.1	4.37	361	0.19	4.2	2.02
Tennessee	6,861	0.49	9.5	2.41	9,690	0.42	8.5	2.33	1,724	0.38	7.6	2.45
Texas	2,147	0.86	11.8	5.76	8,021	0.53	5.4	7.49	2,521	0.27	3.8	4.69
Utah	2,820	0.78	20.1	2.27	7,613	0.73	15.7	2.82	1,275	0.52	11.1	2.15
Vermont	973	0.55	14.4	1.87	897	0.57	15.8	2.37	249	0.51	13.3	2.26
Virginia	26,679	0.59	13.6	2.24	32,635	0.55	12.8	2.19	5,109	0.50	11.6	1.97
Washington	1,006	0.68	14.7	3.24	2,069	0.47	9.0	3.50	934	0.30	6.5	2.51
West Virginia	45,966	0.66	16.1	2.20	69,427	0.51	10.1	2.11	10,354	0.51	10.4	2.09
Wisconsin	2,151	0.48	9.5	2.82	2,406	0.53	10.6	3.36	830	0.53	6.7	5.57
Wyoming	2,506	0.99	16.7	4.34	3,022	0.60	11.1	3.48	815	0.39	9.4	2.29
<b>TOTAL</b>	<b>251,658</b>	<b>0.72</b>	<b>14.1</b>	<b>3.20</b>	<b>356,348</b>	<b>0.52</b>	<b>10.3</b>	<b>2.61</b>	<b>76,145</b>	<b>0.43</b>	<b>8.0</b>	<b>2.59</b>

- indicates incalculable field.

NOTE: See Appendix A for source description, Appendix B for methods, and Appendix D for agents.

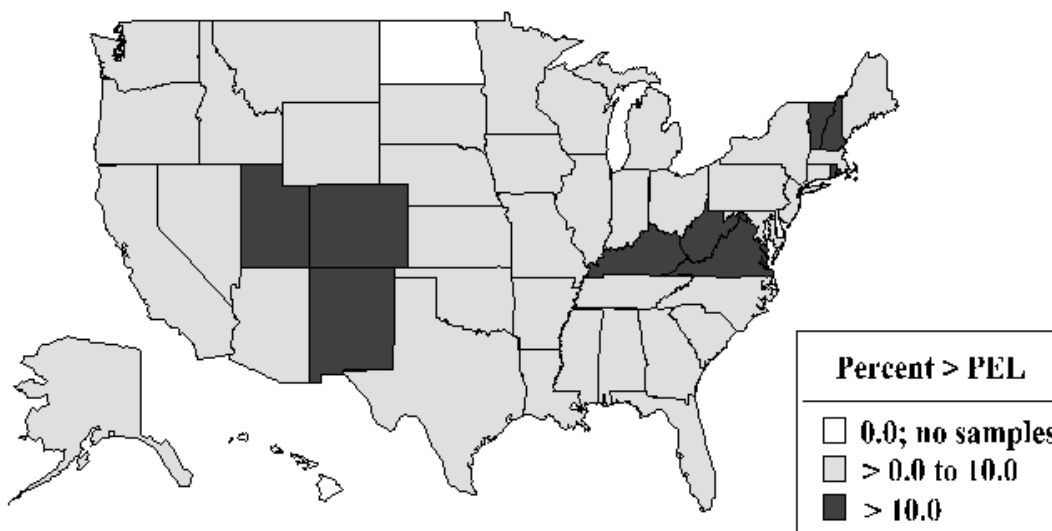
SOURCE: Mine Safety and Health Administration: respirable coal mine dust data and respirable coal mine quartz data. Bureau of Mines: Mine Inspection Data Analysis System.

**Figure 6-7. Pneumoconiotic agents: Number of MSHA inspector samples collected by state, 1993-1994**



NOTE: See Appendix A for source description, Appendix B for methods, and Appendix D for agents.  
SOURCE: Mine Safety and Health Administration: respirable coal mine dust data and respirable coal mine quartz data. Bureau of Mines: Mine Inspection Data Analysis System.

