

Work-Related Lung Disease Surveillance Report 2007

Respiratory Conditions by NORA Industrial Sector

Division of Respiratory Disease Studies
National Institute for Occupational Safety and Health

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

This document is in the public domain and may be freely copied or reprinted.

Disclaimer

Mention of any company or product does not constitute endorsement by the National Institute for Occupational Safety and Health (NIOSH). In addition, citations to Web sites external to NIOSH do not constitute NIOSH endorsement of the sponsoring organizations or their programs or products. Furthermore, NIOSH is not responsible for the content of these Web sites.

Ordering Information

To receive documents or other information about occupational safety and health topics, contact NIOSH at

Telephone: **1-800-CDC-INFO** (1-800-232-4636)

TTY: 1-888-232-6348

E-mail: cdcinfo@cdc.gov

or visit the NIOSH Web site at **www.cdc.gov/niosh**.

For a monthly update on news at NIOSH, subscribe to *NIOSH eNews* by visiting **www.cdc.gov/niosh/eNews**.

DHHS (NIOSH) Publication No. 2008-143b

September 2008

SAFER • HEALTHIER • PEOPLE™

Table of Contents

Volume II: Respiratory Conditions by NORA Industrial Sector

| | |
|---|-----|
| Section 1. Respiratory Conditions by NORA Industrial Sector..... | 1 |
| Section 2. NORA Agriculture, Forestry, and Fishing (AFF) Sector | 25 |
| Section 3. NORA Construction (CON) Sector | 43 |
| Section 4. NORA Healthcare and Social Assistance (HAS) Sector..... | 63 |
| Section 5. NORA Manufacturing (MNF) Sector | 81 |
| Section 6. NORA Mining (MIN) Sector | 107 |
| Section 7. NORA Services (SRV) Sector..... | 129 |
| Section 8. NORA Transportation, Warehousing, and Utilities (TWU) Sector | 151 |
| Section 9. NORA Wholesale and Retail Trade (TRD) Sector | 171 |

List of Tables and Figures

Section 1. Respiratory Conditions by NORA Industrial Sector

| | |
|---|----|
| Table 1-1. Asbestosis: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 3 |
| Table 1-2. Asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 4 |
| Table 1-3. Coal workers’ pneumoconiosis: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 5 |
| Table 1-4. Coal workers’ pneumoconiosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 6 |
| Table 1-5. Silicosis: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 7 |
| Table 1-6. Silicosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 8 |
| Table 1-7. Byssinosis: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 9 |
| Table 1-8. Byssinosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 10 |
| Table 1-9. Unspecified and other pneumoconioses: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 11 |
| Table 1-10. Unspecified and other pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 12 |
| Table 1-11. All pneumoconioses: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 13 |
| Table 1-12. All pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 14 |
| Table 1-13. Malignant mesothelioma: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999 | 15 |
| Table 1-14. Malignant mesothelioma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999 | 16 |
| Table 1-15. Hypersensitivity pneumonitis: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 17 |
| Table 1-16. Hypersensitivity pneumonitis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 18 |
| Table 1-17. Asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999 | 19 |
| Table 1-18. Chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999..... | 20 |

| | |
|--|----|
| Table 1-19. Respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 21 |
| Table 1-20. Lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999..... | 22 |
| Table 1-21. Other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999..... | 23 |
| Table 1-22. Pneumonia and Influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999..... | 24 |

Section 2. NORA Agriculture, Forestry, and Fishing (AFF) Sector

| | |
|---|----|
| Table 2-1. NORA <i>agriculture, forestry, and fishing</i> sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 27 |
| Table 2-2. NORA <i>agriculture, forestry, and fishing</i> sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 28 |
| Table 2-3. NORA <i>agriculture, forestry, and fishing</i> sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 29 |
| Table 2-4. NORA <i>agriculture, forestry, and fishing</i> sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 30 |
| Table 2-5. NORA <i>agriculture, forestry, and fishing</i> sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 31 |
| Table 2-6. NORA <i>agriculture, forestry, and fishing</i> sector and byssinosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 32 |
| Table 2-7. NORA <i>agriculture, forestry, and fishing</i> sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 33 |
| Table 2-8. NORA <i>agriculture, forestry, and fishing</i> sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 34 |
| Table 2-9. NORA <i>agriculture, forestry, and fishing</i> sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999..... | 35 |
| Table 2-10. NORA <i>agriculture, forestry, and fishing</i> sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 36 |

List of Tables and Figures

| | |
|--|----|
| Table 2-11. NORA <i>agriculture, forestry, and fishing</i> sector and hypersensitivity pneumonitis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 37 |
| Table 2-12. NORA <i>agriculture, forestry, and fishing</i> sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 38 |
| Table 2-13. NORA <i>agriculture, forestry, and fishing</i> sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999 | 39 |
| Table 2-14. NORA <i>agriculture, forestry, and fishing</i> sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 40 |
| Table 2-15. NORA <i>agriculture, forestry, and fishing</i> sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999 | 41 |
| Table 2-16. NORA <i>agriculture, forestry, and fishing</i> sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999 | 42 |

Section 3. NORA Construction (CON) Sector

| | |
|--|----|
| Table 3-1. NORA <i>construction</i> sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999 | 45 |
| Table 3-2. NORA <i>construction</i> sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999 | 46 |
| Table 3-3. NORA <i>construction</i> sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 47 |
| Table 3-4. NORA <i>construction</i> sector and asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 48 |
| Table 3-5. NORA <i>construction</i> sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 49 |
| Table 3-6. NORA <i>construction</i> sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 50 |
| Table 3-7. NORA <i>construction</i> sector and silicosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 51 |
| Table 3-8. NORA <i>construction</i> sector and byssinosis: Most frequently recorded industries on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 52 |

| | |
|--|----|
| Table 3-9. NORA <i>construction</i> sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 53 |
| Table 3-10. NORA <i>construction</i> sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 54 |
| Table 3-11. NORA <i>construction</i> sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 55 |
| Table 3-12. NORA <i>construction</i> sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999..... | 56 |
| Table 3-13. NORA <i>construction</i> sector and malignant mesothelioma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999..... | 57 |
| Table 3-14. NORA <i>construction</i> sector and hypersensitivity pneumonitis: Most frequently recorded industries on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 58 |
| Table 3-15. NORA <i>construction</i> sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999 | 59 |
| Table 3-16. NORA <i>construction</i> sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 60 |
| Table 3-17. NORA <i>construction</i> sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999..... | 61 |
| Table 3-18. NORA <i>construction</i> sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999..... | 62 |

Section 4. NORA Healthcare and Social Assistance (HAS) Sector

| | |
|--|----|
| Table 4-1. NORA <i>healthcare and social assistance</i> sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999 | 65 |
| Table 4-2. NORA <i>healthcare and social assistance</i> sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999 | 66 |
| Table 4-3. NORA <i>healthcare and social assistance</i> sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 67 |
| Table 4-4. NORA <i>healthcare and social assistance</i> sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 68 |

List of Tables and Figures

| | |
|---|----|
| Table 4-5. NORA <i>healthcare and social assistance</i> sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 69 |
| Table 4-6. NORA <i>healthcare and social assistance</i> sector and byssinosis: Most frequently recorded industries on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 70 |
| Table 4-7. NORA <i>healthcare and social assistance</i> sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 71 |
| Table 4-8. NORA <i>healthcare and social assistance</i> sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 72 |
| Table 4-9. NORA <i>healthcare and social assistance</i> sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999..... | 73 |
| Table 4-10. NORA <i>healthcare and social assistance</i> sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 74 |
| Table 4-11. NORA <i>healthcare and social assistance</i> sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 75 |
| Table 4-12. NORA <i>healthcare and social assistance</i> sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999..... | 76 |
| Table 4-13. NORA <i>healthcare and social assistance</i> sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 77 |
| Table 4-14. NORA <i>healthcare and social assistance</i> sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999..... | 78 |
| Table 4-15. NORA <i>healthcare and social assistance</i> sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999 | 79 |
| Table 4-16. NORA <i>healthcare and social assistance</i> sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999 | 80 |

Section 5. NORA Manufacturing (MNF) Sector

| | |
|---|----|
| Table 5-1. NORA <i>manufacturing</i> sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 83 |
| Table 5-2. NORA <i>manufacturing</i> sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999 | 84 |

| | |
|---|----|
| Table 5-3. NORA <i>manufacturing</i> sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 85 |
| Table 5-4. NORA <i>manufacturing</i> sector and asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 86 |
| Table 5-5. NORA <i>manufacturing</i> sector and coal workers’ pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 88 |
| Table 5-6. NORA <i>manufacturing</i> sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 89 |
| Table 5-7. NORA <i>manufacturing</i> sector and silicosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 90 |
| Table 5-8. NORA <i>manufacturing</i> sector and byssinosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 91 |
| Table 5-9. NORA <i>manufacturing</i> sector and byssinosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 92 |
| Table 5-10. NORA <i>manufacturing</i> sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 93 |
| Table 5-11. NORA <i>manufacturing</i> sector and unspecified and other pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 94 |
| Table 5-12. NORA <i>manufacturing</i> sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 95 |
| Table 5-13. NORA <i>manufacturing</i> sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 96 |
| Table 5-14. NORA <i>manufacturing</i> sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999..... | 97 |
| Table 5-15. NORA <i>manufacturing</i> sector and malignant mesothelioma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry, U.S. residents age 15 and over, selected states, 1999..... | 98 |
| Table 5-16. NORA <i>manufacturing</i> sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 99 |

List of Tables and Figures

| | |
|--|-----|
| Table 5-17. NORA <i>manufacturing</i> sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 100 |
| Table 5-18. NORA <i>manufacturing</i> sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999 | 101 |
| Table 5-19. NORA <i>manufacturing</i> sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 102 |
| Table 5-20. NORA <i>manufacturing</i> sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999..... | 103 |
| Table 5-21. NORA <i>manufacturing</i> sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999 | 104 |
| Table 5-22. NORA <i>manufacturing</i> sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999..... | 105 |

Section 6. NORA Mining (MIN) Sector

| | |
|--|-----|
| Table 6-1. NORA <i>mining</i> sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 109 |
| Table 6-2. NORA <i>mining</i> sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999 | 110 |
| Table 6-3. NORA <i>mining</i> sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 111 |
| Table 6-4. NORA <i>mining</i> sector and coal workers’ pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 112 |
| Table 6-5. NORA <i>mining</i> sector and coal workers’ pneumoconiosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 113 |
| Table 6-6. NORA <i>mining</i> sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 114 |
| Table 6-7. NORA <i>mining</i> sector and silicosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 115 |
| Table 6-8. NORA <i>mining</i> sector and byssinosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 116 |
| Table 6-9. NORA <i>mining</i> sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 117 |

| | |
|--|-----|
| Table 6-10. NORA <i>mining</i> sector and unspecified and other pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 118 |
| Table 6-11. NORA <i>mining</i> sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 119 |
| Table 6-12. NORA <i>mining</i> sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 120 |
| Table 6-13. NORA <i>mining</i> sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999 | 122 |
| Table 6-14. NORA <i>mining</i> sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999 | 123 |
| Table 6-15. NORA <i>mining</i> sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 124 |
| Table 6-16. NORA <i>mining</i> sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999..... | 125 |
| Table 6-17. NORA <i>mining</i> sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry, U.S. residents age 15 and over, selected states and years, 1990–1999 | 126 |
| Table 6-18. NORA <i>mining</i> sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999..... | 127 |

Section 7. NORA Services (SRV) Sector

| | |
|--|-----|
| Table 7-1. NORA <i>services</i> sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 131 |
| Table 7-2. NORA <i>services</i> sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999 | 132 |
| Table 7-3. NORA <i>services</i> sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 133 |
| Table 7-4. NORA <i>services</i> sector and asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 134 |
| Table 7-5. NORA <i>services</i> sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 135 |

List of Tables and Figures

| | |
|---|-----|
| Table 7-6. NORA <i>services</i> sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 136 |
| Table 7-7. NORA <i>services</i> sector and byssinosis: Most frequently recorded industries on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 137 |
| Table 7-8. NORA <i>services</i> sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 138 |
| Table 7-9. NORA <i>services</i> sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 139 |
| Table 7-10. NORA <i>services</i> sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 140 |
| Table 7-11. NORA <i>services</i> sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999..... | 141 |
| Table 7-12. NORA <i>services</i> sector and malignant mesothelioma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999..... | 142 |
| Table 7-13. NORA <i>services</i> sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 143 |
| Table 7-14. NORA <i>services</i> sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 144 |
| Table 7-15. NORA <i>services</i> sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999 | 145 |
| Table 7-16. NORA <i>services</i> sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 146 |
| Table 7-17. NORA <i>services</i> sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999..... | 147 |
| Table 7-18. NORA <i>services</i> sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999..... | 148 |
| Table 7-19. NORA <i>services</i> sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999..... | 149 |

Section 8. NORA Transportation, Warehousing, and Utilities (TWU) Sector

| | |
|---|-----|
| Table 8-1. NORA <i>transportation, warehousing, and utilities</i> sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999 | 153 |
|---|-----|

| | |
|---|-----|
| Table 8-2. NORA <i>transportation, warehousing, and utilities</i> sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999 | 154 |
| Table 8-3. NORA <i>transportation, warehousing, and utilities</i> sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 155 |
| Table 8-4. NORA <i>transportation, warehousing, and utilities</i> sector and asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 156 |
| Table 8-5. NORA <i>transportation, warehousing, and utilities</i> sector and coal workers’ pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 157 |
| Table 8-6. NORA <i>transportation, warehousing, and utilities</i> sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 158 |
| Table 8-7. NORA <i>transportation, warehousing, and utilities</i> sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 159 |
| Table 8-8. NORA <i>transportation, warehousing, and utilities</i> sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 160 |
| Table 8-9. NORA <i>transportation, warehousing, and utilities</i> sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 161 |
| Table 8-10. NORA <i>transportation, warehousing, and utilities</i> sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999 | 162 |
| Table 8-11. NORA <i>transportation, warehousing, and utilities</i> sector and malignant mesothelioma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry, U.S. residents age 15 and over, selected states, 1999 | 163 |
| Table 8-12. NORA <i>transportation, warehousing, and utilities</i> sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 164 |
| Table 8-13. NORA <i>transportation, warehousing, and utilities</i> sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 165 |
| Table 8-14. NORA <i>transportation, warehousing, and utilities</i> sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999..... | 166 |
| Table 8-15. NORA <i>transportation, warehousing, and utilities</i> sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999 | 167 |

List of Tables and Figures

| | |
|---|-----|
| Table 8-16. NORA <i>transportation, warehousing, and utilities</i> sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999 | 168 |
| Table 8-17. NORA <i>transportation, warehousing, and utilities</i> sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999..... | 169 |
| Table 8-18. NORA <i>transportation, warehousing, and utilities</i> sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999 | 170 |

Section 9. NORA Wholesale and Retail Trade (TRD) Sector

| | |
|---|-----|
| Table 9-1. NORA <i>wholesale and retail trade</i> sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 173 |
| Table 9-2. NORA <i>wholesale and retail trade</i> sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 174 |
| Table 9-3. NORA <i>wholesale and retail trade</i> sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 175 |
| Table 9-4. NORA <i>wholesale and retail trade</i> sector and asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 176 |
| Table 9-5. NORA <i>wholesale and retail trade</i> sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 177 |
| Table 9-6. NORA <i>wholesale and retail trade</i> sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 178 |
| Table 9-7. NORA <i>wholesale and retail trade</i> sector and silicosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry, U.S. residents age 15 and over, selected states and years, 1990–1999 | 179 |
| Table 9-8. NORA <i>wholesale and retail trade</i> sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 180 |
| Table 9-9. NORA <i>wholesale and retail trade</i> sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999 | 181 |
| Table 9-10. NORA <i>wholesale and retail trade</i> sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 182 |
| Table 9-11. NORA <i>wholesale and retail trade</i> sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999..... | 183 |

| | |
|---|-----|
| Table 9-12. NORA <i>wholesale and retail trade</i> sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 184 |
| Table 9-13. NORA <i>wholesale and retail trade</i> sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999..... | 185 |
| Table 9-14. NORA <i>wholesale and retail trade</i> sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999 | 186 |
| Table 9-15. NORA <i>wholesale and retail trade</i> sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999..... | 187 |
| Table 9-16. NORA <i>wholesale and retail trade</i> sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999 | 188 |
| Table 9-17. NORA <i>wholesale and retail trade</i> sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999..... | 189 |

Section 1

Respiratory Conditions by NORA Industrial Sector

Respiratory Conditions by NORA Industrial Sector

Table 1-1. Asbestosis: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | Percent |
|--|--------------------------|----------------|
| Manufacturing | 1,035 | 36.2 |
| Construction | 702 | 24.6 |
| Services | 434 | 15.2 |
| Transportation, Warehousing, and Utilities | 287 | 10.0 |
| Wholesale and Retail Trade | 166 | 5.8 |
| Agriculture, Forestry, and Fishing | 43 | 1.5 |
| Healthcare and Social Assistance | 23 | 0.8 |
| Mining | 18 | 0.6 |
| Decedents with unclassified industry | 151 | 5.3 |
| TOTAL | 2,859 | 100.0 |

NORA - National Occupational Research Agenda

* The comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-2. Asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|--|-------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Construction | 702 | 2.4 | 2.2 | 2.6 |
| Manufacturing | 1,035 | 1.4 | 1.3 | 1.5 |
| Transportation, Warehousing, and Utilities | 287 | 1.1 | 1.0 | 1.2 |
| Services | 434 | 0.6 | 0.6 | 0.7 |
| Wholesale and Retail Trade | 166 | 0.6 | 0.5 | 0.7 |
| Healthcare and Social Assistance ^{†§} | 23 | 0.4 | 0.3 | 0.6 |
| Mining ^{†§} | 18 | 0.3 | 0.2 | 0.5 |
| Agriculture, Forestry, and Fishing ^{†§} | 43 | 0.2 | 0.1 | 0.3 |
| Decedents with unclassified industry | 151 | | | |
| TOTAL | 2,859 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

* The comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

§ indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-3. Coal workers' pneumoconiosis: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | Percent |
|--|--------------------------|----------------|
| Mining | 3,805 | 77.8 |
| Manufacturing | 293 | 6.0 |
| Construction | 188 | 3.8 |
| Services | 152 | 3.1 |
| Transportation, Warehousing, and Utilities | 103 | 2.1 |
| Wholesale and Retail Trade | 70 | 1.4 |
| Agriculture, Forestry, and Fishing | 50 | 1.0 |
| Healthcare and Social Assistance | 13 | 0.3 |
| Decedents with unclassified industry | 219 | 4.5 |
| TOTAL | 4,893 | 100.0 |

NORA - National Occupational Research Agenda

* The comparable number of coal workers' pneumoconiosis deaths in the entire United States for this same time period was 15,036.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-4. Coal workers' pneumoconiosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|--|-------------------|------|-------------------------|------|
| | | | LCL | UCL |
| Mining | 3,805 | 33.5 | 32.5 | 34.6 |
| Construction ^{†§} | 188 | 0.4 | 0.3 | 0.4 |
| Manufacturing ^{†§} | 293 | 0.2 | 0.2 | 0.3 |
| Transportation, Warehousing, and Utilities ^{†§} | 103 | 0.2 | 0.2 | 0.3 |
| Healthcare and Social Assistance ^{†§} | 13 | 0.2 | 0.1 | 0.3 |
| Wholesale and Retail Trade ^{†§} | 70 | 0.1 | 0.1 | 0.2 |
| Services ^{†§} | 152 | 0.1 | 0.1 | 0.2 |
| Agriculture, Forestry, and Fishing ^{†§} | 50 | 0.1 | 0.1 | 0.2 |
| Decedents with unclassified industry | 219 | | | |
| TOTAL | 4,893 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

* The comparable number of coal workers' pneumoconiosis deaths in the entire United States for this same time period was 15,036.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

§ indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-5. Silicosis: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | Percent |
|--|--------------------------|----------------|
| Manufacturing | 386 | 43.8 |
| Mining | 203 | 23.0 |
| Construction | 118 | 13.4 |
| Services | 60 | 6.8 |
| Wholesale and Retail Trade | 32 | 3.6 |
| Transportation, Warehousing, and Utilities | 26 | 3.0 |
| Agriculture, Forestry, and Fishing | 14 | 1.6 |
| Healthcare and Social Assistance | 6 | 0.7 |
| Decedents with unclassified industry | 36 | 4.1 |
| TOTAL | 881 | 100.0 |

NORA - National Occupational Research Agenda

* The comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-6. Silicosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|--|-------------------|------|-------------------------|------|
| | | | LCL | UCL |
| Mining | 203 | 11.2 | 9.7 | 12.9 |
| Manufacturing | 386 | 1.7 | 1.6 | 1.9 |
| Construction | 118 | 1.3 | 1.1 | 1.5 |
| Wholesale and Retail Trade [§] | 32 | 0.4 | 0.3 | 0.5 |
| Healthcare and Social Assistance ^{†§} | 6 | 0.3 | 0.1 | 0.7 |
| Transportation, Warehousing, and Utilities ^{†§} | 26 | 0.3 | 0.2 | 0.5 |
| Services ^{†§} | 60 | 0.3 | 0.2 | 0.4 |
| Agriculture, Forestry, and Fishing ^{†§} | 14 | 0.2 | 0.1 | 0.3 |
| Decedents with unclassified industry | 36 | | | |
| TOTAL | 881 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

* The comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

§ indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-7. Byssinosis: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | Percent |
|--|-------------------|--------------|
| Manufacturing | 50 | 61.7 |
| Services [§] | 9 | 11.1 |
| Mining | 4 | 4.9 |
| Construction [§] | 4 | 4.9 |
| Healthcare and Social Assistance [§] | 3 | 3.7 |
| Agriculture, Forestry, and Fishing | 2 | 2.5 |
| Wholesale and Retail Trade ^{†§} | 1 | 1.2 |
| Transportation, Warehousing, and Utilities ^{†§} | 0 | 0.0 |
| Decedents with unclassified industry | 8 | 9.9 |
| TOTAL | 81 | 100.0 |

NORA - National Occupational Research Agenda

* The comparable number of byssinosis deaths in the entire United States for this same time period was 125.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with at least two deaths with this condition in the specified time period.

§ indicates that, among decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with at least two deaths with this condition in the specified time period.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-8. Byssinosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|--|-------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Manufacturing | 50 | 3.1 | 2.3 | 4.1 |
| Services ^{†§} | 9 | 0.5 | 0.2 | 0.9 |
| Construction ^{†§} | 4 | - | - | - |
| Mining ^{†§} | 4 | - | - | - |
| Healthcare and Social Assistance ^{†§} | 3 | - | - | - |
| Agriculture, Forestry, and Fishing ^{†§} | 2 | - | - | - |
| Wholesale and Retail Trade ^{†§} | 1 | - | - | - |
| Transportation, Warehousing, and Utilities ^{†§} | 0 | - | - | - |
| Decedents with unclassified industry | 8 | | | |
| TOTAL | 81 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

-indicates no PMR was calculated because there were fewer than 5 deaths.

* The comparable number of byssinosis deaths in the entire United States for this same time period was 125.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

§ indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-9. Unspecified and other pneumoconioses: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | Percent |
|--|-------------------|--------------|
| Mining | 860 | 59.7 |
| Manufacturing | 236 | 16.4 |
| Construction | 90 | 6.3 |
| Services | 84 | 5.8 |
| Transportation, Warehousing, and Utilities | 52 | 3.6 |
| Wholesale and Retail Trade | 32 | 2.2 |
| Agriculture, Forestry, and Fishing | 27 | 1.9 |
| Healthcare and Social Assistance | 9 | 0.6 |
| Decedents with unclassified industry | 50 | 3.5 |
| TOTAL | 1,440 | 100.0 |

NORA - National Occupational Research Agenda

* The comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-10. Unspecified and other pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|--|-------------------|------|-------------------------|------|
| | | | LCL | UCL |
| Mining | 860 | 26.6 | 24.9 | 28.5 |
| Manufacturing | 236 | 0.6 | 0.6 | 0.7 |
| Construction ^{†§} | 90 | 0.6 | 0.5 | 0.7 |
| Transportation, Warehousing, and Utilities ^{†§} | 52 | 0.4 | 0.3 | 0.5 |
| Healthcare and Social Assistance ^{†§} | 9 | 0.3 | 0.2 | 0.6 |
| Services ^{†§} | 84 | 0.2 | 0.2 | 0.3 |
| Wholesale and Retail Trade ^{†§} | 32 | 0.2 | 0.2 | 0.3 |
| Agriculture, Forestry, and Fishing ^{†§} | 27 | 0.2 | 0.1 | 0.3 |
| Decedents with unclassified industry | 50 | | | |
| TOTAL | 1,440 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

* The comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

§ indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-11. All pneumoconioses: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | Percent |
|--|-------------------|--------------|
| Mining | 4,837 | 48.3 |
| Manufacturing | 1,960 | 19.6 |
| Construction | 1,078 | 10.8 |
| Services | 731 | 7.3 |
| Transportation, Warehousing, and Utilities | 460 | 4.6 |
| Wholesale and Retail Trade | 300 | 3.0 |
| Agriculture, Forestry, and Fishing | 136 | 1.4 |
| Healthcare and Social Assistance | 52 | 0.5 |
| Decedents with unclassified industry | 460 | 4.6 |
| TOTAL | 10,014 | 100.0 |

NORA - National Occupational Research Agenda

* The comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-12. All pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|---|-------------------|------|-------------------------|------|
| | | | LCL | UCL |
| Mining | 4,837 | 21.6 | 21.0 | 22.2 |
| Construction [†] | 1,078 | 1.0 | 1.0 | 1.1 |
| Manufacturing | 1,960 | 0.7 | 0.7 | 0.8 |
| Transportation, Warehousing, and Utilities [†] | 460 | 0.5 | 0.5 | 0.5 |
| Wholesale and Retail Trade [§] | 300 | 0.3 | 0.3 | 0.3 |
| Services [†] | 731 | 0.3 | 0.3 | 0.3 |
| Healthcare and Social Assistance ^{†§} | 52 | 0.3 | 0.2 | 0.4 |
| Agriculture, Forestry, and Fishing ^{†§} | 136 | 0.2 | 0.1 | 0.2 |
| Decedents with unclassified industry | 460 | | | |
| TOTAL | 10,014 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

* The comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

§ indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-13. Malignant mesothelioma: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999

| NORA Industrial Sector | Number of Deaths* | Percent |
|--|-------------------|--------------|
| Services | 135 | 25.0 |
| Manufacturing | 134 | 24.8 |
| Construction | 77 | 14.2 |
| Transportation, Warehousing, and Utilities | 51 | 9.4 |
| Wholesale and Retail Trade | 44 | 8.1 |
| Healthcare and Social Assistance | 20 | 3.7 |
| Agriculture, Forestry, and Fishing | 16 | 3.0 |
| Mining | 3 | 0.6 |
| Decedents with unclassified industry | 61 | 11.3 |
| TOTAL | 541 | 100.0 |

NORA - National Occupational Research Agenda

* The comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-14. Malignant mesothelioma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|---|-------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Construction | 77 | 1.6 | 1.2 | 1.9 |
| Transportation, Warehousing, and Utilities [§] | 51 | 1.2 | 0.9 | 1.6 |
| Manufacturing [§] | 134 | 1.2 | 1.0 | 1.4 |
| Healthcare and Social Assistance ^{†§} | 20 | 1.1 | 0.7 | 1.7 |
| Services [†] | 135 | 1.0 | 0.8 | 1.1 |
| Wholesale and Retail Trade ^{†§} | 44 | 0.9 | 0.6 | 1.2 |
| Agriculture, Forestry, and Fishing ^{†§} | 16 | 0.6 | 0.3 | 0.9 |
| Mining ^{†§} | 3 | - | - | - |
| Decedents with unclassified industry | 61 | | | |
| TOTAL | 541 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

- indicates no PMR was calculated because there were fewer than 5 deaths.

* The comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

§ indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-15. Hypersensitivity pneumonitis: Number and percent of deaths by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | Percent |
|--|-------------------|--------------|
| Agriculture, Forestry, and Fishing | 53 | 43.4 |
| Manufacturing | 13 | 10.7 |
| Services | 12 | 9.8 |
| Wholesale and Retail Trade | 8 | 6.6 |
| Transportation, Warehousing, and Utilities | 6 | 4.9 |
| Healthcare and Social Assistance | 5 | 4.1 |
| Construction [§] | 4 | 3.3 |
| Mining ^{†§} | 0 | 0.0 |
| Decedents with unclassified industry | 21 | 17.2 |
| TOTAL | 122 | 100.0 |

NORA - National Occupational Research Agenda

* The comparable number of hypersensitivity pneumonitis deaths in the entire United States for this same time period was 398.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with at least two deaths with this condition in the specified time period.

§ indicates that, among decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with at least two deaths with this condition in the specified time period.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-16. Hypersensitivity pneumonitis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|--|-------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Agriculture, Forestry, and Fishing | 53 | 7.2 | 5.4 | 9.5 |
| Healthcare and Social Assistance ^{†§} | 5 | 1.2 | 0.4 | 2.8 |
| Wholesale and Retail Trade ^{†§} | 8 | 0.7 | 0.3 | 1.4 |
| Transportation, Warehousing, and Utilities ^{†§} | 6 | 0.7 | 0.3 | 1.5 |
| Manufacturing ^{†§} | 13 | 0.5 | 0.3 | 0.8 |
| Services ^{†§} | 12 | 0.4 | 0.2 | 0.7 |
| Construction ^{†§} | 4 | - | - | - |
| Mining ^{†§} | 0 | - | - | - |
| Decedents with unclassified industry | 21 | | | |
| TOTAL | 122 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

-indicates no PMR was calculated because there were fewer than 5 deaths.

* The comparable number of hypersensitivity pneumonitis deaths in the entire United States for this same time period was 398.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

§ indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-17. Asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|---|-------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Healthcare and Social Assistance | 2,031 | 1.2 | 1.1 | 1.2 |
| Agriculture, Forestry, and Fishing | 1,058 | 1.1 | 1.1 | 1.2 |
| Services | 7,320 | 1.0 | 1.0 | 1.0 |
| Wholesale and Retail Trade | 2,137 | 1.0 | 0.9 | 1.0 |
| Manufacturing [†] | 4,348 | 0.9 | 0.9 | 1.0 |
| Transportation, Warehousing, and Utilities [†] | 1,112 | 0.9 | 0.9 | 1.0 |
| Construction ^{†§} | 1,224 | 0.9 | 0.9 | 1.0 |
| Mining ^{†§} | 190 | 0.9 | 0.8 | 1.1 |
| Decedents with unclassified industry | 10,283 | | | |
| TOTAL | 29,703 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

* The comparable number of asthma deaths in the entire United States for this same time period was 115,729.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

§ indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-18. Chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|--|-------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Mining | 1,104 | 1.7 | 1.6 | 1.8 |
| Construction | 4,288 | 1.2 | 1.2 | 1.2 |
| Transportation, Warehousing, and Utilities | 3,639 | 1.1 | 1.0 | 1.1 |
| Healthcare and Social Assistance | 2,683 | 1.0 | 1.0 | 1.1 |
| Agriculture, Forestry, and Fishing | 2,790 | 1.0 | 1.0 | 1.1 |
| Manufacturing | 10,657 | 1.0 | 1.0 | 1.0 |
| Wholesale and Retail Trade [†] | 4,648 | 1.0 | 0.9 | 1.0 |
| Services | 13,184 | 0.9 | 0.9 | 1.0 |
| Decedents with unclassified industry | 14,080 | | | |
| TOTAL | 57,073 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

* The comparable number of chronic obstructive pulmonary disease deaths in the entire United States for this same time period was 245,415.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-19. Respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states and years, 1990–1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|---|-------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Mining | 107 | 1.3 | 1.1 | 1.6 |
| Agriculture, Forestry, and Fishing | 549 | 1.3 | 1.2 | 1.4 |
| Healthcare and Social Assistance | 406 | 1.1 | 1.0 | 1.2 |
| Construction [†] | 697 | 1.1 | 1.0 | 1.1 |
| Wholesale and Retail Trade ^{†§} | 560 | 0.9 | 0.9 | 1.0 |
| Services | 1,910 | 0.9 | 0.9 | 1.0 |
| Transportation, Warehousing, and Utilities [†] | 456 | 0.9 | 0.8 | 1.0 |
| Manufacturing | 1,232 | 0.8 | 0.8 | 0.9 |
| Decedents with unclassified industry | 2,154 | | | |
| TOTAL | 8,071 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

* The comparable number of respiratory tuberculosis deaths in the entire United States for this same time period was 35,417.

[†] indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

[§] indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-20. Lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|--|-------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Construction | 3,336 | 1.2 | 1.2 | 1.2 |
| Mining | 516 | 1.2 | 1.1 | 1.3 |
| Transportation, Warehousing, and Utilities | 2,698 | 1.1 | 1.1 | 1.1 |
| Manufacturing | 7,567 | 1.1 | 1.1 | 1.1 |
| Wholesale and Retail Trade | 3,308 | 1.1 | 1.0 | 1.1 |
| Services | 9,680 | 1.0 | 1.0 | 1.0 |
| Healthcare and Social Assistance [†] | 1,708 | 0.9 | 0.9 | 1.0 |
| Agriculture, Forestry, and Fishing ^{†§} | 1,296 | 0.8 | 0.8 | 0.9 |
| Decedents with unclassified industry | 7,453 | | | |
| TOTAL | 37,562 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

* The comparable number of lung cancer deaths in the entire United States for this same time period was 162,546.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

§ indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-21. Other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|---|-------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Healthcare and Social Assistance | 267 | 1.3 | 1.2 | 1.4 |
| Mining [§] | 56 | 1.1 | 1.1 | 1.2 |
| Services | 1,142 | 1.0 | 1.0 | 1.1 |
| Wholesale and Retail Trade [†] | 379 | 1.0 | 1.0 | 1.0 |
| Construction ^{†§} | 272 | 1.0 | 1.0 | 1.0 |
| Transportation, Warehousing, and Utilities | 246 | 0.9 | 0.9 | 1.0 |
| Manufacturing | 786 | 0.9 | 0.9 | 1.0 |
| Agriculture, Forestry, and Fishing [†] | 185 | 0.9 | 0.8 | 0.9 |
| Decedents with unclassified industry | 1,138 | | | |
| TOTAL | 4,471 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

* The comparable number of other interstitial pulmonary diseases deaths in the entire United States for this same time period was 18,655.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

§ indicates that, for decedents whose industry was within the specified sector, no occupation (as defined by 3-digit Census Occupation Code) was associated with a significantly elevated PMR based on at least 5 deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Respiratory Conditions by NORA Industrial Sector

Table 1-22. Pneumonia and Influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by NORA industrial sector, U.S. residents age 15 and over, selected states, 1999

| NORA Industrial Sector | Number of Deaths* | PMR | 95% Confidence Interval | |
|---|-------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Mining | 631 | 1.3 | 1.2 | 1.4 |
| Agriculture, Forestry, and Fishing [†] | 2,605 | 1.0 | 1.0 | 1.0 |
| Construction [†] | 2,876 | 1.0 | 1.0 | 1.0 |
| Manufacturing [†] | 8,810 | 1.0 | 1.0 | 1.0 |
| Transportation, Warehousing, and Utilities [†] | 2,621 | 1.0 | 0.9 | 1.0 |
| Services [†] | 12,277 | 1.0 | 0.9 | 1.0 |
| Wholesale and Retail Trade [†] | 4,148 | 1.0 | 0.9 | 1.0 |
| Healthcare and Social Assistance | 2,355 | 1.0 | 0.9 | 1.0 |
| Decedents with unclassified industry | 15,972 | | | |
| TOTAL | 52,295 | | | |

NORA - National Occupational Research Agenda LCL - lower confidence limit UCL - upper confidence limit

* The comparable number of pneumonia and influenza deaths in the entire United States for this same time period was 229,136.

† indicates that no industry (as defined by 3-digit Census Industry Code) within the specified sector was associated with a significantly elevated PMR based on at least five deaths with this condition in the specified time period.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Section 2

NORA Agriculture, Forestry, and Fishing (AFF) Sector

NORA Agriculture, Forestry, and Fishing Sector

Table 2-1. NORA agriculture, forestry, and fishing sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | Percent |
|---|-------------------------|----------------|
| All Pneumoconioses | 136 | 0.1 |
| Hypersensitivity Pneumonitis | 53 | 0.0 |
| Coal Workers' Pneumoconiosis | 50 | 0.0 |
| Asbestosis | 43 | 0.0 |
| Unspecified and Other Pneumoconioses | 27 | 0.0 |
| Malignant Mesothelioma (all sites)* | 16 | 0.0 |
| Silicosis | 14 | 0.0 |
| Byssinosis | 2 | 0.0 |
| All other conditions within this sector | 254,403 | 99.9 |
| TOTAL | 254,744 | 100.0 |

NORA - National Occupational Research Agenda

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-2. NORA agriculture, forestry, and fishing sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | PMR | 95% Confidence Interval | |
|---|------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Hypersensitivity Pneumonitis | 53 | 7.2 | 5.4 | 9.5 |
| Malignant Mesothelioma (all sites)* | 16 | 0.6 | 0.3 | 0.9 |
| Byssinosis | 2 | - | - | - |
| Unspecified and Other Pneumoconioses | 27 | 0.2 | 0.1 | 0.3 |
| Silicosis | 14 | 0.2 | 0.1 | 0.3 |
| Asbestosis | 43 | 0.2 | 0.1 | 0.3 |
| All Pneumoconioses | 136 | 0.2 | 0.1 | 0.2 |
| Coal Workers' Pneumoconiosis | 50 | 0.1 | 0.1 | 0.2 |
| All other conditions within this sector | 254,403 | | | |
| TOTAL | 254,744 | | | |

NORA - National Occupational Research Agenda

- indicates no PMR was calculated because there were fewer than 5 deaths.