**Figure 6-8. Pneumoconiotic agents: Percent of MSHA inspector samples that exceeded the permissible exposure limit (PEL), by state, 1993-1994**



NOTE: See Appendix A for source description, Appendix B for methods, and Appendix D for agents.  
SOURCE: Mine Safety and Health Administration: respirable coal mine dust data and respirable coal mine quartz data. Bureau of Mines: Mine Inspection Data Analysis System.



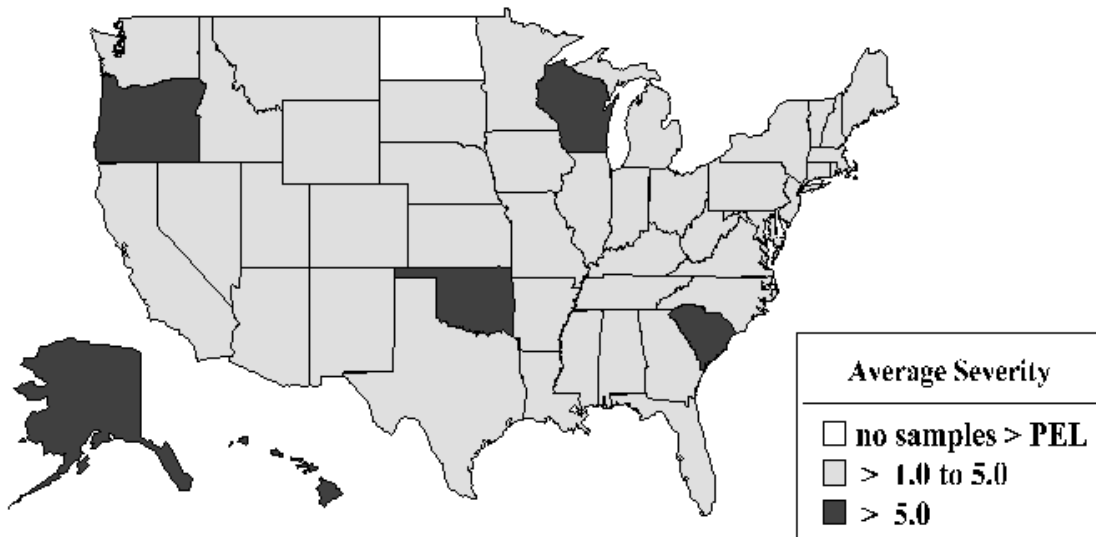
**Figure 6-9. Pneumoconiotic agents: Average severity level by state for MSHA inspector samples, 1993-1994**



NOTE: See Appendix A for source description, Appendix B for methods, and Appendix D for agents.

SOURCE: Mine Safety and Health Administration: respirable coal mine dust data and respirable coal mine quartz data. Bureau of Mines: Mine Inspection Data Analysis System.