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-3. NORA agriculture, forestry, and fishing sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 010 | Agricultural production, crops | 22 | 51.2 |
| 011 | Agricultural production, livestock | 10 | 23.3 |
| 031 | Fishing, hunting, and trapping | 5 | 11.6 |
| 230 | Logging | 5 | 11.6 |
| | All other industries within this sector | 1 | 2.3 |
| | TOTAL | 43 | 100.0 |
| COC | Occupation | | |
| 473 | Farmers, except horticulture | 25 | 58.1 |
| 496 | Timber cutting and logging occupations | 5 | 11.6 |
| 498 | Fishers | 4 | 9.3 |
| 479 | Farm workers | 2 | 4.7 |
| | All other occupations within this sector | 7 | 16.3 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 43 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-4. NORA agriculture, forestry, and fishing sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 010 | Agricultural production, crops | 35 | 70.0 |
| 230 | Logging | 7 | 14.0 |
| 011 | Agricultural production, livestock | 6 | 12.0 |
| 020 | Agricultural services, except horticultural | 2 | 4.0 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 50 | 100.0 |
| COC | Occupation | | |
| 473 | Farmers, except horticulture | 39 | 78.0 |
| 496 | Timber cutting and logging occupations | 6 | 12.0 |
| 479 | Farm workers | 3 | 6.0 |
| | All other occupations within this sector | 2 | 4.0 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 50 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with coal workers' pneumoconiosis reported was 4,893 in these same selected states and years, and the comparable number of coal workers' pneumoconiosis deaths in the entire United States for this same time period was 15,036.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-5. NORA agriculture, forestry, and fishing sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 010 | Agricultural production, crops | 8 | 57.1 |
| 011 | Agricultural production, livestock | 4 | 28.6 |
| | All other industries within this sector | 2 | 14.3 |
| | TOTAL | 14 | 100.0 |
| COC | Occupation | | |
| 473 | Farmers, except horticulture | 9 | 64.3 |
| 479 | Farm workers | 2 | 14.3 |
| | All other occupations within this sector | 3 | 21.4 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 14 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-6. NORA agriculture, forestry, and fishing sector and byssinosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 010 | Agricultural production, crops | 2 | 100.0 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 2 | 100.0 |
| COC | Occupation | | |
| 473 | Farmers, except horticulture | 2 | 100.0 |
| | All other occupations within this sector | 0 | 0.0 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 2 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with byssinosis reported was 81 in these same selected states and years, and the comparable number of byssinosis deaths in the entire United States for this same time period was 125.
 NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.
 SOURCE: National Center for Health Statistics multiple cause-of-death data.

NORA Agriculture, Forestry, and Fishing Sector

Table 2-7. NORA agriculture, forestry, and fishing sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 010 | Agricultural production, crops | 16 | 59.3 |
| 230 | Logging | 6 | 22.2 |
| 011 | Agricultural production, livestock | 4 | 14.8 |
| | All other industries within this sector | 1 | 3.7 |
| | TOTAL | 27 | 100.0 |
| COC | Occupation | | |
| 473 | Farmers, except horticulture | 18 | 66.7 |
| 496 | Timber cutting and logging occupations | 6 | 22.2 |
| | All other occupations within this sector | 3 | 11.1 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 27 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with unspecified and other pneumoconioses reported was 1,440 in these same selected states and years, and the comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-8. NORA agriculture, forestry, and fishing sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 010 | Agricultural production, crops | 83 | 61.0 |
| 011 | Agricultural production, livestock | 24 | 17.6 |
| 230 | Logging | 18 | 13.2 |
| 020 | Agricultural services, except horticultural | 5 | 3.7 |
| 031 | Fishing, hunting, and trapping | 5 | 3.7 |
| | All other industries within this sector | 1 | 0.7 |
| | TOTAL | 136 | 100.0 |
| COC | Occupation | | |
| 473 | Farmers, except horticulture | 93 | 68.4 |
| 496 | Timber cutting and logging occupations | 17 | 12.5 |
| 479 | Farm workers | 8 | 5.9 |
| 498 | Fishers | 4 | 2.9 |
| 019 | Managers and administrators, n.e.c. | 2 | 1.5 |
| | All other occupations within this sector | 12 | 8.8 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 136 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 2-9. NORA agriculture, forestry, and fishing sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|---|--|--------------------------|----------------|
| CIC | Industry | | |
| 010 | Agricultural production, crops | 10 | 62.5 |
| 011 | Agricultural production, livestock | 5 | 31.3 |
| | All other industries within this sector | 1 | 6.3 |
| | TOTAL | 16 | 100.0 |
| COC | Occupation | | |
| 473 | Farmers, except horticulture | 12 | 75.0 |
| | All other occupations within this sector | 4 | 25.0 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 16 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-10. NORA agriculture, forestry, and fishing sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 011 | Agricultural production, livestock | 30 | 56.6 |
| 010 | Agricultural production, crops | 22 | 41.5 |
| | All other industries within this sector | 1 | 1.9 |
| | TOTAL | 53 | 100.0 |
| COC | Occupation | | |
| 473 | Farmers, except horticulture | 51 | 96.2 |
| | All other occupations within this sector | 2 | 3.8 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 53 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with hypersensitivity pneumonitis reported was 122 in these same selected states and years, and the comparable number of hypersensitivity pneumonitis deaths in the entire United States for this same time period was 398.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-11. NORA agriculture, forestry, and fishing sector and hypersensitivity pneumonitis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|------|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 011 | Agricultural production, livestock | 30 | 17.6 | 11.9 | 25.2 |
| 010 | Agricultural production, crops | 22 | 4.4 | 2.8 | 6.7 |
| | All other industries within this sector | 1 | | | |
| | TOTAL | 53 | | | |
| COC | Occupation | | | | |
| 473 | Farmers, except horticulture | 51 | 8.5 | 6.4 | 11.3 |
| | All other occupations within this sector | 2 | | | |
| | Occupation not reported within this sector | 0 | | | |
| | TOTAL | 53 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with hypersensitivity pneumonitis reported was 122 in these same selected states and years, and the comparable number of hypersensitivity pneumonitis deaths in the entire United States for this same time period was 398.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-12. NORA agriculture, forestry, and fishing sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 011 | Agricultural production, livestock | 274 | 1.5 | 1.3 | 1.7 |
| 010 | Agricultural production, crops | 687 | 1.1 | 1.0 | 1.2 |
| | All other industries within this sector | 97 | | | |
| | TOTAL | 1,058 | | | |
| COC | Occupation | | | | |
| 473 | Farmers, except horticulture | 795 | 1.2 | 1.1 | 1.3 |
| | All other occupations within this sector | 262 | | | |
| | Occupation not reported within this sector | 1 | | | |
| | TOTAL | 1,058 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with asthma reported was 29,703 in these same selected states and years, and the comparable number of asthma deaths in the entire United States for this same time period was 115,729.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-13. NORA agriculture, forestry, and fishing sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|----------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 230 | Logging | 172 | 1.3 | 1.1 | 1.5 |
| | All other industries within this sector | 2,618 | | | |
| | TOTAL | 2,790 | | | |
| COC | Occupation | | | | |
| 496 | Timber cutting and logging occupations | 130 | 1.3 | 1.1 | 1.5 |
| 479 | Farm workers | 214 | 1.2 | 1.0 | 1.3 |
| | All other occupations within this sector | 2,444 | | | |
| | Occupation not reported within this sector | 2 | | | |
| | TOTAL | 2,790 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with chronic obstructive pulmonary disease reported was 57,073 in these same selected states and year, and the comparable number of chronic obstructive pulmonary disease deaths in the entire United States for this same time period was 245,415.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-14. NORA agriculture, forestry, and fishing sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 010 | Agricultural production, crops | 436 | 1.5 | 1.3 | 1.6 |
| | All other industries within this sector | 113 | | | |
| | TOTAL | 549 | | | |
| COC | Occupation | | | | |
| 479 | Farm workers | 99 | 1.7 | 1.4 | 2.1 |
| 473 | Farmers, except horticulture | 356 | 1.3 | 1.1 | 1.4 |
| | All other occupations within this sector | 93 | | | |
| | Occupation not reported within this sector | 1 | | | |
| | TOTAL | 549 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with respiratory tuberculosis reported was 8,071 in these same selected states and years, and the comparable number of respiratory tuberculosis deaths in the entire United States for this same time period was 35,417.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-15. NORA agriculture, forestry, and fishing sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|----------------------|-----|-------------------------|------|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 086 | Veterinarians | 5 | 4.5 | 1.5 | 10.6 |
| 019 | Managers and administrators, n.e.c. | 5 | 4.3 | 1.4 | 10.1 |
| | All other occupations within this sector | 1,602 | | | |
| | Occupation not reported within this sector | 2 | | | |
| | TOTAL | 1,619 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with other interstitial pulmonary diseases reported was 4,471 in these same selected states and year, and the comparable number of other interstitial pulmonary diseases deaths in the entire United States for this same time period was 18,655.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Agriculture, Forestry, and Fishing Sector

Table 2-16. NORA agriculture, forestry, and fishing sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 567 | Carpenters | 5 | 3.2 | 1.0 | 7.5 |
| 783 | Welders and cutters | 6 | 2.7 | 1.0 | 6.0 |
| | All other occupations within this sector | 2,590 | | | |
| | Occupation not reported within this sector | 4 | | | |
| | TOTAL | 2,605 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with pneumonia and influenza reported was 52,295 in these same selected states and year, and the comparable number of pneumonia and influenza deaths in the entire United States for this same time period was 229,136.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Section 3

NORA Construction (CON) Sector

Work-Related Lung Disease Surveillance Report 2007

Section 3

NORA Construction (CON) Sector

Table 3-1. NORA construction sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | Percent |
|---|-------------------------|----------------|
| All Pneumoconioses | 1,078 | 0.3 |
| Asbestosis | 702 | 0.2 |
| Coal Workers' Pneumoconiosis | 188 | 0.1 |
| Silicosis | 118 | 0.0 |
| Unspecified and Other Pneumoconioses | 90 | 0.0 |
| Malignant Mesothelioma (all sites)* | 77 | 0.0 |
| Byssinosis | 4 | 0.0 |
| Hypersensitivity Pneumonitis | 4 | 0.0 |
| All other conditions within this sector | 351,414 | 99.4 |
| TOTAL | 353,675 | 100.0 |

NORA - National Occupational Research Agenda

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Construction Sector

Table 3-2. NORA construction sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | PMR | 95% Confidence Interval | |
|---|------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Asbestosis | 702 | 2.4 | 2.2 | 2.6 |
| Malignant Mesothelioma (all sites)* | 77 | 1.6 | 1.2 | 1.9 |
| Silicosis | 118 | 1.3 | 1.1 | 1.5 |
| All Pneumoconioses | 1,078 | 1.0 | 1.0 | 1.1 |
| Byssinosis | 4 | - | - | - |
| Unspecified and Other Pneumoconioses | 90 | 0.6 | 0.5 | 0.7 |
| Hypersensitivity Pneumonitis | 4 | - | - | - |
| Coal Workers' Pneumoconiosis | 188 | 0.4 | 0.3 | 0.4 |
| All other conditions within this sector | 351,414 | | | |
| TOTAL | 353,675 | | | |

NORA - National Occupational Research Agenda

- indicates no PMR was calculated because there were fewer than 5 deaths.

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 3-3. NORA construction sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 060 | Construction | 702 | 100.0 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 702 | 100.0 |
| COC | Occupation | | |
| 585 | Plumbers, pipefitters, and steamfitters | 141 | 20.1 |
| 567 | Carpenters | 95 | 13.5 |
| 593 | Insulation workers | 78 | 11.1 |
| 575 | Electricians | 57 | 8.1 |
| 869 | Construction laborers | 53 | 7.5 |
| 019 | Managers and administrators, n.e.c. | 50 | 7.1 |
| 558 | Supervisors, construction, n.e.c. | 34 | 4.8 |
| 643 | Boilermakers | 21 | 3.0 |
| 579 | Painters, construction and maintenance | 19 | 2.7 |
| 653 | Sheet metal workers | 19 | 2.7 |
| | All other occupations within this sector | 135 | 19.2 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 702 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Construction Sector

Table 3-4. NORA construction sector and asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|------|-------------------------|-------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 060 | Construction | 702 | 2.4 | 2.2 | 2.6 |
| | All other industries within this sector | 0 | | | |
| | TOTAL | 702 | | | |
| COC | Occupation | | | | |
| 593 | Insulation workers | 78 | 84.1 | 67.0 | 105.7 |
| 643 | Boilermakers | 21 | 31.1 | 19.2 | 47.5 |
| 585 | Plumbers, pipefitters, and steamfitters | 141 | 8.3 | 7.1 | 9.9 |
| 653 | Sheet metal workers | 19 | 8.0 | 4.8 | 12.5 |
| 584 | Plasterers | 9 | 6.8 | 3.1 | 12.9 |
| 544 | Millwrights | 6 | 6.5 | 2.4 | 14.2 |
| 557 | Supervisors: plumbers, pipefitters, and steamfitters | 7 | 5.9 | 2.4 | 12.2 |
| 575 | Electricians | 57 | 4.0 | 3.1 | 5.3 |
| 783 | Welders and cutters | 13 | 3.6 | 1.9 | 6.1 |
| 019 | Managers and administrators, n.e.c. | 50 | 2.2 | 1.7 | 2.9 |
| 567 | Carpenters | 95 | 1.7 | 1.4 | 2.1 |
| | All other occupations within this sector | 206 | | | |
| | Occupation not reported within this sector | 0 | | | |
| | TOTAL | 702 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
 n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 3-5. NORA construction sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 060 | Construction | 188 | 100.0 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 188 | 100.0 |
| COC | Occupation | | |
| 869 | Construction laborers | 42 | 22.3 |
| 567 | Carpenters | 37 | 19.7 |
| 844 | Operating engineers | 20 | 10.6 |
| 019 | Managers and administrators, n.e.c. | 13 | 6.9 |
| 558 | Supervisors, construction, n.e.c. | 12 | 6.4 |
| 563 | Brickmasons and stonemasons | 8 | 4.3 |
| 585 | Plumbers, pipefitters, and steamfitters | 8 | 4.3 |
| 804 | Truck drivers | 8 | 4.3 |
| 579 | Painters, construction and maintenance | 7 | 3.7 |
| 575 | Electricians | 5 | 2.7 |
| | All other occupations within this sector | 26 | 13.8 |
| | Occupation not reported within this sector | 2 | 1.1 |
| | TOTAL | 188 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with coal workers' pneumoconiosis reported was 4,893 in these same selected states and years, and the comparable number of coal workers' pneumoconiosis deaths in the entire United States for this same time period was 15,036.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Construction Sector

Table 3-6. NORA construction sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 060 | Construction | 118 | 100.0 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 118 | 100.0 |
| COC | Occupation | | |
| 869 | Construction laborers | 24 | 20.3 |
| 567 | Carpenters | 15 | 12.7 |
| 579 | Painters, construction and maintenance | 11 | 9.3 |
| 844 | Operating engineers | 9 | 7.6 |
| 558 | Supervisors, construction, n.e.c. | 8 | 6.8 |
| 599 | Construction trades, n.e.c. | 7 | 5.9 |
| 019 | Managers and administrators, n.e.c. | 6 | 5.1 |
| 563 | Brickmasons and stonemasons | 6 | 5.1 |
| 597 | Structural metal workers | 3 | 2.5 |
| 598 | Drillers, earth | 3 | 2.5 |
| 804 | Truck drivers | 3 | 2.5 |
| | All other occupations within this sector | 23 | 19.5 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 118 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 3-7. NORA construction sector and silicosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 060 | Construction | 118 | 1.3 | 1.1 | 1.5 |
| | All other industries within this sector | 0 | | | |
| | TOTAL | 118 | | | |
| COC | Occupation | | | | |
| 599 | Construction trades, n.e.c. | 7 | 7.4 | 3.0 | 15.3 |
| 579 | Painters, construction and maintenance | 11 | 2.0 | 1.0 | 3.6 |
| | All other occupations within this sector | 100 | | | |
| | Occupation not reported within this sector | 0 | | | |
| | TOTAL | 118 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Construction Sector

Table 3-8. NORA construction sector and byssinosis: Most frequently recorded industries on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry | | Number of Deaths* | Percent |
|---------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 060 | Construction | 4 | 100.0 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 4 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with byssinosis reported was 81 in these same selected states and years, and the comparable number of byssinosis deaths in the entire United States for this same time period was 125.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 3-9. NORA construction sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 060 | Construction | 90 | 100.0 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 90 | 100.0 |
| COC | Occupation | | |
| 869 | Construction laborers | 21 | 23.3 |
| 567 | Carpenters | 13 | 14.4 |
| 844 | Operating engineers | 9 | 10.0 |
| 558 | Supervisors, construction, n.e.c. | 6 | 6.7 |
| 563 | Brickmasons and stonemasons | 5 | 5.6 |
| 575 | Electricians | 5 | 5.6 |
| 783 | Welders and cutters | 4 | 4.4 |
| 019 | Managers and administrators, n.e.c. | 3 | 3.3 |
| 585 | Plumbers, pipefitters, and steamfitters | 3 | 3.3 |
| 597 | Structural metal workers | 3 | 3.3 |
| | All other occupations within this sector | 17 | 18.9 |
| | Occupation not reported within this sector | 1 | 1.1 |
| | TOTAL | 90 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with unspecified and other pneumoconioses reported was 1,440 in these same selected states and years, and the comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Construction Sector

Table 3-10. NORA construction sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 060 | Construction | 1,078 | 100.0 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 1,078 | 100.0 |
| COC | Occupation | | |
| 567 | Carpenters | 156 | 14.5 |
| 585 | Plumbers, pipefitters, and steamfitters | 153 | 14.2 |
| 869 | Construction laborers | 131 | 12.2 |
| 593 | Insulation workers | 79 | 7.3 |
| 019 | Managers and administrators, n.e.c. | 72 | 6.7 |
| 575 | Electricians | 70 | 6.5 |
| 558 | Supervisors, construction, n.e.c. | 59 | 5.5 |
| 844 | Operating engineers | 45 | 4.2 |
| 579 | Painters, construction and maintenance | 37 | 3.4 |
| 563 | Brickmasons and stonemasons | 36 | 3.3 |
| | All other occupations within this sector | 237 | 22.0 |
| | Occupation not reported within this sector | 3 | 0.3 |
| | TOTAL | 1,078 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 3-11. NORA construction sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|------|-------------------------|------|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 593 | Insulation workers | 79 | 25.8 | 20.6 | 32.4 |
| 643 | Boilermakers | 22 | 9.5 | 6.0 | 14.4 |
| 585 | Plumbers, pipefitters, and steamfitters | 153 | 2.6 | 2.2 | 3.0 |
| 544 | Millwrights | 8 | 2.5 | 1.1 | 5.0 |
| 653 | Sheet metal workers | 19 | 2.3 | 1.4 | 3.7 |
| 584 | Plasterers | 11 | 2.2 | 1.1 | 4.0 |
| 783 | Welders and cutters | 22 | 1.8 | 1.1 | 2.7 |
| 575 | Electricians | 70 | 1.4 | 1.1 | 1.8 |
| | All other occupations within this sector | 691 | | | |
| | Occupation not reported within this sector | 3 | | | |
| | TOTAL | 1,078 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Construction Sector

Table 3-12. NORA construction sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 060 | Construction | 77 | 100.0 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 77 | 100.0 |
| COC | Occupation | | |
| 585 | Plumbers, pipefitters, and steamfitters | 14 | 18.2 |
| 567 | Carpenters | 13 | 16.9 |
| 019 | Managers and administrators, n.e.c. | 9 | 11.7 |
| 575 | Electricians | 6 | 7.8 |
| 869 | Construction laborers | 5 | 6.5 |
| 558 | Supervisors, construction, n.e.c. | 4 | 5.2 |
| 579 | Painters, construction and maintenance | 4 | 5.2 |
| 534 | Heating, air conditioning, and refrigeration mechanics | 3 | 3.9 |
| 584 | Plasterers | 2 | 2.6 |
| 653 | Sheet metal workers | 2 | 2.6 |
| 783 | Welders and cutters | 2 | 2.6 |
| | All other occupations within this sector | 12 | 15.6 |
| | Occupation not reported within this sector | 1 | 1.3 |
| | TOTAL | 77 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 3-13. NORA construction sector and malignant mesothelioma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 060 | Construction | 77 | 1.6 | 1.2 | 1.9 |
| | All other industries within this sector | 0 | | | |
| | TOTAL | 77 | | | |
| COC | Occupation | | | | |
| 585 | Plumbers, pipefitters, and steamfitters | 14 | 5.5 | 3.0 | 9.2 |
| | All other occupations within this sector | 62 | | | |
| | Occupation not reported within this sector | 1 | | | |
| | TOTAL | 77 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Construction Sector

Table 3-14. NORA construction sector and hypersensitivity pneumonitis: Most frequently recorded industries on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry | | Number of Deaths* | Percent |
|---------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 060 | Construction | 4 | 100.0 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 4 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with hypersensitivity pneumonitis reported was 122 in these same selected states and years, and the comparable number of hypersensitivity pneumonitis deaths in the entire United States for this same time period was 398.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 3-15. NORA construction sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 060 | Construction | 4,288 | 1.2 | 1.2 | 1.2 |
| | All other industries within this sector | 0 | | | |
| | TOTAL | 4,288 | | | |
| COC | Occupation | | | | |
| 853 | Excavating and loading machine operators | 22 | 2.1 | 1.3 | 3.1 |
| 599 | Construction trades, n.e.c. | 56 | 1.9 | 1.4 | 2.5 |
| 595 | Roofers | 70 | 1.7 | 1.3 | 2.1 |
| 573 | Drywall installers | 33 | 1.5 | 1.0 | 2.1 |
| 579 | Painters, construction and maintenance | 264 | 1.4 | 1.3 | 1.6 |
| 783 | Welders and cutters | 58 | 1.4 | 1.1 | 1.8 |
| 567 | Carpenters | 839 | 1.3 | 1.2 | 1.4 |
| 869 | Construction laborers | 631 | 1.2 | 1.2 | 1.3 |
| 585 | Plumbers, pipefitters, and steamfitters | 226 | 1.2 | 1.1 | 1.4 |
| 844 | Operating engineers | 240 | 1.2 | 1.1 | 1.4 |
| | All other occupations within this sector | 1,831 | | | |
| | Occupation not reported within this sector | 18 | | | |
| | TOTAL | 4,288 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with chronic obstructive pulmonary disease reported was 57,073 in these same selected states and year, and the comparable number of chronic obstructive pulmonary disease deaths in the entire United States for this same time period was 245,415.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Construction Sector

Table 3-16. NORA construction sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 869 | Construction laborers | 221 | 1.3 | 1.1 | 1.5 |
| 567 | Carpenters | 125 | 1.2 | 1.0 | 1.5 |
| | All other occupations within this sector | 348 | | | |
| | Occupation not reported within this sector | 3 | | | |
| | TOTAL | 697 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
 n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with respiratory tuberculosis reported was 8,071 in these same selected states and years, and the comparable number of respiratory tuberculosis deaths in the entire United States for this same time period was 35,417.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 3-17. NORA construction sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 060 | Construction | 3,336 | 1.2 | 1.2 | 1.2 |
| | All other industries within this sector | 0 | | | |
| | TOTAL | 3,336 | | | |
| COC | Occupation | | | | |
| 779 | Machine operators, not specified | 6 | 3.2 | 1.2 | 6.9 |
| 217 | Drafting occupations | 10 | 2.6 | 1.2 | 4.7 |
| 849 | Crane and tower operators | 20 | 1.8 | 1.1 | 2.8 |
| 556 | Supervisors: painters, paperhangers, and plasterers | 30 | 1.5 | 1.0 | 2.2 |
| 579 | Painters, construction and maintenance | 199 | 1.3 | 1.1 | 1.5 |
| 575 | Electricians | 166 | 1.3 | 1.1 | 1.5 |
| 585 | Plumbers, pipefitters, and steamfitters | 168 | 1.2 | 1.1 | 1.4 |
| 869 | Construction laborers | 537 | 1.2 | 1.1 | 1.3 |
| 844 | Operating engineers | 186 | 1.2 | 1.0 | 1.4 |
| 567 | Carpenters | 531 | 1.2 | 1.1 | 1.3 |
| 019 | Managers and administrators, n.e.c. | 301 | 1.1 | 1.0 | 1.3 |
| | All other occupations within this sector | 1,168 | | | |
| | Occupation not reported within this sector | 14 | | | |
| | TOTAL | 3,336 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with lung cancer reported was 37,562 in these same selected states and year, and the comparable number of lung cancer deaths in the entire United States for this same time period was 162,546.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Construction Sector

Table 3-18. NORA construction sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 444 | Miscellaneous food preparation occupations | 13 | 2.1 | 1.1 | 3.5 |
| | All other occupations within this sector | 8,573 | | | |
| | Occupation not reported within this sector | 224 | | | |
| | TOTAL | 8,810 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with pneumonia and influenza reported was 52,295 in these same selected states and year, and the comparable number of pneumonia and influenza deaths in the entire United States for this same time period was 229,136.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Section 4

NORA Healthcare and Social Assistance (HAS) Sector

Table 4-1. NORA healthcare and social assistance sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | Percent |
|---|-------------------------|----------------|
| All Pneumoconioses | 52 | 0.0 |
| Asbestosis | 23 | 0.0 |
| Malignant Mesothelioma (all sites)* | 20 | 0.0 |
| Coal Workers' Pneumoconiosis | 13 | 0.0 |
| Unspecified and Other Pneumoconioses | 9 | 0.0 |
| Silicosis | 6 | 0.0 |
| Hypersensitivity Pneumonitis | 5 | 0.0 |
| Byssinosis | 3 | 0.0 |
| All other conditions within this sector | 265,702 | 100.0 |
| TOTAL | 265,833 | 100.0 |

NORA - National Occupational Research Agenda

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Healthcare and Social Assistance Sector

Table 4-2. NORA healthcare and social assistance sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | PMR | 95% Confidence Interval | |
|---|------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Hypersensitivity Pneumonitis | 5 | 1.2 | 0.4 | 2.8 |
| Malignant Mesothelioma (all sites)* | 20 | 1.1 | 0.7 | 1.7 |
| Byssinosis | 3 | - | - | - |
| Asbestosis | 23 | 0.4 | 0.3 | 0.6 |
| Silicosis | 6 | 0.3 | 0.1 | 0.7 |
| Unspecified and Other Pneumoconioses | 9 | 0.3 | 0.2 | 0.6 |
| All Pneumoconioses | 52 | 0.3 | 0.2 | 0.4 |
| Coal Workers' Pneumoconiosis | 13 | 0.2 | 0.1 | 0.3 |
| All other conditions within this sector | 265,702 | | | |
| TOTAL | 265,833 | | | |

NORA - National Occupational Research Agenda

- indicates no PMR was calculated because there were fewer than 5 deaths.

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 4-3. NORA healthcare and social assistance sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 831 | Hospitals | 18 | 78.3 |
| 832 | Nursing and personal care facilities | 2 | 8.7 |
| | All other industries within this sector | 3 | 13.0 |
| | TOTAL | 23 | 100.0 |
| COC | Occupation | | |
| 453 | Janitors and cleaners | 4 | 17.4 |
| 084 | Physicians | 2 | 8.7 |
| 095 | Registered nurses | 2 | 8.7 |
| 448 | Supervisors, cleaning and building service workers | 2 | 8.7 |
| 585 | Plumbers, pipefitters, and steamfitters | 2 | 8.7 |
| | All other occupations within this sector | 11 | 47.8 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 23 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Healthcare and Social Assistance Sector

Table 4-4. NORA healthcare and social assistance sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 831 | Hospitals | 9 | 69.2 |
| 840 | Health services, n.e.c. | 2 | 15.4 |
| | All other industries within this sector | 2 | 15.4 |
| | TOTAL | 13 | 100.0 |
| COC | Occupation | | |
| 453 | Janitors and cleaners | 3 | 23.1 |
| | All other occupations within this sector | 10 | 76.9 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 13 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with coal workers' pneumoconiosis reported was 4,893 in these same selected states and years, and the comparable number of coal workers' pneumoconiosis deaths in the entire United States for this same time period was 15,036.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 4-5. NORA healthcare and social assistance sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 831 | Hospitals | 3 | 50.0 |
| 870 | Residential care facilities, without nursing | 2 | 33.3 |
| | All other industries within this sector | 1 | 16.7 |
| | TOTAL | 6 | 100.0 |
| COC | Occupation | | |
| 453 | Janitors and cleaners | 2 | 33.3 |
| | All other occupations within this sector | 4 | 66.7 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 6 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Healthcare and Social Assistance Sector

Table 4-6. NORA healthcare and social assistance sector and byssinosis: Most frequently recorded industries on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry | | Number of Deaths* | Percent |
|----------------------------------|---|--------------------------|----------------|
| CIC | Industry | | |
| 831 | Hospitals | 2 | 66.7 |
| | All other industries within this sector | 1 | 33.3 |
| | TOTAL | 3 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with byssinosis reported was 81 in these same selected states and years, and the comparable number of byssinosis deaths in the entire United States for this same time period was 125.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Healthcare and Social Assistance Sector

Table 4-7. NORA healthcare and social assistance sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|---|---|--------------------------|----------------|
| CIC | Industry | | |
| 831 | Hospitals | 5 | 55.6 |
| | All other industries within this sector | 4 | 44.4 |
| | TOTAL | 9 | 100.0 |
| COC | Occupation | | |
| 453 | Janitors and cleaners | 3 | 33.3 |
| 678 | Dental laboratory and medical appliance technicians | 2 | 22.2 |
| 696 | Stationary engineers | 2 | 22.2 |
| | All other occupations within this sector | 2 | 22.2 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 9 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with unspecified and other pneumoconioses reported was 1,440 in these same selected states and years, and the comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Healthcare and Social Assistance Sector

Table 4-8. NORA healthcare and social assistance sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 831 | Hospitals | 35 | 67.3 |
| 840 | Health services, n.e.c. | 5 | 9.6 |
| 832 | Nursing and personal care facilities | 4 | 7.7 |
| 870 | Residential care facilities, without nursing | 3 | 5.8 |
| 812 | Offices and clinics of physicians | 2 | 3.8 |
| 871 | Social services, n.e.c. | 2 | 3.8 |
| | All other industries within this sector | 1 | 1.9 |
| | TOTAL | 52 | 100.0 |
| COC | Occupation | | |
| 453 | Janitors and cleaners | 11 | 21.2 |
| 447 | Nursing aides, orderlies, and attendants | 3 | 5.8 |
| 678 | Dental laboratory and medical appliance technicians | 3 | 5.8 |
| 084 | Physicians | 2 | 3.8 |
| 095 | Registered nurses | 2 | 3.8 |
| 203 | Clinical laboratory technologists and technicians | 2 | 3.8 |
| 448 | Supervisors, cleaning and building service workers | 2 | 3.8 |
| 449 | Maids and housemen | 2 | 3.8 |
| 575 | Electricians | 2 | 3.8 |
| 585 | Plumbers, pipefitters, and steamfitters | 2 | 3.8 |
| 696 | Stationary engineers | 2 | 3.8 |
| | All other occupations within this sector | 19 | 36.5 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 52 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 4-9. NORA healthcare and social assistance sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 831 | Hospitals | 9 | 45.0 |
| 840 | Health services, n.e.c. | 3 | 15.0 |
| 812 | Offices and clinics of physicians | 2 | 10.0 |
| 862 | Child day care services | 2 | 10.0 |
| | All other industries within this sector | 4 | 20.0 |
| | TOTAL | 20 | 100.0 |
| COC | Occupation | | |
| 447 | Nursing aides, orderlies, and attendants | 4 | 20.0 |
| 095 | Registered nurses | 3 | 15.0 |
| 015 | Managers, medicine and health | 2 | 10.0 |
| | All other occupations within this sector | 10 | 50.0 |
| | Occupation not reported within this sector | 1 | 5.0 |
| | TOTAL | 20 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Healthcare and Social Assistance Sector

Table 4-10. NORA healthcare and social assistance sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 831 | Hospitals | 4 | 80.0 |
| | All other industries within this sector | 1 | 20.0 |
| | TOTAL | 5 | 100.0 |
| COC | Occupation | | |
| 095 | Registered nurses | 2 | 40.0 |
| | All other occupations within this sector | 3 | 60.0 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 5 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with hypersensitivity pneumonitis reported was 122 in these same selected states and years, and the comparable number of hypersensitivity pneumonitis deaths in the entire United States for this same time period was 398.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Healthcare and Social Assistance Sector

Table 4-11. NORA healthcare and social assistance sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 862 | Child day care services | 68 | 1.4 | 1.1 | 1.8 |
| 840 | Health services, n.e.c. | 228 | 1.3 | 1.1 | 1.5 |
| 831 | Hospitals | 1,110 | 1.1 | 1.1 | 1.2 |
| | All other industries within this sector | 625 | | | |
| | TOTAL | 2,031 | | | |
| COC | Occupation | | | | |
| 098 | Respiratory therapists | 13 | 3.2 | 1.7 | 5.4 |
| 433 | Supervisors, food preparation and service occupations | 13 | 2.6 | 1.4 | 4.4 |
| 696 | Stationary engineers | 10 | 2.5 | 1.2 | 4.6 |
| 085 | Dentists | 26 | 1.9 | 1.3 | 2.8 |
| 014 | Administrators, education and related fields | 18 | 1.8 | 1.1 | 2.8 |
| 203 | Clinical laboratory technologists and technicians | 45 | 1.4 | 1.1 | 1.9 |
| 095 | Registered nurses | 415 | 1.2 | 1.1 | 1.3 |
| 447 | Nursing aides, orderlies, and attendants | 427 | 1.2 | 1.1 | 1.3 |
| | All other occupations within this sector | 1,043 | | | |
| | Occupation not reported within this sector | 21 | | | |
| | TOTAL | 2,031 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with asthma reported was 29,703 in these same selected states and years, and the comparable number of asthma deaths in the entire United States for this same time period was 115,729.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Healthcare and Social Assistance Sector

Table 4-12. NORA healthcare and social assistance sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 832 | Nursing and personal care facilities | 310 | 1.1 | 1.0 | 1.3 |
| 831 | Hospitals | 1,380 | 1.1 | 1.0 | 1.1 |
| | All other industries within this sector | 993 | | | |
| | TOTAL | 2,683 | | | |
| COC | Occupation | | | | |
| 097 | Dietitians | 58 | 1.3 | 1.0 | 1.7 |
| 449 | Maids and housemen | 107 | 1.3 | 1.1 | 1.6 |
| 447 | Nursing aides, orderlies, and attendants | 548 | 1.2 | 1.1 | 1.3 |
| | All other occupations within this sector | 1,935 | | | |
| | Occupation not reported within this sector | 35 | | | |
| | TOTAL | 2,683 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with chronic obstructive pulmonary disease reported was 57,073 in the same selected states and year, and the comparable number of chronic obstructive pulmonary disease deaths in the entire United States for this same time period was 245,415.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 4-13. NORA healthcare and social assistance sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 830 | Offices and clinics of health practitioners, n.e.c. | 13 | 2.9 | 1.6 | 5.0 |
| 831 | Hospitals | 238 | 1.2 | 1.0 | 1.3 |
| | All other industries within this sector | 155 | | | |
| | TOTAL | 406 | | | |
| COC | Occupation | | | | |
| 804 | Truck drivers | 5 | 4.2 | 1.4 | 9.9 |
| 089 | Health diagnosing practitioners, n.e.c. | 5 | 3.2 | 1.0 | 7.5 |
| 203 | Clinical laboratory technologists and technicians | 15 | 2.1 | 1.1 | 3.4 |
| | All other occupations within this sector | 374 | | | |
| | Occupation not reported within this sector | 7 | | | |
| | TOTAL | 406 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with respiratory tuberculosis reported was 8,071 in these same selected states and years, and the comparable number of respiratory tuberculosis deaths in the entire United States for this same time period was 35,417.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Healthcare and Social Assistance Sector

Table 4-14. NORA healthcare and social assistance sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 205 | Health record technologists and technicians | 5 | 3.3 | 1.1 | 7.6 |
| | All other occupations within this sector | 1,679 | | | |
| | Occupation not reported within this sector | 24 | | | |
| | TOTAL | 1,708 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with lung cancer reported was 37,562 in these same selected states and year, and the comparable number of lung cancer deaths in the entire United States for this same time period was 162,546.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Healthcare and Social Assistance Sector

Table 4-15. NORA healthcare and social assistance sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 812 | Offices and clinics of physicians | 31 | 1.8 | 1.2 | 2.6 |
| 831 | Hospitals | 128 | 1.2 | 1.0 | 1.5 |
| | All other industries within this sector | 108 | | | |
| | TOTAL | 267 | | | |
| COC | Occupation | | | | |
| 084 | Physicians | 23 | 2.1 | 1.3 | 3.1 |
| 095 | Registered nurses | 68 | 1.6 | 1.2 | 2.0 |
| | All other occupations within this sector | 173 | | | |
| | Occupation not reported within this sector | 3 | | | |
| | TOTAL | 267 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of other interstitial pulmonary diseases was 4,471 in these same selected states and year, and the comparable number of other interstitial pulmonary diseases deaths in the entire United States for this same time period was 18,655.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Healthcare and Social Assistance Sector

Table 4-16. NORA healthcare and social assistance sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 861 | Job training and vocational rehabilitation services | 20 | 1.6 | 1.0 | 2.5 |
| | All other industries within this sector | 2,335 | | | |
| | TOTAL | 2,355 | | | |
| COC | Occupation | | | | |
| 338 | Payroll and timekeeping clerks | 6 | 3.3 | 1.2 | 7.2 |
| 167 | Psychologists | 15 | 1.8 | 1.0 | 3.0 |
| | All other occupations within this sector | 2,293 | | | |
| | Occupation not reported within this sector | 41 | | | |
| | TOTAL | 2,355 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with pneumonia and influenza reported was 52,295 in these same selected states and year, and the comparable number of pneumonia and influenza deaths in the entire United States for this same time period was 229,136.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Section 5