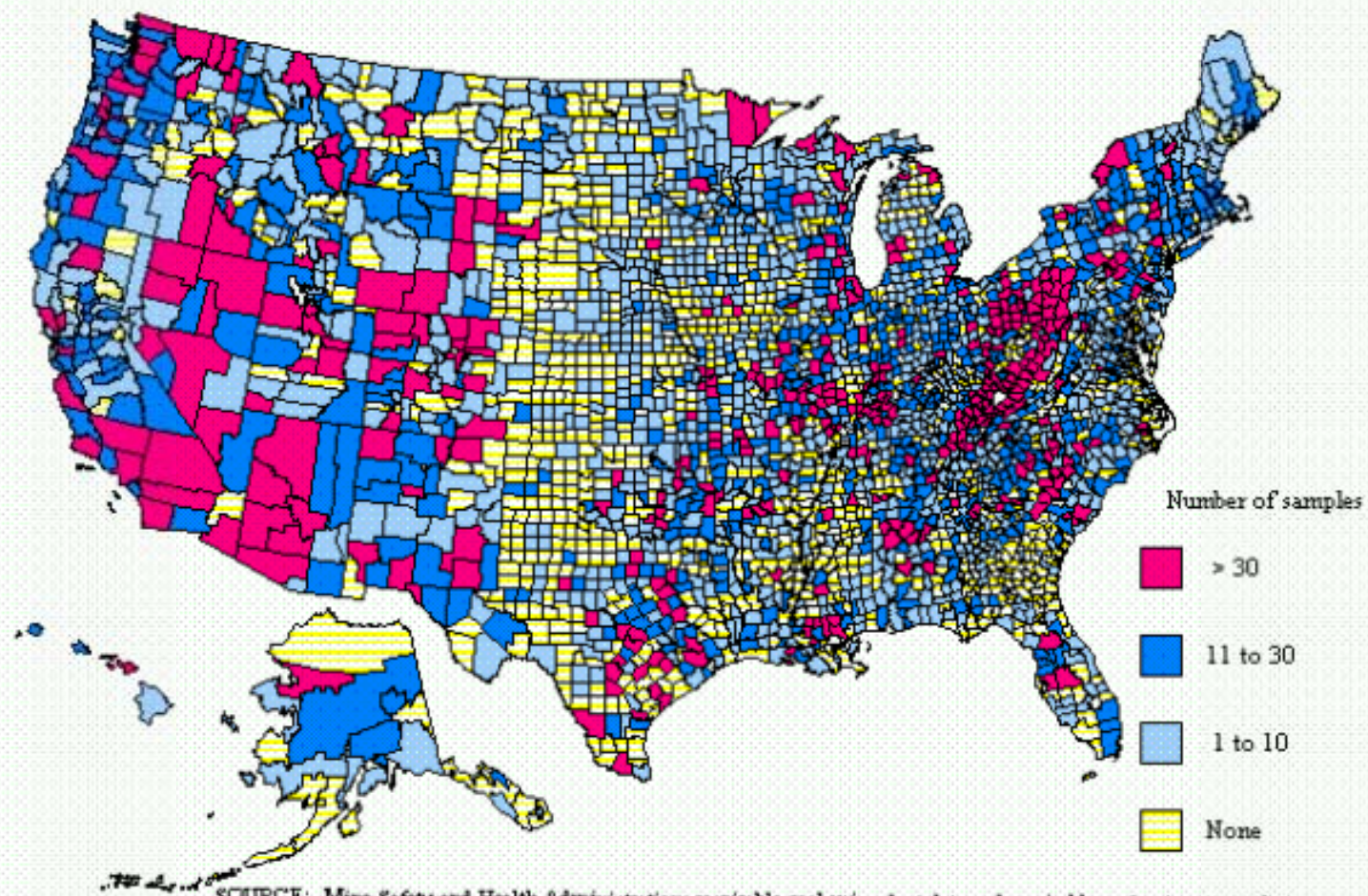
**Figure 6-10. Pneumoconiotic agents: Average severity level by state for MSHA inspector samples that exceeded the permissible exposure limit (PEL), 1993-1994**



NOTE: See Appendix A for source description, Appendix B for methods, and Appendix D for agents.

SOURCE: Mine Safety and Health Administration: respirable coal mine dust data and respirable coal mine quartz data. Bureau of Mines: Mine Inspection Data Analysis System.

Figure 6-11. Pneumoconiotic agents: Number of MSHA inspector samples collected by county, 1993-1994



**UNITED STATES**

*Pneumoconiotic Agents: Exposure*

**Table 6-9 (page 1 of 2). Pneumoconiotic agents: Number of OSHA inspector samples, percent exceeding the permissible exposure limit (PEL) and average severity levels (Avg. Sev.), by state, 1979-1994**