NORA Manufacturing (MNF) Sector

Table 5-1. NORA *manufacturing* sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | Percent |
|---|-------------------------|----------------|
| All Pneumoconioses | 1,960 | 0.2 |
| Asbestosis | 1,035 | 0.1 |
| Silicosis | 386 | 0.0 |
| Coal Workers' Pneumoconiosis | 293 | 0.0 |
| Unspecified and Other Pneumoconioses | 236 | 0.0 |
| Malignant Mesothelioma (all sites)* | 134 | 0.0 |
| Byssinosis | 50 | 0.0 |
| Hypersensitivity Pneumonitis | 13 | 0.0 |
| All other conditions within this sector | 1,034,734 | 99.6 |
| TOTAL | 1,038,841 | 100.0 |

NORA - National Occupational Research Agenda

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Manufacturing Sector

Table 5-2. NORA manufacturing sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | PMR | 95% Confidence Interval | |
|---|------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Byssinosis | 50 | 3.1 | 2.3 | 4.1 |
| Silicosis | 386 | 1.7 | 1.6 | 1.9 |
| Asbestosis | 1,035 | 1.4 | 1.3 | 1.5 |
| Malignant Mesothelioma (all sites)* | 134 | 1.2 | 1.0 | 1.4 |
| All Pneumoconioses | 1,960 | 0.7 | 0.7 | 0.8 |
| Unspecified and Other Pneumoconioses | 236 | 0.6 | 0.6 | 0.7 |
| Hypersensitivity Pneumonitis | 13 | 0.5 | 0.3 | 0.8 |
| Coal Workers' Pneumoconiosis | 293 | 0.2 | 0.2 | 0.3 |
| All other conditions within this sector | 1,034,734 | | | |
| TOTAL | 1,038,841 | | | |

NORA - National Occupational Research Agenda

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 5-3. NORA manufacturing sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 360 | Ship and boat building and repairing | 171 | 16.5 |
| 192 | Industrial and miscellaneous chemicals | 124 | 12.0 |
| 262 | Miscellaneous nonmetallic mineral and stone products | 75 | 7.2 |
| 270 | Blast furnaces, steelworks, rolling and finishing mills | 67 | 6.5 |
| 392 | Not specified manufacturing industries | 61 | 5.9 |
| 142 | Yarn, thread, and fabric mills | 47 | 4.5 |
| 211 | Other rubber products, and plastics footwear and belting | 40 | 3.9 |
| 200 | Petroleum refining | 31 | 3.0 |
| 250 | Glass and glass products | 30 | 2.9 |
| 160 | Pulp, paper, and paperboard mills | 29 | 2.8 |
| | All other industries within this sector | 360 | 34.8 |
| | TOTAL | 1,035 | 100.0 |
| COC | Occupation | | |
| 585 | Plumbers, pipefitters, and steamfitters | 69 | 6.7 |
| 633 | Supervisors, production occupations | 64 | 6.2 |
| 889 | Laborers, except construction | 63 | 6.1 |
| 783 | Welders and cutters | 55 | 5.3 |
| 637 | Machinists | 44 | 4.3 |
| 779 | Machine operators, not specified | 41 | 4.0 |
| 575 | Electricians | 38 | 3.7 |
| 777 | Miscellaneous machine operators, n.e.c. | 34 | 3.3 |
| 518 | Industrial machinery repairers | 33 | 3.2 |
| 019 | Managers and administrators, n.e.c. | 31 | 3.0 |
| | All other occupations within this sector | 553 | 53.4 |
| | Occupation not reported within this sector | 10 | 1.0 |
| | TOTAL | 1,035 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Manufacturing Sector

Table 5-4 (page 1 of 2). NORA manufacturing sector and asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|------|-------------------------|-------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 262 | Miscellaneous nonmetallic mineral and stone products | 75 | 16.4 | 13.0 | 20.7 |
| 360 | Ship and boat building and repairing | 171 | 15.7 | 13.5 | 18.3 |
| 192 | Industrial and miscellaneous chemicals | 124 | 4.8 | 4.0 | 5.7 |
| 211 | Other rubber products, and plastics footwear and belting | 40 | 4.3 | 3.1 | 5.9 |
| 180 | Plastics, synthetics, and resins | 12 | 2.8 | 1.4 | 4.9 |
| 200 | Petroleum refining | 31 | 2.7 | 1.9 | 3.9 |
| 272 | Primary aluminum industries | 16 | 2.7 | 1.5 | 4.3 |
| 250 | Glass and glass products | 30 | 2.6 | 1.7 | 3.7 |
| 282 | Fabricated structural metal products | 28 | 2.3 | 1.5 | 3.3 |
| 210 | Tires and inner tubes | 15 | 2.2 | 1.3 | 3.7 |
| 270 | Blast furnaces, steelworks, rolling and finishing mills | 67 | 1.3 | 1.0 | 1.7 |
| | All other industries within this sector | 426 | | | |
| | TOTAL | 1,035 | | | |
| COC | Occupation | | | | |
| 593 | Insulation workers | 25 | 93.7 | 60.5 | 138.2 |
| 643 | Boilermakers | 23 | 16.9 | 10.7 | 25.4 |
| 585 | Plumbers, pipefitters, and steamfitters | 69 | 13.3 | 10.5 | 17.0 |
| 563 | Brickmasons and stonemasons | 8 | 11.4 | 4.9 | 22.4 |
| 534 | Heating, air conditioning, and refrigeration mechanics | 6 | 10.9 | 4.0 | 23.8 |
| 646 | Lay-out workers | 7 | 9.1 | 3.7 | 18.8 |
| 676 | Patternmakers, lay-out workers, and cutters | 5 | 7.1 | 2.3 | 16.7 |
| 757 | Separating, filtering, and clarifying machine operators | 21 | 5.0 | 3.1 | 7.7 |
| 224 | Chemical technicians | 7 | 4.8 | 1.9 | 9.8 |
| 579 | Painters, construction and maintenance | 5 | 4.5 | 1.5 | 10.5 |
| 575 | Electricians | 38 | 4.5 | 3.2 | 6.2 |
| 653 | Sheet metal workers | 22 | 4.4 | 2.7 | 6.6 |
| 567 | Carpenters | 18 | 4.1 | 2.4 | 6.5 |
| 544 | Millwrights | 27 | 4.0 | 2.7 | 5.9 |

See footnotes at end of table.

Table 5-4 (page 2 of 2). NORA manufacturing sector and asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation (continued) | | | | |
| 783 | Welders and cutters | 55 | 3.7 | 2.8 | 4.8 |
| 547 | Specified mechanics and repairers, n.e.c. | 15 | 3.4 | 1.9 | 5.7 |
| 549 | Not specified mechanics and repairers | 13 | 2.6 | 1.4 | 4.4 |
| 759 | Painting and paint spraying machine operators | 9 | 2.6 | 1.2 | 4.8 |
| 849 | Crane and tower operators | 12 | 2.4 | 1.2 | 4.1 |
| 518 | Industrial machinery repairers | 33 | 2.4 | 1.6 | 3.3 |
| 696 | Stationary engineers | 14 | 2.3 | 1.3 | 3.9 |
| 856 | Industrial truck and tractor equipment operators | 13 | 2.1 | 1.1 | 3.6 |
| 738 | Winding and twisting machine operators | 11 | 2.1 | 1.1 | 3.7 |
| 777 | Miscellaneous machine operators, n.e.c. | 34 | 1.5 | 1.1 | 2.2 |
| 779 | Machine operators, not specified | 41 | 1.5 | 1.0 | 2.0 |
| | All other occupations within this sector | 494 | | | |
| | Occupation not reported within this sector | 10 | | | |
| | TOTAL | 1,035 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Manufacturing Sector

Table 5-5. NORA manufacturing sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 270 | Blast furnaces, steelworks, rolling and finishing mills | 56 | 19.1 |
| 392 | Not specified manufacturing industries | 48 | 16.4 |
| 351 | Motor vehicles and motor vehicle equipment | 30 | 10.2 |
| 192 | Industrial and miscellaneous chemicals | 20 | 6.8 |
| 331 | Machinery, except electrical, n.e.c. | 13 | 4.4 |
| 271 | Iron and steel foundries | 8 | 2.7 |
| 342 | Electrical machinery, equipment, and supplies, n.e.c. | 8 | 2.7 |
| 250 | Glass and glass products | 7 | 2.4 |
| 172 | Printing, publishing, and allied industries, except newspapers | 6 | 2.0 |
| 300 | Miscellaneous fabricated metal products | 6 | 2.0 |
| | All other industries within this sector | 91 | 31.1 |
| | TOTAL | 293 | 100.0 |
| COC | Occupation | | |
| 889 | Laborers, except construction | 73 | 24.9 |
| 779 | Machine operators, not specified | 25 | 8.5 |
| 453 | Janitors and cleaners | 17 | 5.8 |
| 637 | Machinists | 17 | 5.8 |
| 785 | Assemblers | 15 | 5.1 |
| 777 | Miscellaneous machine operators, n.e.c. | 12 | 4.1 |
| 633 | Supervisors, production occupations | 10 | 3.4 |
| 783 | Welders and cutters | 8 | 2.7 |
| 796 | Production inspectors, checkers, and examiners | 7 | 2.4 |
| 019 | Managers and administrators, n.e.c. | 5 | 1.7 |
| 544 | Millwrights | 5 | 1.7 |
| 766 | Furnace, kiln, and oven operators, except food | 5 | 1.7 |
| 849 | Crane and tower operators | 5 | 1.7 |
| | All other occupations within this sector | 84 | 28.7 |
| | Occupation not reported within this sector | 5 | 1.7 |
| | TOTAL | 293 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with coal workers' pneumoconiosis reported was 4,893 in these same selected states and years, and the comparable number of coal workers' pneumoconiosis deaths in the entire United States for this same time period was 15,036.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 5-6. NORA manufacturing sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 270 | Blast furnaces, steelworks, rolling and finishing mills | 51 | 13.2 |
| 271 | Iron and steel foundries | 49 | 12.7 |
| 262 | Miscellaneous nonmetallic mineral and stone products | 44 | 11.4 |
| 392 | Not specified manufacturing industries | 33 | 8.5 |
| 331 | Machinery, except electrical, n.e.c. | 23 | 6.0 |
| 252 | Structural clay products | 20 | 5.2 |
| 300 | Miscellaneous fabricated metal products | 18 | 4.7 |
| 261 | Pottery and related products | 17 | 4.4 |
| 250 | Glass and glass products | 10 | 2.6 |
| 280 | Other primary metal industries | 9 | 2.3 |
| 351 | Motor vehicles and motor vehicle equipment | 9 | 2.3 |
| | All other industries within this sector | 103 | 26.7 |
| | TOTAL | 386 | 100.0 |
| COC | Occupation | | |
| 889 | Laborers, except construction | 67 | 17.4 |
| 633 | Supervisors, production occupations | 27 | 7.0 |
| 779 | Machine operators, not specified | 27 | 7.0 |
| 719 | Molding and casting machine operators | 25 | 6.5 |
| 453 | Janitors and cleaners | 14 | 3.6 |
| 637 | Machinists | 14 | 3.6 |
| 768 | Crushing and grinding machine operators | 13 | 3.4 |
| 675 | Hand molders and shapers, except jewelers | 11 | 2.8 |
| 777 | Miscellaneous machine operators, n.e.c. | 11 | 2.8 |
| 019 | Managers and administrators, n.e.c. | 9 | 2.3 |
| | All other occupations within this sector | 163 | 42.2 |
| | Occupation not reported within this sector | 5 | 1.3 |
| | TOTAL | 386 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Manufacturing Sector

Table 5-7. NORA manufacturing sector and silicosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|------|-------------------------|-------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 262 | Miscellaneous nonmetallic mineral and stone products | 44 | 30.7 | 22.2 | 41.2 |
| 261 | Pottery and related products | 17 | 29.3 | 17.0 | 46.9 |
| 271 | Iron and steel foundries | 49 | 21.6 | 16.0 | 28.5 |
| 252 | Structural clay products | 20 | 19.7 | 12.0 | 30.4 |
| 300 | Miscellaneous fabricated metal products | 18 | 5.7 | 3.4 | 9.0 |
| 251 | Cement, concrete, gypsum, and plaster products | 8 | 4.2 | 1.8 | 8.3 |
| 280 | Other primary metal industries | 9 | 3.5 | 1.6 | 6.6 |
| 270 | Blast furnaces, steelworks, rolling and finishing mills | 51 | 3.2 | 2.4 | 4.2 |
| 250 | Glass and glass products | 10 | 3.0 | 1.4 | 5.5 |
| 331 | Machinery, except electrical, n.e.c. | 23 | 2.5 | 1.6 | 3.7 |
| 392 | Not specified manufacturing industries | 33 | 1.6 | 1.1 | 2.2 |
| | All other industries within this sector | 104 | | | |
| | TOTAL | 386 | | | |
| COC | Occupation | | | | |
| 725 | Miscellaneous metal and plastic processing machine operators | 8 | 76.8 | 33.1 | 151.3 |
| 787 | Hand molding, casting, and forming occupations | 8 | 43.9 | 18.9 | 86.3 |
| 675 | Hand molders and shapers, except jewelers | 11 | 36.1 | 18.1 | 64.6 |
| 768 | Crushing and grinding machine operators | 13 | 31.2 | 16.6 | 53.4 |
| 719 | Molding and casting machine operators | 25 | 19.8 | 12.8 | 29.2 |
| 883 | Freight, stock, and material handlers, n.e.c. | 5 | 4.9 | 1.6 | 11.4 |
| 766 | Furnace, kiln, and oven operators, except food | 8 | 4.9 | 2.1 | 9.6 |
| 709 | Grinding, abrading, buffing, and polishing machine operators | 7 | 4.8 | 1.9 | 9.9 |
| 849 | Crane and tower operators | 7 | 4.3 | 1.7 | 8.9 |
| 544 | Millwrights | 7 | 3.8 | 1.5 | 7.8 |
| 779 | Machine operators, not specified | 27 | 3.1 | 2.0 | 4.4 |
| 889 | Laborers, except construction | 67 | 2.9 | 2.3 | 3.7 |
| 453 | Janitors and cleaners | 14 | 2.4 | 1.3 | 4.0 |
| 633 | Supervisors, production occupations | 27 | 1.8 | 1.2 | 2.6 |
| | All other occupations within this sector | 147 | | | |
| | Occupation not reported within this sector | 5 | | | |
| | TOTAL | 386 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 5-8. NORA manufacturing sector and byssinosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 142 | Yarn, thread, and fabric mills | 39 | 78.0 |
| 151 | Apparel and accessories, except knit | 2 | 4.0 |
| 351 | Motor vehicles and motor vehicle equipment | 2 | 4.0 |
| 392 | Not specified manufacturing industries | 2 | 4.0 |
| | All other industries within this sector | 5 | 10.0 |
| | TOTAL | 50 | 100.0 |
| COC | Occupation | | |
| 749 | Miscellaneous textile machine operators | 11 | 22.0 |
| 738 | Winding and twisting machine operators | 8 | 16.0 |
| 518 | Industrial machinery repairers | 7 | 14.0 |
| 744 | Textile sewing machine operators | 4 | 8.0 |
| 633 | Supervisors, production occupations | 2 | 4.0 |
| 637 | Machinists | 2 | 4.0 |
| 739 | Knitting, looping, taping, and weaving machine operators | 2 | 4.0 |
| 754 | Packaging and filling machine operators | 2 | 4.0 |
| 889 | Laborers, except construction | 2 | 4.0 |
| | All other occupations within this sector | 9 | 18.0 |
| | Occupation not reported within this sector | 1 | 2.0 |
| | TOTAL | 50 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with byssinosis reported was 81 in these same selected states and years, and the comparable number of byssinosis deaths in the entire United States for this same time period was 125.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Manufacturing Sector

Table 5-9. NORA manufacturing sector and byssinosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|------|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 142 | Yarn, thread, and fabric mills | 39 | 22.3 | 15.8 | 30.4 |
| | All other industries within this sector | 11 | | | |
| | TOTAL | 50 | | | |
| COC | Occupation | | | | |
| 749 | Miscellaneous textile machine operators | 11 | 36.0 | 18.0 | 64.4 |
| 518 | Industrial machinery repairers | 7 | 30.8 | 12.4 | 63.4 |
| 738 | Winding and twisting machine operators | 8 | 27.5 | 11.9 | 54.2 |
| | All other occupations within this sector | 23 | | | |
| | Occupation not reported within this sector | 1 | | | |
| | TOTAL | 50 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
 n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with byssinosis reported was 81 in these same selected states and years, and the comparable number of byssinosis deaths in the entire United States for this same time period was 125.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 5-10. NORA manufacturing sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|---|---|--------------------------|----------------|
| CIC | Industry | | |
| 270 | Blast furnaces, steelworks, rolling and finishing mills | 34 | 14.4 |
| 392 | Not specified manufacturing industries | 30 | 12.7 |
| 351 | Motor vehicles and motor vehicle equipment | 19 | 8.1 |
| 192 | Industrial and miscellaneous chemicals | 12 | 5.1 |
| 250 | Glass and glass products | 11 | 4.7 |
| 271 | Iron and steel foundries | 10 | 4.2 |
| 331 | Machinery, except electrical, n.e.c. | 9 | 3.8 |
| 280 | Other primary metal industries | 8 | 3.4 |
| 252 | Structural clay products | 7 | 3.0 |
| 262 | Miscellaneous nonmetallic mineral and stone products | 7 | 3.0 |
| | All other industries within this sector | 89 | 37.7 |
| | TOTAL | 236 | 100.0 |
| COC | Occupation | | |
| 889 | Laborers, except construction | 44 | 18.6 |
| 633 | Supervisors, production occupations | 17 | 7.2 |
| 783 | Welders and cutters | 14 | 5.9 |
| 637 | Machinists | 12 | 5.1 |
| 453 | Janitors and cleaners | 10 | 4.2 |
| 779 | Machine operators, not specified | 8 | 3.4 |
| 785 | Assemblers | 7 | 3.0 |
| 019 | Managers and administrators, n.e.c. | 6 | 2.5 |
| 575 | Electricians | 6 | 2.5 |
| 777 | Miscellaneous machine operators, n.e.c. | 6 | 2.5 |
| | All other occupations within this sector | 102 | 43.2 |
| | Occupation not reported within this sector | 4 | 1.7 |
| | TOTAL | 236 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with unspecified and other pneumoconioses reported was 1,440 in these same selected states and years, and the comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Manufacturing Sector

Table 5-11. NORA manufacturing sector and unspecified and other pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 252 | Structural clay products | 7 | 4.5 | 1.8 | 9.2 |
| 262 | Miscellaneous nonmetallic mineral and stone products | 7 | 3.0 | 1.2 | 6.3 |
| 271 | Iron and steel foundries | 10 | 2.8 | 1.3 | 5.1 |
| | All other industries within this sector | 212 | | | |
| | TOTAL | 236 | | | |
| COC | Occupation | | | | |
| 783 | Welders and cutters | 14 | 1.9 | 1.0 | 3.2 |
| | All other occupations within this sector | 218 | | | |
| | Occupation not reported within this sector | 4 | | | |
| | TOTAL | 236 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with unspecified and other pneumoconioses reported was 1,440 in these same selected states and years, and the comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 5-12. NORA manufacturing sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 270 | Blast furnaces, steelworks, rolling and finishing mills | 203 | 10.4 |
| 360 | Ship and boat building and repairing | 176 | 9.0 |
| 392 | Not specified manufacturing industries | 170 | 8.7 |
| 192 | Industrial and miscellaneous chemicals | 159 | 8.1 |
| 262 | Miscellaneous nonmetallic mineral and stone products | 127 | 6.5 |
| 142 | Yarn, thread, and fabric mills | 97 | 4.9 |
| 351 | Motor vehicles and motor vehicle equipment | 78 | 4.0 |
| 271 | Iron and steel foundries | 71 | 3.6 |
| 331 | Machinery, except electrical, n.e.c. | 68 | 3.5 |
| 250 | Glass and glass products | 55 | 2.8 |
| | All other industries within this sector | 756 | 38.6 |
| | TOTAL | 1,960 | 100.0 |
| COC | Occupation | | |
| 889 | Laborers, except construction | 245 | 12.5 |
| 633 | Supervisors, production occupations | 119 | 6.1 |
| 779 | Machine operators, not specified | 99 | 5.1 |
| 637 | Machinists | 88 | 4.5 |
| 783 | Welders and cutters | 82 | 4.2 |
| 585 | Plumbers, pipefitters, and steamfitters | 73 | 3.7 |
| 453 | Janitors and cleaners | 63 | 3.2 |
| 777 | Miscellaneous machine operators, n.e.c. | 62 | 3.2 |
| 019 | Managers and administrators, n.e.c. | 51 | 2.6 |
| 518 | Industrial machinery repairers | 51 | 2.6 |
| | All other occupations within this sector | 1,002 | 51.1 |
| | Occupation not reported within this sector | 25 | 1.3 |
| | TOTAL | 1,960 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Manufacturing Sector

Table 5-13. NORA manufacturing sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|------|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 262 | Miscellaneous nonmetallic mineral and stone products | 127 | 7.9 | 6.6 | 9.4 |
| 360 | Ship and boat building and repairing | 176 | 4.5 | 3.9 | 5.2 |
| 261 | Pottery and related products | 27 | 3.8 | 2.5 | 5.6 |
| 271 | Iron and steel foundries | 71 | 2.8 | 2.2 | 3.6 |
| 361 | Railroad locomotives and equipment | 7 | 2.7 | 1.1 | 5.5 |
| 252 | Structural clay products | 29 | 2.6 | 1.8 | 3.8 |
| 192 | Industrial and miscellaneous chemicals | 159 | 1.8 | 1.5 | 2.1 |
| 211 | Other rubber products, and plastics footwear and belting | 48 | 1.5 | 1.1 | 1.9 |
| 250 | Glass and glass products | 55 | 1.4 | 1.0 | 1.8 |
| | All other industries within this sector | 1,261 | | | |
| | TOTAL | 1,960 | | | |
| COC | Occupation | | | | |
| 593 | Insulation workers | 25 | 27.2 | 17.6 | 40.1 |
| 725 | Miscellaneous metal and plastic processing machine operators | 9 | 8.8 | 4.0 | 16.7 |
| 643 | Boilermakers | 24 | 5.0 | 3.2 | 7.5 |
| 787 | Hand molding, casting, and forming occupations | 10 | 4.8 | 2.3 | 8.8 |
| 563 | Brickmasons and stonemasons | 12 | 4.8 | 2.5 | 8.3 |
| 585 | Plumbers, pipefitters, and steamfitters | 73 | 4.0 | 3.2 | 5.1 |
| 768 | Crushing and grinding machine operators | 17 | 3.7 | 2.1 | 5.9 |
| 675 | Hand molders and shapers, except jewelers | 13 | 3.5 | 1.9 | 6.0 |
| 534 | Heating, air conditioning, and refrigeration mechanics | 6 | 3.1 | 1.2 | 6.8 |
| 719 | Molding and casting machine operators | 38 | 2.8 | 2.0 | 3.8 |
| 646 | Lay-out workers | 7 | 2.6 | 1.0 | 5.3 |
| 544 | Millwrights | 42 | 1.8 | 1.3 | 2.4 |
| 757 | Separating, filtering, and clarifying machine operators | 24 | 1.6 | 1.0 | 2.4 |
| 575 | Electricians | 47 | 1.6 | 1.2 | 2.1 |
| 783 | Welders and cutters | 82 | 1.6 | 1.3 | 2.0 |
| | All other occupations within this sector | 1,506 | | | |
| | Occupation not reported within this sector | 25 | | | |
| | TOTAL | 1,960 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 5-14. NORA manufacturing sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 192 | Industrial and miscellaneous chemicals | 19 | 14.2 |
| 392 | Not specified manufacturing industries | 10 | 7.5 |
| 351 | Motor vehicles and motor vehicle equipment | 8 | 6.0 |
| 270 | Blast furnaces, steelworks, rolling and finishing mills | 7 | 5.2 |
| 360 | Ship and boat building and repairing | 7 | 5.2 |
| 142 | Yarn, thread, and fabric mills | 6 | 4.5 |
| 200 | Petroleum refining | 5 | 3.7 |
| 160 | Pulp, paper, and paperboard mills | 4 | 3.0 |
| 211 | Other rubber products, and plastics footwear and belting | 4 | 3.0 |
| 262 | Miscellaneous nonmetallic mineral and stone products | 4 | 3.0 |
| 282 | Fabricated structural metal products | 4 | 3.0 |
| 342 | Electrical machinery, equipment, and supplies, n.e.c. | 4 | 3.0 |
| | All other industries within this sector | 52 | 38.8 |
| | TOTAL | 134 | 100.0 |
| COC | Occupation | | |
| 019 | Managers and administrators, n.e.c. | 12 | 9.0 |
| 889 | Laborers, except construction | 9 | 6.7 |
| 633 | Supervisors, production occupations | 8 | 6.0 |
| 453 | Janitors and cleaners | 6 | 4.5 |
| 637 | Machinists | 6 | 4.5 |
| 779 | Machine operators, not specified | 6 | 4.5 |
| 785 | Assemblers | 6 | 4.5 |
| 777 | Miscellaneous machine operators, n.e.c. | 4 | 3.0 |
| 259 | Sales representatives, mining, manufacturing, and wholesale | 3 | 2.2 |
| 575 | Electricians | 3 | 2.2 |
| 696 | Stationary engineers | 3 | 2.2 |
| 744 | Textile sewing machine operators | 3 | 2.2 |
| 796 | Production inspectors, checkers, and examiners | 3 | 2.2 |
| 804 | Truck drivers | 3 | 2.2 |
| | All other occupations within this sector | 55 | 41.0 |
| | Occupation not reported within this sector | 4 | 3.0 |
| | TOTAL | 134 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Manufacturing Sector

Table 5-15. NORA manufacturing sector and malignant mesothelioma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry | | Number of Deaths* | PMR | 95% Confidence Interval | |
|---------------------------|---|-------------------|-----|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 360 | Ship and boat building and repairing | 7 | 6.0 | 2.4 | 12.3 |
| 192 | Industrial and miscellaneous chemicals | 19 | 4.8 | 2.9 | 7.5 |
| 200 | Petroleum refining | 5 | 3.8 | 1.2 | 8.9 |
| | All other industries within this sector | 103 | | | |
| | TOTAL | 134 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit

UCL - upper confidence limit

* The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 5-16. NORA *manufacturing* sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|---|--|--------------------------|----------------|
| CIC | Industry | | |
| 142 | Yarn, thread, and fabric mills | 3 | 23.1 |
| | All other industries within this sector | 10 | 76.9 |
| | TOTAL | 13 | 100.0 |
| COC | Occupation | | |
| 633 | Supervisors, production occupations | 2 | 15.4 |
| 637 | Machinists | 2 | 15.4 |
| | All other occupations within this sector | 9 | 69.2 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 13 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with hypersensitivity pneumonitis reported was 122 in these same selected states and years, and the comparable number of hypersensitivity pneumonitis deaths in the entire United States for this same time period was 398.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Manufacturing Sector

Table 5-17. NORA manufacturing sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|------|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 069 | Physicists and astronomers | 5 | 7.9 | 2.6 | 18.4 |
| 549 | Not specified mechanics and repairers | 28 | 1.5 | 1.0 | 2.2 |
| | All other occupations within this sector | 4,247 | | | |
| | Occupation not reported within this sector | 68 | | | |
| | TOTAL | 4,348 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with asthma reported was 29,703 in these same selected states and years, and the comparable number of asthma deaths in the entire United States for this same time period was 115,729.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 5-18. NORA manufacturing sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 242 | Furniture and fixtures | 335 | 1.2 | 1.1 | 1.3 |
| 142 | Yarn, thread, and fabric mills | 1,423 | 1.1 | 1.0 | 1.1 |
| | All other industries within this sector | 8,899 | | | |
| | TOTAL | 10,657 | | | |
| COC | Occupation | | | | |
| 747 | Pressing machine operators | 25 | 1.6 | 1.0 | 2.3 |
| 709 | Grinding, abrading, buffing, and polishing machine operators | 50 | 1.5 | 1.1 | 1.9 |
| 727 | Sawing machine operators | 59 | 1.4 | 1.1 | 1.8 |
| 804 | Truck drivers | 187 | 1.3 | 1.1 | 1.5 |
| 783 | Welders and cutters | 182 | 1.2 | 1.0 | 1.4 |
| 779 | Machine operators, not specified | 571 | 1.2 | 1.1 | 1.3 |
| 889 | Laborers, except construction | 1,041 | 1.2 | 1.1 | 1.2 |
| 777 | Miscellaneous machine operators, n.e.c. | 266 | 1.2 | 1.0 | 1.3 |
| 785 | Assemblers | 474 | 1.1 | 1.0 | 1.2 |
| | All other occupations within this sector | 7,516 | | | |
| | Occupation not reported within this sector | 286 | | | |
| | TOTAL | 10,657 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with chronic obstructive pulmonary disease reported was 57,073 in the same selected states and year, and the comparable number of chronic obstructive pulmonary disease deaths in the entire United States for this same time period was 245,415.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Manufacturing Sector

Table 5-19. NORA manufacturing sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 141 | Carpets and rugs | 13 | 2.1 | 1.1 | 3.7 |
| 280 | Other primary metal industries | 24 | 1.7 | 1.1 | 2.5 |
| | All other industries within this sector | 1,195 | | | |
| | TOTAL | 1,232 | | | |
| COC | Occupation | | | | |
| 768 | Crushing and grinding machine operators | 10 | 3.7 | 1.8 | 6.7 |
| | All other occupations within this sector | 1,193 | | | |
| | Occupation not reported within this sector | 29 | | | |
| | TOTAL | 1,232 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
 n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with respiratory tuberculosis reported was 8,071 in these same selected states and years, and the comparable number of respiratory tuberculosis deaths in the entire United States for this same time period was 35,417.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 5-20. NORA manufacturing sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 371 | Scientific and controlling instruments | 55 | 1.4 | 1.1 | 1.9 |
| 360 | Ship and boat building and repairing | 84 | 1.3 | 1.1 | 1.7 |
| 130 | Tobacco manufactures | 95 | 1.3 | 1.1 | 1.6 |
| 271 | Iron and steel foundries | 90 | 1.3 | 1.1 | 1.6 |
| 351 | Motor vehicles and motor vehicle equipment | 493 | 1.2 | 1.1 | 1.3 |
| 282 | Fabricated structural metal products | 124 | 1.2 | 1.0 | 1.4 |
| 172 | Printing, publishing, and allied industries, except newspapers | 271 | 1.2 | 1.1 | 1.4 |
| 392 | Not specified manufacturing industries | 782 | 1.1 | 1.0 | 1.2 |
| | All other industries within this sector | 5,573 | | | |
| | TOTAL | 7,567 | | | |
| COC | Occupation | | | | |
| 636 | Precision assemblers, metal | 14 | 2.4 | 1.3 | 4.1 |
| 646 | Lay-out workers | 10 | 2.3 | 1.1 | 4.2 |
| 704 | Lathe and turning machine operators | 10 | 2.1 | 1.0 | 3.9 |
| 319 | Receptionists | 11 | 2.0 | 1.0 | 3.6 |
| 806 | Driver-sales workers | 34 | 1.5 | 1.1 | 2.1 |
| 689 | Inspectors, testers, and graders | 39 | 1.5 | 1.1 | 2.1 |
| 683 | Electrical and electronic equipment assemblers | 90 | 1.4 | 1.1 | 1.7 |
| 756 | Mixing and blending machine operators | 45 | 1.4 | 1.0 | 1.9 |
| 653 | Sheet metal workers | 51 | 1.4 | 1.0 | 1.8 |
| 337 | Bookkeepers, accounting, and auditing clerks | 58 | 1.3 | 1.0 | 1.7 |
| 518 | Industrial machinery repairers | 185 | 1.3 | 1.1 | 1.5 |
| 783 | Welders and cutters | 142 | 1.3 | 1.1 | 1.5 |
| 633 | Supervisors, production occupations | 516 | 1.3 | 1.2 | 1.4 |
| 785 | Assemblers | 330 | 1.1 | 1.0 | 1.3 |
| 019 | Managers and administrators, n.e.c. | 512 | 1.1 | 1.0 | 1.2 |
| | All other occupations within this sector | 5,325 | | | |
| | Occupation not reported within this sector | 195 | | | |
| | TOTAL | 7,567 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with lung cancer reported was 37,562 in these same selected states and year, and the comparable number of lung cancer deaths in the entire United States for this same time period was 162,546.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Manufacturing Sector

Table 5-21. NORA manufacturing sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 232 | Wood buildings and mobile homes | 5 | 4.8 | 1.5 | 11.1 |
| 282 | Fabricated structural metal products | 19 | 1.8 | 1.1 | 2.8 |
| | All other industries within this sector | 762 | | | |
| | TOTAL | 786 | | | |
| COC | Occupation | | | | |
| 533 | Miscellaneous electrical and electronic equipment repairers | 5 | 5.1 | 1.6 | 11.8 |
| 544 | Millwrights | 10 | 2.4 | 1.2 | 4.4 |
| | All other occupations within this sector | 748 | | | |
| | Occupation not reported within this sector | 23 | | | |
| | TOTAL | 786 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of other interstitial pulmonary diseases was 4,471 in these same selected states and year, and the comparable number of other interstitial pulmonary diseases deaths in the entire United States for this same time period was 18,655.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 5-22. NORA manufacturing sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 444 | Miscellaneous food preparation occupations | 13 | 2.1 | 1.1 | 3.5 |
| | All other occupations within this sector | 8,573 | | | |
| | Occupation not reported within this sector | 224 | | | |
| | TOTAL | 8,810 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with pneumonia and influenza reported was 52,295 in these same selected states and year, and the comparable number of pneumonia and influenza deaths in the entire United States for this same time period was 229,136.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Section 6

NORA Mining (MIN) Sector

Table 6-1. NORA *mining* sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | Percent |
|---|-------------------------|----------------|
| All Pneumoconioses | 4,837 | 7.4 |
| Coal Workers' Pneumoconiosis | 3,805 | 5.8 |
| Unspecified and Other Pneumoconioses | 860 | 1.3 |
| Silicosis | 203 | 0.3 |
| Asbestosis | 18 | 0.0 |
| Byssinosis | 4 | 0.0 |
| Malignant Mesothelioma (all sites)* | 3 | 0.0 |
| Hypersensitivity Pneumonitis | 0 | 0.0 |
| All other conditions within this sector | 55,635 | 85.1 |
| TOTAL | 65,365 | 100.0 |

NORA - National Occupational Research Agenda

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Mining Sector

Table 6-2. NORA mining sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | PMR | 95% Confidence Interval | |
|---|------------------|-------|-------------------------|------|
| | | | LCL | UCL |
| Coal Workers' Pneumoconiosis | 3,805 | 33.54 | 32.5 | 34.6 |
| Unspecified and Other Pneumoconioses | 860 | 26.63 | 24.9 | 28.5 |
| All Pneumoconioses | 4,837 | 21.55 | 21.0 | 22.2 |
| Silicosis | 203 | 11.19 | 9.7 | 12.9 |
| Byssinosis | 4 | - | - | - |
| Malignant Mesothelioma (all sites)* | 3 | - | - | - |
| Asbestosis | 18 | 0.29 | 0.2 | 0.5 |
| Hypersensitivity Pneumonitis | 0 | - | - | - |
| All other conditions within this sector | 55,635 | | | |
| TOTAL | 65,365 | | | |

NORA - National Occupational Research Agenda

- indicates no PMR was calculated because there were fewer than 5 deaths.