State	1979-1984				1985-1994				1993-1994			
	Total samples		Samples > PEL		Total samples		Samples > PEL		Total samples		Samples > PEL	
	Number	Avg. Sev.	%	Avg. Sev.	Number	Avg. Sev.	%	Avg. Sev.	Number	Avg. Sev.	%	Avg. Sev.
Alabama	560	0.76	19.6	2.95	839	0.55	7.2	6.40	93	1.27	7.5	15.66
Alaska	93	0.38	1.1	34.59	149	0.16	4.0	3.31	4	0.00	0.0	-
Arizona	303	0.15	4.6	2.35	182	0.28	3.3	6.59	12	1.52	8.3	17.36
Arkansas	184	0.26	7.6	1.90	690	0.41	5.1	7.06	186	0.20	4.8	2.20
California	52	1.05	13.5	7.30	1,462	2.11	3.6	56.84	25	0.21	8.0	1.85
Colorado	1,562	0.41	5.3	5.89	2,673	4.06	2.8	141.51	126	0.24	6.3	2.67
Connecticut	698	0.49	11.0	3.06	1,285	0.26	3.1	7.12	164	0.10	1.8	3.38
Delaware	90	0.22	5.6	1.49	75	0.08	2.7	1.77	8	0.08	0.0	-
District of Columbia	62	0.08	1.6	2.04	47	1.96	8.5	22.75	24	1.66	8.3	19.75
Florida	263	1.12	9.9	10.06	1,176	0.14	2.5	4.68	109	0.08	2.8	1.67
Georgia	919	0.89	18.2	3.98	2,789	0.54	5.5	8.67	340	0.39	4.1	7.27
Hawaii	14	0.08	0.0	-	20	0.00	0.0	-	3	0.00	0.0	-
Idaho	153	0.84	9.8	7.28	746	0.11	1.1	5.64	171	0.04	0.0	-
Illinois	1,451	0.98	11.4	7.35	4,549	0.41	2.9	12.51	650	0.06	0.8	3.95
Indiana	516	0.53	15.1	2.09	886	0.35	6.4	3.38	93	0.12	3.2	1.47
Iowa	845	0.52	9.6	3.73	1,284	0.29	5.2	3.14	128	0.41	14.1	2.14
Kansas	265	0.42	8.3	3.23	450	0.10	1.8	2.95	72	0.02	0.0	-
Kentucky	286	1.05	12.9	7.41	767	1.73	7.8	21.08	146	0.35	4.8	6.73
Louisiana	261	0.48	10.3	3.36	499	0.13	2.8	3.00	25	0.12	0.0	-
Maine	111	0.28	9.0	2.19	145	0.57	6.2	7.88	0	-	-	-
Maryland	121	0.89	8.3	9.43	752	0.73	9.6	6.71	122	0.25	4.1	3.49
Massachusetts	1,015	0.60	13.0	3.57	2,695	0.13	2.9	3.34	204	0.30	4.9	4.78
Michigan	0	-	-	-	1,781	3.05	4.6	64.42	528	9.69	4.2	230.81
Minnesota	59	1.17	35.6	2.59	80	0.01	0.0	-	0	-	-	-
Mississippi	93	1.07	9.7	9.06	535	0.78	4.3	16.78	43	0.04	0.0	-
Missouri	666	0.45	8.4	3.90	1,076	2.15	4.9	42.12	18	0.00	0.0	-
Montana	692	0.18	2.0	5.33	570	0.46	7.0	5.63	0	-	-	-

See footnotes at end of table.

**UNITED STATES**

*Pneumoconiotic Agents: Exposure*

**Table 6-9 (page 2 of 2). Pneumoconiotic agents: Number of OSHA inspector samples, percent exceeding the permissible exposure limit (PEL) and average severity levels (Avg. Sev.), by state, 1979-1994**