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 6-3. NORA mining sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 050 | Nonmetallic mining and quarrying, except fuel | 7 | 38.9 |
| 041 | Coal mining | 5 | 27.8 |
| 042 | Oil and gas extraction | 4 | 22.2 |
| 040 | Metal mining | 2 | 11.1 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 18 | 100.0 |
| COC | Occupation | | |
| 616 | Mining machine operators | 5 | 27.8 |
| 585 | Plumbers, pipefitters, and steamfitters | 2 | 11.1 |
| | All other occupations within this sector | 11 | 61.1 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 18 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified

* The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Mining Sector

Table 6-4. NORA mining sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 041 | Coal mining | 3,765 | 98.9 |
| 040 | Metal mining | 25 | 0.7 |
| 042 | Oil and gas extraction | 8 | 0.2 |
| 050 | Nonmetallic mining and quarrying, except fuel | 7 | 0.2 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 3,805 | 100.0 |
| COC | Occupation | | |
| 616 | Mining machine operators | 3,437 | 90.3 |
| 575 | Electricians | 50 | 1.3 |
| 613 | Supervisors, extractive occupations | 49 | 1.3 |
| 889 | Laborers, except construction | 42 | 1.1 |
| 019 | Managers and administrators, n.e.c. | 25 | 0.7 |
| 804 | Truck drivers | 19 | 0.5 |
| 824 | Locomotive operating occupations | 19 | 0.5 |
| 633 | Supervisors, production occupations | 17 | 0.4 |
| 844 | Operating engineers | 16 | 0.4 |
| 617 | Mining occupations, n.e.c. | 14 | 0.4 |
| | All other occupations within this sector | 115 | 3.0 |
| | Occupation not reported within this sector | 2 | 0.1 |
| | TOTAL | 3,805 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified

* The total number of deaths with coal workers' pneumoconiosis reported was 4,893 in these same selected states and years, and the comparable number of coal workers' pneumoconiosis deaths in the entire United States for this same time period was 15,036.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 6-5. NORA mining sector and coal workers' pneumoconiosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|------|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 041 | Coal mining | 3,765 | 53.2 | 51.5 | 54.9 |
| 040 | Metal mining | 25 | 2.0 | 1.3 | 2.9 |
| | All other industries within this sector | 15 | | | |
| | TOTAL | 3,805 | | | |
| COC | Occupation | | | | |
| 616 | Mining machine operators | 3,437 | 51.8 | 50.1 | 53.6 |
| 824 | Locomotive operating occupations | 19 | 48.7 | 29.3 | 76.1 |
| 036 | Inspectors and compliance officers, except construction | 10 | 44.2 | 21.3 | 81.3 |
| 883 | Freight, stock, and material handlers, n.e.c. | 8 | 38.1 | 16.4 | 75.1 |
| 575 | Electricians | 50 | 36.3 | 26.9 | 47.9 |
| 855 | Grader, dozer, and scraper operators | 6 | 31.6 | 11.6 | 68.8 |
| 567 | Carpenters | 6 | 22.0 | 8.1 | 48.0 |
| 777 | Miscellaneous machine operators, n.e.c. | 5 | 20.1 | 6.5 | 46.9 |
| 613 | Supervisors, extractive occupations | 49 | 14.6 | 10.8 | 19.3 |
| 633 | Supervisors, production occupations | 17 | 13.0 | 7.6 | 20.8 |
| 889 | Laborers, except construction | 42 | 10.4 | 7.5 | 14.0 |
| 853 | Excavating and loading machine operators | 5 | 9.9 | 3.2 | 23.1 |
| 804 | Truck drivers | 19 | 8.6 | 5.2 | 13.5 |
| 844 | Operating engineers | 16 | 8.3 | 4.8 | 13.5 |
| 783 | Welders and cutters | 8 | 8.2 | 3.5 | 16.0 |
| 516 | Heavy equipment mechanics | 12 | 7.9 | 4.1 | 13.8 |
| 046 | Mining engineers | 8 | 7.1 | 3.0 | 13.9 |
| 019 | Managers and administrators, n.e.c. | 25 | 6.2 | 4.0 | 9.1 |
| 859 | Miscellaneous material moving equipment operators | 12 | 5.7 | 2.9 | 9.9 |
| 617 | Mining occupations, n.e.c. | 14 | 4.6 | 2.5 | 7.7 |
| | All other occupations within this sector | 35 | | | |
| | Occupation not reported within this sector | 2 | | | |
| | TOTAL | 3,805 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with coal workers' pneumoconiosis reported was 4,893 in these same selected states and years, and the comparable number of coal workers' pneumoconiosis deaths in the entire United States for this same time period was 15,036.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Mining Sector

Table 6-6. NORA mining sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 040 | Metal mining | 86 | 42.4 |
| 041 | Coal mining | 69 | 34.0 |
| 050 | Nonmetallic mining and quarrying, except fuel | 48 | 23.6 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 203 | 100.0 |
| COC | Occupation | | |
| 616 | Mining machine operators | 136 | 67.0 |
| 019 | Managers and administrators, n.e.c. | 7 | 3.4 |
| 613 | Supervisors, extractive occupations | 7 | 3.4 |
| 617 | Mining occupations, n.e.c. | 7 | 3.4 |
| 889 | Laborers, except construction | 7 | 3.4 |
| 844 | Operating engineers | 6 | 3.0 |
| 768 | Crushing and grinding machine operators | 4 | 2.0 |
| 046 | Mining engineers | 3 | 1.5 |
| 766 | Furnace, kiln, and oven operators, except food | 3 | 1.5 |
| 516 | Heavy equipment mechanics | 2 | 1.0 |
| 615 | Explosives workers | 2 | 1.0 |
| 633 | Supervisors, production occupations | 2 | 1.0 |
| 779 | Machine operators, not specified | 2 | 1.0 |
| | All other occupations within this sector | 15 | 7.4 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 203 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 6-7. NORA mining sector and silicosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|------|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 040 | Metal mining | 86 | 41.7 | 33.6 | 51.8 |
| 050 | Nonmetallic mining and quarrying, except fuel | 48 | 29.2 | 21.5 | 38.8 |
| 041 | Coal mining | 69 | 6.2 | 4.8 | 7.9 |
| | All other industries within this sector | 0 | | | |
| | TOTAL | 203 | | | |
| COC | Occupation | | | | |
| 844 | Operating engineers | 6 | 17.9 | 6.6 | 39.0 |
| 617 | Mining occupations, n.e.c. | 7 | 14.2 | 5.7 | 29.3 |
| 613 | Supervisors, extractive occupations | 7 | 13.1 | 5.2 | 26.9 |
| 616 | Mining machine operators | 136 | 12.9 | 10.9 | 15.4 |
| 019 | Managers and administrators, n.e.c. | 7 | 11.0 | 4.4 | 22.8 |
| 889 | Laborers, except construction | 7 | 10.4 | 4.2 | 21.4 |
| | All other occupations within this sector | 33 | | | |
| | Occupation not reported within this sector | 0 | | | |
| | TOTAL | 203 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Mining Sector

Table 6-8. NORA *mining* sector and byssinosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 041 | Coal mining | 3 | 75.0 |
| | All other industries within this sector | 1 | 25.0 |
| | TOTAL | 4 | 100.0 |
| COC | Occupation | | |
| 616 | Mining machine operators | 4 | 100.0 |
| | All other occupations within this sector | 0 | 0.0 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 4 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with byssinosis reported was 81 in these same selected states and years, and the comparable number of byssinosis deaths in the entire United States for this same time period was 125.
 NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.
 SOURCE: National Center for Health Statistics multiple cause-of-death data.

Table 6-9. NORA mining sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 041 | Coal mining | 833 | 96.9 |
| 040 | Metal mining | 18 | 2.1 |
| 050 | Nonmetallic mining and quarrying, except fuel | 7 | 0.8 |
| 042 | Oil and gas extraction | 2 | 0.2 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 860 | 100.0 |
| COC | Occupation | | |
| 616 | Mining machine operators | 756 | 87.9 |
| 613 | Supervisors, extractive occupations | 17 | 2.0 |
| 575 | Electricians | 12 | 1.4 |
| 889 | Laborers, except construction | 10 | 1.2 |
| 804 | Truck drivers | 9 | 1.0 |
| 019 | Managers and administrators, n.e.c. | 5 | 0.6 |
| 516 | Heavy equipment mechanics | 4 | 0.5 |
| 617 | Mining occupations, n.e.c. | 4 | 0.5 |
| 843 | Supervisors, material moving equipment operators | 4 | 0.5 |
| 046 | Mining engineers | 3 | 0.3 |
| 633 | Supervisors, production occupations | 3 | 0.3 |
| 637 | Machinists | 3 | 0.3 |
| 783 | Welders and cutters | 3 | 0.3 |
| 824 | Locomotive operating occupations | 3 | 0.3 |
| 844 | Operating engineers | 3 | 0.3 |
| 859 | Miscellaneous material moving equipment operators | 3 | 0.3 |
| | All other occupations within this sector | 18 | 2.1 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 860 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with unspecified and other pneumoconioses reported was 1,440 in these same selected states and years, and the comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Mining Sector

Table 6-10. NORA mining sector and unspecified and other pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|------|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 041 | Coal mining | 833 | 41.6 | 38.9 | 44.6 |
| 040 | Metal mining | 18 | 4.9 | 2.9 | 7.8 |
| 050 | Nonmetallic mining and quarrying, except fuel | 7 | 2.5 | 1.0 | 5.2 |
| | All other industries within this sector | 2 | | | |
| | TOTAL | 860 | | | |
| COC | Occupation | | | | |
| 616 | Mining machine operators | 756 | 40.3 | 37.5 | 43.3 |
| 575 | Electricians | 12 | 30.5 | 15.7 | 53.2 |
| 613 | Supervisors, extractive occupations | 17 | 17.7 | 10.3 | 28.2 |
| 804 | Truck drivers | 9 | 14.0 | 6.4 | 26.6 |
| 889 | Laborers, except construction | 10 | 8.7 | 4.2 | 15.9 |
| 019 | Managers and administrators, n.e.c. | 5 | 4.3 | 1.4 | 10.1 |
| | All other occupations within this sector | 51 | | | |
| | Occupation not reported within this sector | 0 | | | |
| | TOTAL | 860 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with unspecified and other pneumoconioses reported was 1,440 in these same selected states and years, and the comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 6-11. NORA mining sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 041 | Coal mining | 4,623 | 95.6 |
| 040 | Metal mining | 131 | 2.7 |
| 050 | Nonmetallic mining and quarrying, except fuel | 69 | 1.4 |
| 042 | Oil and gas extraction | 14 | 0.3 |
| | All other industries within this sector | 0 | 0.0 |
| | TOTAL | 4,837 | 100.0 |
| COC | Occupation | | |
| 616 | Mining machine operators | 4,292 | 88.7 |
| 613 | Supervisors, extractive occupations | 73 | 1.5 |
| 575 | Electricians | 64 | 1.3 |
| 889 | Laborers, except construction | 58 | 1.2 |
| 019 | Managers and administrators, n.e.c. | 36 | 0.7 |
| 804 | Truck drivers | 30 | 0.6 |
| 617 | Mining occupations, n.e.c. | 25 | 0.5 |
| 844 | Operating engineers | 24 | 0.5 |
| 824 | Locomotive operating occupations | 23 | 0.5 |
| 633 | Supervisors, production occupations | 22 | 0.5 |
| | All other occupations within this sector | 188 | 3.9 |
| | Occupation not reported within this sector | 2 | 0.0 |
| | TOTAL | 4,837 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Mining Sector

Table 6-12 (page 1 of 2). NORA mining sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|------|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 041 | Coal mining | 4,623 | 33.1 | 32.2 | 34.1 |
| 040 | Metal mining | 131 | 5.2 | 4.4 | 6.2 |
| 050 | Nonmetallic mining and quarrying, except fuel | 69 | 3.6 | 2.8 | 4.6 |
| | All other industries within this sector | 14 | | | |
| | TOTAL | 4,837 | | | |
| COC | Occupation | | | | |
| 616 | Mining machine operators | 4,292 | 32.9 | 31.9 | 33.9 |
| 824 | Locomotive operating occupations | 23 | 30.0 | 19.0 | 45.0 |
| 036 | Inspectors and compliance officers, except construction | 12 | 26.6 | 13.7 | 46.4 |
| 883 | Freight, stock, and material handlers, n.e.c. | 10 | 24.2 | 11.6 | 44.4 |
| 575 | Electricians | 64 | 23.5 | 18.3 | 30.3 |
| 855 | Grader, dozer, and scraper operators | 7 | 18.2 | 7.3 | 37.4 |
| 777 | Miscellaneous machine operators, n.e.c. | 6 | 12.2 | 4.5 | 26.6 |
| 567 | Carpenters | 6 | 11.4 | 4.2 | 24.7 |
| 768 | Crushing and grinding machine operators | 9 | 11.1 | 5.1 | 21.0 |
| 613 | Supervisors, extractive occupations | 73 | 10.9 | 8.6 | 13.8 |
| 615 | Explosives workers | 5 | 10.9 | 3.5 | 25.4 |
| 633 | Supervisors, production occupations | 22 | 8.4 | 5.2 | 12.7 |
| 889 | Laborers, except construction | 58 | 7.3 | 5.6 | 9.5 |
| 853 | Excavating and loading machine operators | 7 | 6.9 | 2.8 | 14.3 |
| 046 | Mining engineers | 15 | 6.7 | 3.8 | 11.1 |
| 804 | Truck drivers | 30 | 6.7 | 4.5 | 9.5 |
| 844 | Operating engineers | 24 | 6.1 | 3.9 | 9.1 |
| 516 | Heavy equipment mechanics | 18 | 5.9 | 3.5 | 9.3 |

See footnotes at end of table.

Table 6-12 (page 2 of 2). NORA mining sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|------|
| | | | | LCL | UCL |
| COC | Occupation (continued) | | | | |
| 637 | Machinists | 7 | 5.7 | 2.3 | 11.7 |
| 783 | Welders and cutters | 11 | 5.6 | 2.8 | 10.0 |
| 019 | Managers and administrators, n.e.c. | 36 | 4.5 | 3.1 | 6.2 |
| 859 | Miscellaneous material moving equipment operators | 17 | 4.2 | 2.4 | 6.6 |
| 617 | Mining occupations, n.e.c. | 25 | 4.1 | 2.7 | 6.1 |
| | All other occupations within this sector | 58 | | | |
| | Occupation not reported within this sector | 2 | | | |
| | TOTAL | 4,837 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Mining Sector

Table 6-13. NORA mining sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 042 | Oil and gas extraction | 2 | 66.7 |
| | All other industries within this sector | 1 | 33.3 |
| | TOTAL | 3 | 100.0 |
| COC | Occupation | | |
| 783 | Welders and cutters | 2 | 66.7 |
| | All other occupations within this sector | 1 | 33.3 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 3 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.
 NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.
 SOURCE: National Center for Health Statistics multiple cause-of-death data.

Table 6-14. NORA mining sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 041 | Coal mining | 783 | 2.0 | 1.8 | 2.1 |
| 050 | Nonmetallic mining and quarrying, except fuel | 77 | 1.3 | 1.0 | 1.6 |
| 040 | Metal mining | 115 | 1.3 | 1.0 | 1.5 |
| 042 | Oil and gas extraction | 129 | 1.2 | 1.0 | 1.5 |
| | All other industries within this sector | 0 | | | |
| | TOTAL | 1,104 | | | |
| COC | Occupation | | | | |
| 615 | Explosives workers | 7 | 3.0 | 1.2 | 6.1 |
| 783 | Welders and cutters | 16 | 2.2 | 1.2 | 3.5 |
| 616 | Mining machine operators | 765 | 2.0 | 1.9 | 2.2 |
| 617 | Mining occupations, n.e.c. | 27 | 1.8 | 1.2 | 2.6 |
| 889 | Laborers, except construction | 25 | 1.6 | 1.0 | 2.3 |
| | All other occupations within this sector | 261 | | | |
| | Occupation not reported within this sector | 3 | | | |
| | TOTAL | 1,104 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with chronic obstructive pulmonary disease reported was 57,073 in the same selected states and year, and the comparable number of chronic obstructive pulmonary disease deaths in the entire United States for this same time period was 245,415.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Mining Sector

Table 6-15. NORA *mining* sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 050 | Nonmetallic mining and quarrying, except fuel | 16 | 1.9 | 1.1 | 3.0 |
| 040 | Metal mining | 17 | 1.8 | 1.1 | 2.9 |
| 041 | Coal mining | 67 | 1.4 | 1.1 | 1.8 |
| | All other industries within this sector | 7 | | | |
| | TOTAL | 107 | | | |
| COC | Occupation | | | | |
| 616 | Mining machine operators | 76 | 1.7 | 1.4 | 2.1 |
| | All other occupations within this sector | 30 | | | |
| | Occupation not reported within this sector | 1 | | | |
| | TOTAL | 107 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with respiratory tuberculosis reported was 8,071 in these same selected states and years, and the comparable number of respiratory tuberculosis deaths in the entire United States for this same time period was 35,417.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 6-16. NORA mining sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 041 | Coal mining | 327 | 1.3 | 1.1 | 1.4 |
| | All other industries within this sector | 189 | | | |
| | TOTAL | 516 | | | |
| COC | Occupation | | | | |
| 614 | Drillers, oil well | 18 | 1.8 | 1.0 | 2.8 |
| 616 | Mining machine operators | 315 | 1.3 | 1.1 | 1.4 |
| | All other occupations within this sector | 180 | | | |
| | Occupation not reported within this sector | 3 | | | |
| | TOTAL | 516 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with lung cancer reported was 37,562 in these same selected states and year, and the comparable number of lung cancer deaths in the entire United States for this same time period was 162,546.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Mining Sector

Table 6-17. NORA *mining* sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry | | Number of Deaths* | PMR | 95% Confidence Interval | |
|---------------------------|---|----------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 040 | Metal mining | 15 | 2.2 | 1.2 | 3.6 |
| | All other industries within this sector | 41 | | | |
| | TOTAL | 56 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of other interstitial pulmonary diseases was 4,471 in these same selected states and years, and the comparable number of other interstitial pulmonary diseases deaths in the entire United States for this same time period was 18,655.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 6-18. NORA *mining* sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 041 | Coal mining | 410 | 1.3 | 1.2 | 1.5 |
| | All other industries within this sector | 221 | | | |
| | TOTAL | 631 | | | |
| COC | Occupation | | | | |
| 616 | Mining machine operators | 394 | 1.3 | 1.2 | 1.5 |
| | All other occupations within this sector | 236 | | | |
| | Occupation not reported within this sector | 1 | | | |
| | TOTAL | 631 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with pneumonia and influenza reported was 52,295 in these same selected states and year, and the comparable number of pneumonia and influenza deaths in the entire United States for this same time period was 229,136.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Section 7

NORA Services (SRV) Sector

Table 7-1. NORA services sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | Percent |
|---|-------------------------|----------------|
| All Pneumoconioses | 731 | 0.1 |
| Asbestosis | 434 | 0.0 |
| Coal Workers' Pneumoconiosis | 152 | 0.0 |
| Malignant Mesothelioma (all sites)* | 135 | 0.0 |
| Unspecified and Other Pneumoconioses | 84 | 0.0 |
| Silicosis | 60 | 0.0 |
| Hypersensitivity Pneumonitis | 12 | 0.0 |
| Byssinosis | 9 | 0.0 |
| All other conditions within this sector | 1,419,930 | 99.9 |
| TOTAL | 1,421,547 | 100.0 |

NORA - National Occupational Research Agenda

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Services Sector

Table 7-2. NORA *services* sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | PMR | 95% Confidence Interval | |
|---|-------------------------|------------|--------------------------------|------------|
| | | | LCL | UCL |
| Malignant Mesothelioma (all sites)* | 135 | 1.0 | 0.8 | 1.1 |
| Asbestosis | 434 | 0.6 | 0.6 | 0.7 |
| Byssinosis | 9 | 0.5 | 0.2 | 0.9 |
| Hypersensitivity Pneumonitis | 12 | 0.4 | 0.2 | 0.7 |
| All Pneumoconioses | 731 | 0.3 | 0.3 | 0.3 |
| Silicosis | 60 | 0.3 | 0.2 | 0.4 |
| Unspecified and Other Pneumoconioses | 84 | 0.2 | 0.2 | 0.3 |
| Coal Workers' Pneumoconiosis | 152 | 0.1 | 0.1 | 0.2 |
| All other conditions within this sector | 1,419,930 | | | |
| TOTAL | 1,421,547 | | | |