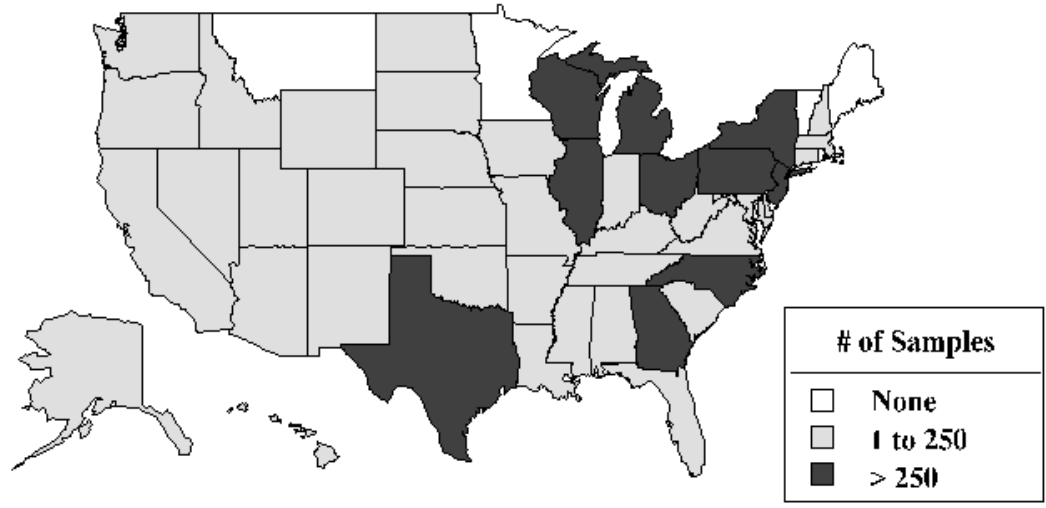
State	1979-1984				1985-1994				1993-1994			
	Total samples		Samples > PEL		Total samples		Samples > PEL		Total samples		Samples > PEL	
	Number	Avg. Sev.	%	Avg. Sev.	Number	Avg. Sev.	%	Avg. Sev.	Number	Avg. Sev.	%	Avg. Sev.
Nebraska	123	0.31	5.7	3.59	571	0.16	4.9	2.23	105	0.05	1.0	1.36
Nevada	59	0.75	13.6	4.34	229	4.34	33.6	12.68	15	0.08	0.0	-
New Hampshire	325	0.58	11.4	3.69	720	0.20	3.2	4.46	50	0.06	0.0	-
New Jersey	973	0.58	10.6	4.27	1,705	0.95	7.8	11.36	274	3.55	4.7	74.24
New Mexico	62	0.56	16.1	2.82	31	0.06	0.0	-	8	0.21	0.0	-
New York	1,807	0.64	11.7	4.39	2,547	0.27	3.4	6.54	503	0.21	3.0	5.50
North Carolina	561	14.85	13.4	108.98	1,236	0.48	6.5	5.64	514	0.49	2.5	16.58
North Dakota	204	0.42	7.8	3.68	475	0.14	2.1	1.85	57	0.09	0.0	-
Ohio	2,678	0.57	12.7	3.22	6,001	0.37	4.5	6.86	390	0.66	6.2	9.52
Oklahoma	880	0.33	4.4	5.25	1,743	0.76	2.0	35.40	75	0.09	1.3	1.73
Oregon	311	0.35	7.1	1.99	328	2.23	9.1	23.41	90	5.41	4.4	120.36
Pennsylvania	2,229	0.80	15.8	3.69	3,145	0.72	11.1	5.40	258	0.45	10.5	3.38
Rhode Island	401	0.90	15.0	5.22	378	0.87	7.9	9.87	0	-	-	-
South Carolina	201	0.10	2.0	2.07	859	0.44	6.3	5.43	174	0.98	6.3	14.33
South Dakota	96	0.17	4.2	1.75	536	0.10	2.1	1.97	82	0.10	2.4	1.74
Tennessee	48	0.53	12.5	2.32	590	1.25	8.6	13.14	126	0.18	4.0	2.07
Texas	2,324	0.78	7.2	9.35	3,998	0.81	5.4	14.16	523	2.71	4.8	55.86
Utah	11	0.71	27.3	2.58	66	0.26	4.5	2.83	7	0.35	14.3	1.30
Vermont	0	-	-	-	3	0.10	0.0	-	0	-	-	-
Virginia	271	0.46	11.4	2.56	462	0.87	17.7	3.92	8	1.82	25.0	7.00
Washington	27	0.82	37.0	1.96	285	1.16	18.9	5.56	116	0.54	13.8	3.27
West Virginia	480	1.11	15.0	6.39	651	0.47	6.6	6.34	8	0.00	0.0	-
Wisconsin	2,066	0.52	13.3	2.82	3,857	0.29	5.9	3.39	650	0.09	1.5	1.61
Wyoming	23	0.27	4.3	2.57	7	0.13	0.0	-	3	0.10	0.0	-
<b>TOTAL</b>	<b>27,494</b>	<b>0.91</b>	<b>11.0</b>	<b>6.95</b>	<b>58,625</b>	<b>0.82</b>	<b>5.2</b>	<b>14.40</b>	<b>7,330</b>	<b>1.33</b>	<b>3.9</b>	<b>32.18</b>

- indicates incalculable field.

NOTE: See Appendix A for source description, Appendix B for methods, and Appendix D for agents.

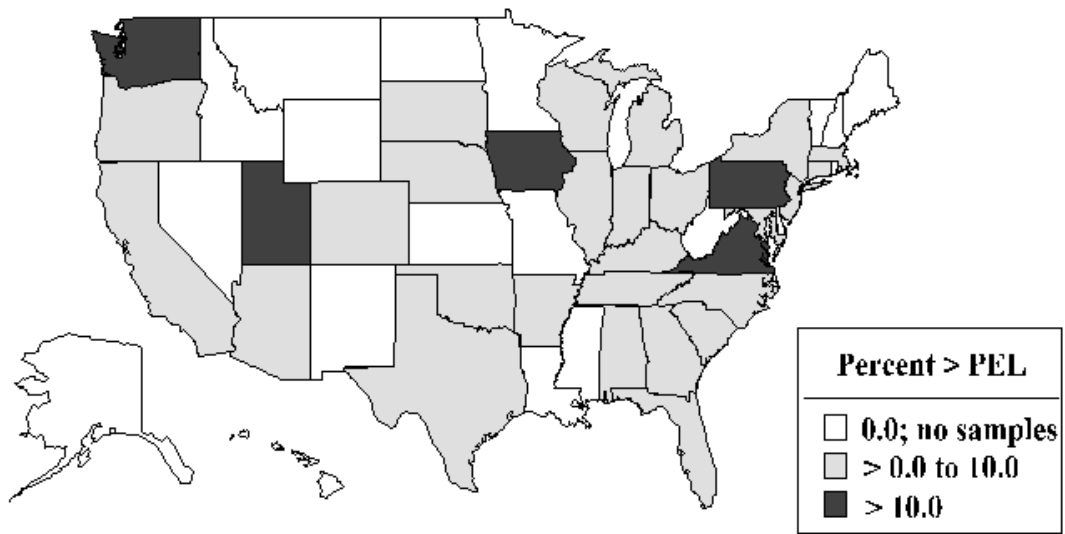
SOURCE: Occupational Safety and Health Administration: Integrated Management Information System.

**Figure 6-12. Pneumoconiotic agents: Number of OSHA inspector samples collected by state, 1993-1994**



NOTE: See Appendix A for source description, Appendix B for methods, and Appendix D for agents.  
 SOURCE: Occupational Safety and Health Administration: Integrated Management Information System .

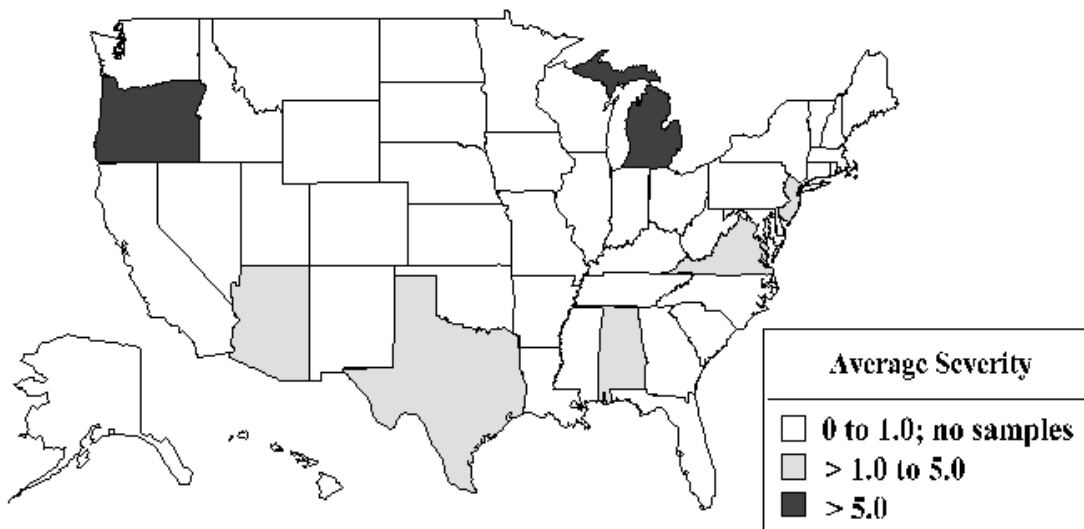
**Figure 6-13. Pneumoconiotic agents: Percent of OSHA inspector samples that exceeded the permissible exposure limit (PEL), by state, 1993-1994**



NOTE: See Appendix A for source description, Appendix B for methods, and Appendix D for agents.  
 SOURCE: Occupational Safety and Health Administration: Integrated Management Information System .

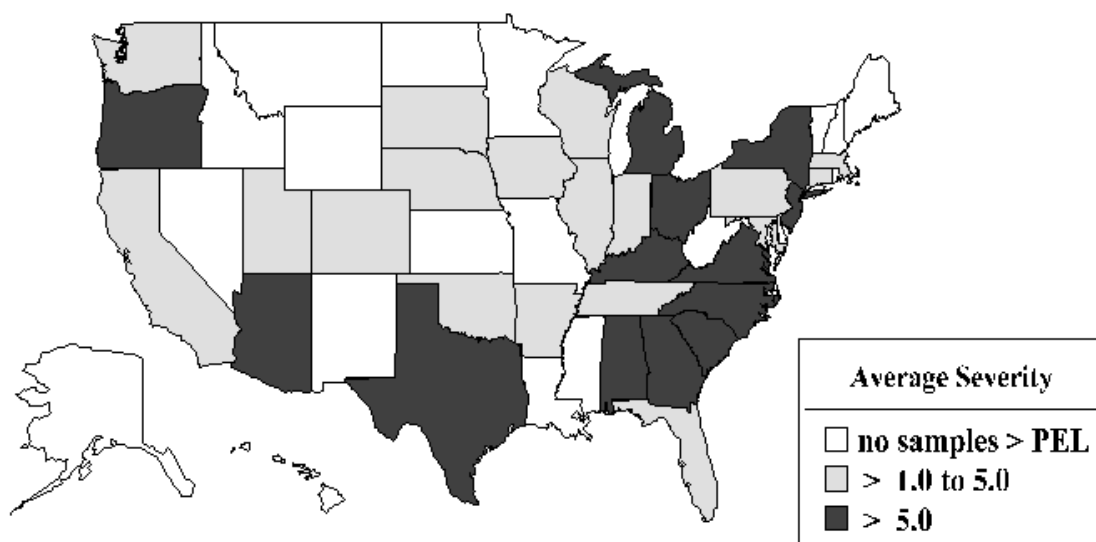


**Figure 6-14. Pneumoconiotic agents: Average severity level by state for OSHA inspector samples, 1993-1994**



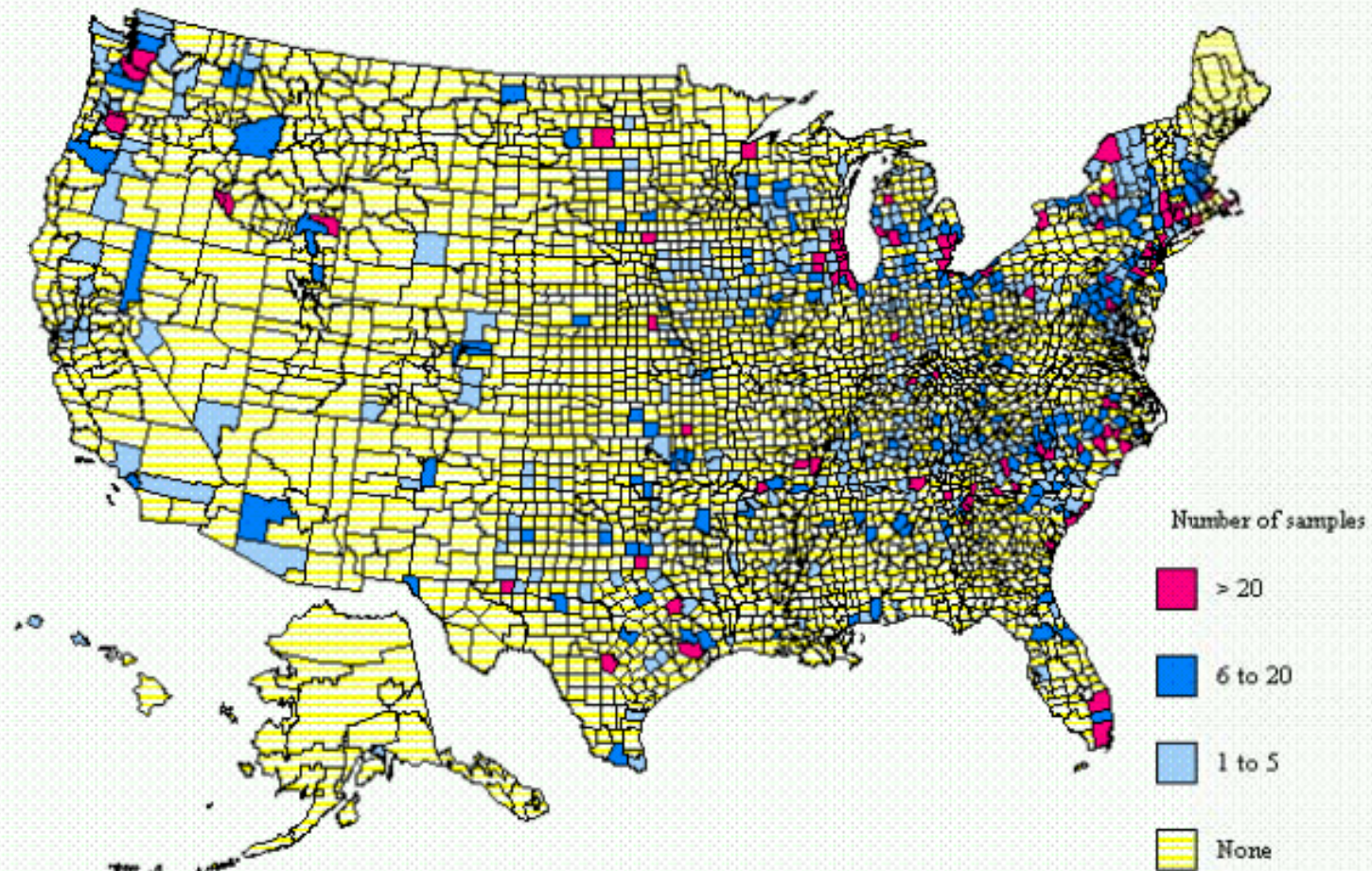
NOTE: See Appendix A for source descriptions, Appendix B for methods, and Appendix D for agents.  
SOURCE: Occupational Safety and Health Administration: Integrated Management Information System.

**Figure 6-15. Pneumoconiotic agents: Average severity level by state for OSHA inspector samples that exceeded the permissible exposure limit (PEL), 1993-1994**



NOTE: See Appendix A for source descriptions, Appendix B for methods, and Appendix D for agents.  
SOURCE: Occupational Safety and Health Administration: Integrated Management Information System.

Figure 6-16. Pneumoconiotic agents: Number of OSHA inspector samples collected by county, 1993-1994



SOURCE: Occupational Safety and Health Administration: Integrated Management Information System.