NORA - National Occupational Research Agenda

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 7-3. NORA services sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 901 | General government, n.e.c. | 71 | 16.4 |
| 842 | Elementary and secondary schools | 53 | 12.2 |
| 942 | Military | 47 | 10.8 |
| 751 | Automotive repair and related services | 31 | 7.1 |
| 910 | Justice, public order, and safety | 25 | 5.8 |
| 932 | National security and international affairs | 25 | 5.8 |
| 641 | Eating and drinking places | 18 | 4.1 |
| 712 | Real estate, including real estate-insurance offices | 15 | 3.5 |
| 711 | Insurance | 14 | 3.2 |
| 881 | Membership organizations | 13 | 3.0 |
| | All other industries within this sector | 122 | 28.1 |
| | TOTAL | 434 | 100.0 |
| COC | Occupation | | |
| 905 | Military occupations | 43 | 9.9 |
| 453 | Janitors and cleaners | 30 | 6.9 |
| 019 | Managers and administrators, n.e.c. | 28 | 6.5 |
| 505 | Automobile mechanics | 22 | 5.1 |
| 575 | Electricians | 15 | 3.5 |
| 585 | Plumbers, pipefitters, and steamfitters | 11 | 2.5 |
| 254 | Real estate sales occupations | 8 | 1.8 |
| 696 | Stationary engineers | 8 | 1.8 |
| 176 | Clergy | 7 | 1.6 |
| 417 | Firefighting occupations | 7 | 1.6 |
| 457 | Barbers | 7 | 1.6 |
| 637 | Machinists | 7 | 1.6 |
| 783 | Welders and cutters | 7 | 1.6 |
| | All other occupations within this sector | 224 | 51.6 |
| | Occupation not reported within this sector | 10 | 2.3 |
| | TOTAL | 434 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Services Sector

Table 7-4. NORA services sector and asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-------|-------------------------|-------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 881 | Membership organizations | 13 | 2.5 | 1.3 | 4.2 |
| | All other industries within this sector | 421 | | | |
| | TOTAL | 434 | | | |
| COC | Occupation | | | | |
| 593 | Insulation workers | 5 | 124.5 | 40.3 | 290.9 |
| 585 | Plumbers, pipefitters, and steamfitters | 11 | 8.2 | 4.1 | 14.6 |
| 575 | Electricians | 15 | 4.7 | 2.6 | 7.8 |
| 057 | Mechanical engineers | 6 | 2.8 | 1.0 | 6.2 |
| 637 | Machinists | 7 | 2.8 | 1.1 | 5.7 |
| | All other occupations within this sector | 380 | | | |
| | Occupation not reported within this sector | 10 | | | |
| | TOTAL | 434 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
 n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 7-5. NORA services sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 842 | Elementary and secondary schools | 20 | 13.2 |
| 901 | General government, n.e.c. | 15 | 9.9 |
| 751 | Automotive repair and related services | 13 | 8.6 |
| 880 | Religious organizations | 11 | 7.2 |
| 910 | Justice, public order, and safety | 9 | 5.9 |
| 712 | Real estate, including real estate-insurance offices | 8 | 5.3 |
| 931 | Administration of economic programs | 8 | 5.3 |
| 760 | Miscellaneous repair services | 7 | 4.6 |
| 942 | Military | 6 | 3.9 |
| 881 | Membership organizations | 5 | 3.3 |
| 930 | Administration of environmental quality and housing programs | 5 | 3.3 |
| | All other industries within this sector | 45 | 29.6 |
| | TOTAL | 152 | 100.0 |
| COC | Occupation | | |
| 453 | Janitors and cleaners | 20 | 13.2 |
| 176 | Clergy | 11 | 7.2 |
| 505 | Automobile mechanics | 9 | 5.9 |
| 426 | Guards and police, except public service | 8 | 5.3 |
| 019 | Managers and administrators, n.e.c. | 7 | 4.6 |
| 036 | Inspectors and compliance officers, except construction | 7 | 4.6 |
| 889 | Laborers, except construction | 6 | 3.9 |
| 808 | Bus drivers | 4 | 2.6 |
| 905 | Military occupations | 4 | 2.6 |
| 016 | Managers, properties and real estate | 3 | 2.0 |
| 253 | Insurance sales occupations | 3 | 2.0 |
| 379 | General office clerks | 3 | 2.0 |
| 423 | Sheriffs, bailiffs, and other law enforcement officers | 3 | 2.0 |
| 457 | Barbers | 3 | 2.0 |
| 547 | Specified mechanics and repairers, n.e.c. | 3 | 2.0 |
| 567 | Carpenters | 3 | 2.0 |
| 575 | Electricians | 3 | 2.0 |
| 783 | Welders and cutters | 3 | 2.0 |
| | All other occupations within this sector | 45 | 29.6 |
| | Occupation not reported within this sector | 4 | 2.6 |
| | TOTAL | 152 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with coal workers' pneumoconiosis reported was 4,893 in these same selected states and years, and the comparable number of coal workers' pneumoconiosis deaths in the entire United States for this same time period was 15,036.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Services Sector

Table 7-6. NORA services sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 641 | Eating and drinking places | 11 | 18.3 |
| 901 | General government, n.e.c. | 9 | 15.0 |
| 760 | Miscellaneous repair services | 6 | 10.0 |
| 842 | Elementary and secondary schools | 6 | 10.0 |
| 751 | Automotive repair and related services | 3 | 5.0 |
| 850 | Colleges and universities | 3 | 5.0 |
| 880 | Religious organizations | 3 | 5.0 |
| 171 | Newspaper publishing and printing | 2 | 3.3 |
| 761 | Private households | 2 | 3.3 |
| 771 | Laundry, cleaning, and garment services | 2 | 3.3 |
| 802 | Miscellaneous entertainment and recreation services | 2 | 3.3 |
| 892 | Miscellaneous professional and related services | 2 | 3.3 |
| 910 | Justice, public order, and safety | 2 | 3.3 |
| | All other industries within this sector | 7 | 11.7 |
| | TOTAL | 60 | 100.0 |
| COC | Occupation | | |
| 453 | Janitors and cleaners | 11 | 18.3 |
| 019 | Managers and administrators, n.e.c. | 8 | 13.3 |
| 783 | Welders and cutters | 3 | 5.0 |
| 176 | Clergy | 2 | 3.3 |
| 188 | Painters, sculptors, craft-artists, and artist printmakers | 2 | 3.3 |
| 407 | Private household cleaners and servants | 2 | 3.3 |
| 426 | Guards and police, except public service | 2 | 3.3 |
| 435 | Waiters and waitresses | 2 | 3.3 |
| 486 | Groundskeepers and gardeners, except farm | 2 | 3.3 |
| 514 | Automobile body and related repairers | 2 | 3.3 |
| 889 | Laborers, except construction | 2 | 3.3 |
| | All other occupations within this sector | 22 | 36.7 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 60 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 7-7. NORA *services* sector and byssinosis: Most frequently recorded industries on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry | | Number of Deaths* | Percent |
|----------------------------------|---|--------------------------|----------------|
| CIC | Industry | | |
| 901 | General government, n.e.c. | 2 | 22.2 |
| | All other industries within this sector | 7 | 77.8 |
| | TOTAL | 9 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with byssinosis reported was 81 in these same selected states and years, and the comparable number of byssinosis deaths in the entire United States for this same time period was 125.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Services Sector

Table 7-8. NORA services sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 842 | Elementary and secondary schools | 17 | 20.2 |
| 901 | General government, n.e.c. | 8 | 9.5 |
| 722 | Services to dwellings and other buildings | 7 | 8.3 |
| 641 | Eating and drinking places | 5 | 6.0 |
| 880 | Religious organizations | 5 | 6.0 |
| 751 | Automotive repair and related services | 4 | 4.8 |
| 910 | Justice, public order, and safety | 4 | 4.8 |
| 711 | Insurance | 3 | 3.6 |
| 850 | Colleges and universities | 3 | 3.6 |
| 922 | Administration of human resources programs | 3 | 3.6 |
| | All other industries within this sector | 25 | 29.8 |
| | TOTAL | 84 | 100.0 |
| COC | Occupation | | |
| 453 | Janitors and cleaners | 15 | 17.9 |
| 019 | Managers and administrators, n.e.c. | 7 | 8.3 |
| 176 | Clergy | 5 | 6.0 |
| 156 | Teachers, elementary school | 4 | 4.8 |
| 808 | Bus drivers | 4 | 4.8 |
| 505 | Automobile mechanics | 3 | 3.6 |
| 243 | Supervisors and proprietors, sales occupations | 2 | 2.4 |
| 253 | Insurance sales occupations | 2 | 2.4 |
| 426 | Guards and police, except public service | 2 | 2.4 |
| 449 | Maids and housemen | 2 | 2.4 |
| 457 | Barbers | 2 | 2.4 |
| 575 | Electricians | 2 | 2.4 |
| 844 | Operating engineers | 2 | 2.4 |
| 889 | Laborers, except construction | 2 | 2.4 |
| | All other occupations within this sector | 27 | 32.1 |
| | Occupation not reported within this sector | 3 | 3.6 |
| | TOTAL | 84 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with unspecified and other pneumoconioses reported was 1,440 in these same selected states and years, and the comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 7-9. NORA services sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 901 | General government, n.e.c. | 105 | 14.4 |
| 842 | Elementary and secondary schools | 96 | 13.1 |
| 942 | Military | 53 | 7.3 |
| 751 | Automotive repair and related services | 51 | 7.0 |
| 910 | Justice, public order, and safety | 41 | 5.6 |
| 641 | Eating and drinking places | 37 | 5.1 |
| 880 | Religious organizations | 28 | 3.8 |
| 932 | National security and international affairs | 27 | 3.7 |
| 760 | Miscellaneous repair services | 25 | 3.4 |
| 712 | Real estate, including real estate-insurance offices | 24 | 3.3 |
| | All other industries within this sector | 244 | 33.4 |
| | TOTAL | 731 | 100.0 |
| COC | Occupation | | |
| 453 | Janitors and cleaners | 76 | 10.4 |
| 019 | Managers and administrators, n.e.c. | 50 | 6.8 |
| 905 | Military occupations | 47 | 6.4 |
| 505 | Automobile mechanics | 34 | 4.7 |
| 176 | Clergy | 26 | 3.6 |
| 575 | Electricians | 21 | 2.9 |
| 426 | Guards and police, except public service | 16 | 2.2 |
| 889 | Laborers, except construction | 16 | 2.2 |
| 036 | Inspectors and compliance officers, except construction | 15 | 2.1 |
| 156 | Teachers, elementary school | 13 | 1.8 |
| 783 | Welders and cutters | 13 | 1.8 |
| | All other occupations within this sector | 387 | 52.9 |
| | Occupation not reported within this sector | 17 | 2.3 |
| | TOTAL | 731 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Services Sector

Table 7-10. NORA services sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|------|-------------------------|------|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 593 | Insulation workers | 5 | 38.4 | 12.4 | 89.8 |
| 585 | Plumbers, pipefitters, and steamfitters | 12 | 2.6 | 1.3 | 4.5 |
| 575 | Electricians | 21 | 1.9 | 1.2 | 2.9 |
| | All other occupations within this sector | 676 | | | |
| | Occupation not reported within this sector | 17 | | | |
| | TOTAL | 731 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 7-11. NORA services sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 842 | Elementary and secondary schools | 20 | 14.8 |
| 901 | General government, n.e.c. | 13 | 9.6 |
| 850 | Colleges and universities | 8 | 5.9 |
| 910 | Justice, public order, and safety | 8 | 5.9 |
| 712 | Real estate, including real estate-insurance offices | 7 | 5.2 |
| 942 | Military | 7 | 5.2 |
| 751 | Automotive repair and related services | 6 | 4.4 |
| 641 | Eating and drinking places | 5 | 3.7 |
| 711 | Insurance | 5 | 3.7 |
| 880 | Religious organizations | 5 | 3.7 |
| | All other industries within this sector | 51 | 37.8 |
| | TOTAL | 135 | 100.0 |
| COC | Occupation | | |
| 156 | Teachers, elementary school | 13 | 9.6 |
| 019 | Managers and administrators, n.e.c. | 11 | 8.1 |
| 453 | Janitors and cleaners | 8 | 5.9 |
| 418 | Police and detectives, public service | 6 | 4.4 |
| 905 | Military occupations | 6 | 4.4 |
| 313 | Secretaries | 5 | 3.7 |
| 154 | Postsecondary teachers, subject not specified | 4 | 3.0 |
| 176 | Clergy | 4 | 3.0 |
| 379 | General office clerks | 4 | 3.0 |
| 057 | Mechanical engineers | 3 | 2.2 |
| 243 | Supervisors and proprietors, sales occupations | 3 | 2.2 |
| | All other occupations within this sector | 67 | 49.6 |
| | Occupation not reported within this sector | 1 | 0.7 |
| | TOTAL | 135 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Services Sector

Table 7-12. NORA *services* sector and malignant mesothelioma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 156 | Teachers, elementary school | 13 | 2.1 | 1.1 | 3.7 |
| | All other occupations within this sector | 121 | | | |
| | Occupation not reported within this sector | 1 | | | |
| | TOTAL | 135 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 7-13. NORA services sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 842 | Elementary and secondary schools | 2 | 16.7 |
| 850 | Colleges and universities | 2 | 16.7 |
| 942 | Military | 2 | 16.7 |
| | All other industries within this sector | 6 | 50.0 |
| | TOTAL | 12 | 100.0 |
| COC | Occupation | | |
| 905 | Military occupations | 2 | 16.7 |
| | All other occupations within this sector | 10 | 83.3 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 12 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with hypersensitivity pneumonitis reported was 122 in these same selected states and years, and the comparable number of hypersensitivity pneumonitis deaths in the entire United States for this same time period was 398.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Services Sector

Table 7-14. NORA services sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 850 | Colleges and universities | 274 | 1.3 | 1.1 | 1.4 |
| 771 | Laundry, cleaning, and garment services | 178 | 1.2 | 1.0 | 1.4 |
| 901 | General government, n.e.c. | 502 | 1.1 | 1.0 | 1.2 |
| | All other industries within this sector | 6,366 | | | |
| | TOTAL | 7,320 | | | |
| COC | Occupation | | | | |
| 803 | Supervisors, motor vehicle operators | 5 | 4.1 | 1.3 | 9.7 |
| 169 | Social scientists, n.e.c. | 7 | 2.7 | 1.1 | 5.6 |
| 744 | Textile sewing machine operators | 14 | 1.8 | 1.0 | 3.1 |
| 064 | Computer systems analysts and scientists | 22 | 1.6 | 1.0 | 2.4 |
| 154 | Postsecondary teachers, subject not specified | 62 | 1.6 | 1.2 | 2.1 |
| 666 | Dressmakers | 49 | 1.5 | 1.1 | 1.9 |
| 469 | Personal service occupations, n.e.c. | 42 | 1.4 | 1.0 | 1.9 |
| 186 | Musicians and composers | 46 | 1.4 | 1.0 | 1.9 |
| 159 | Teachers, n.e.c. | 74 | 1.3 | 1.0 | 1.6 |
| 157 | Teachers, secondary school | 87 | 1.3 | 1.0 | 1.6 |
| | All other occupations within this sector | 6,839 | | | |
| | Occupation not reported within this sector | 73 | | | |
| | TOTAL | 7,320 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit

UCL - upper confidence limit

* The total number of deaths with asthma reported was 29,703 in these same selected states and years, and the comparable number of asthma deaths in the entire United States for this same time period was 115,729.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 7-15. NORA services sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 751 | Automotive repair and related services | 627 | 1.3 | 1.2 | 1.4 |
| 641 | Eating and drinking places | 1,373 | 1.2 | 1.2 | 1.3 |
| 760 | Miscellaneous repair services | 183 | 1.2 | 1.1 | 1.4 |
| 762 | Hotels and motels | 335 | 1.2 | 1.1 | 1.3 |
| 771 | Laundry, cleaning, and garment services | 257 | 1.2 | 1.0 | 1.3 |
| 802 | Miscellaneous entertainment and recreation services | 291 | 1.2 | 1.0 | 1.3 |
| 942 | Military | 855 | 1.1 | 1.0 | 1.2 |
| | All other industries within this sector | 9,263 | | | |
| | TOTAL | 13,184 | | | |
| COC | Occupation | | | | |
| 759 | Painting and paint spraying machine operators | 14 | 2.3 | 1.3 | 3.9 |
| 207 | Licensed practical nurses | 15 | 1.9 | 1.1 | 3.1 |
| 435 | Waiters and waitresses | 419 | 1.6 | 1.5 | 1.8 |
| 579 | Painters, construction and maintenance | 26 | 1.6 | 1.0 | 2.3 |
| 747 | Pressing machine operators | 45 | 1.4 | 1.0 | 1.9 |
| 507 | Bus, truck, and stationary engine mechanics | 45 | 1.4 | 1.0 | 1.8 |
| 505 | Automobile mechanics | 414 | 1.3 | 1.1 | 1.4 |
| 889 | Laborers, except construction | 145 | 1.2 | 1.1 | 1.5 |
| 436 | Cooks | 387 | 1.1 | 1.0 | 1.2 |
| 905 | Military occupations | 745 | 1.1 | 1.0 | 1.2 |
| 453 | Janitors and cleaners | 574 | 1.1 | 1.0 | 1.2 |
| | All other occupations within this sector | 10,187 | | | |
| | Occupation not reported within this sector | 168 | | | |
| | TOTAL | 13,184 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with chronic obstructive pulmonary disease reported was 57,073 in the same selected states and year, and the comparable number of chronic obstructive pulmonary disease deaths in the entire United States for this same time period was 245,415.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Services Sector

Table 7-16. NORA services sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|----------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 791 | Miscellaneous personal services | 33 | 1.9 | 1.3 | 2.7 |
| 750 | Automotive services, except repair | 17 | 1.8 | 1.0 | 2.9 |
| 760 | Miscellaneous repair services | 35 | 1.5 | 1.1 | 2.1 |
| 762 | Hotels and motels | 79 | 1.3 | 1.0 | 1.6 |
| | All other industries within this sector | 1,746 | | | |
| | TOTAL | 1,910 | | | |
| COC | Occupation | | | | |
| 434 | Bartenders | 20 | 2.1 | 1.3 | 3.3 |
| 913 | Retired, with no other occupation reported | 11 | 2.0 | 1.0 | 3.6 |
| 747 | Pressing machine operators | 20 | 1.6 | 1.0 | 2.5 |
| 449 | Maids and housemen | 38 | 1.6 | 1.1 | 2.2 |
| 889 | Laborers, except construction | 68 | 1.3 | 1.0 | 1.6 |
| | All other occupations within this sector | 1,739 | | | |
| | Occupation not reported within this sector | 14 | | | |
| | TOTAL | 1,910 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with respiratory tuberculosis reported was 8,071 in these same selected states and years, and the comparable number of respiratory tuberculosis deaths in the entire United States for this same time period was 35,417.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 7-17. NORA services sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 801 | Bowling alleys, billiard and pool parlors | 19 | 1.8 | 1.1 | 2.8 |
| 772 | Beauty shops | 211 | 1.3 | 1.1 | 1.5 |
| 802 | Miscellaneous entertainment and recreation services | 251 | 1.2 | 1.1 | 1.4 |
| 641 | Eating and drinking places | 909 | 1.2 | 1.1 | 1.2 |
| 942 | Military | 680 | 1.1 | 1.1 | 1.2 |
| 751 | Automotive repair and related services | 452 | 1.1 | 1.0 | 1.3 |
| | All other industries within this sector | 7,158 | | | |
| | TOTAL | 9,680 | | | |
| COC | Occupation | | | | |
| 518 | Industrial machinery repairers | 12 | 2.2 | 1.1 | 3.8 |
| 459 | Attendants, amusement and recreation facilities | 48 | 1.8 | 1.3 | 2.4 |
| 456 | Supervisors, personal service occupations | 29 | 1.6 | 1.1 | 2.3 |
| 469 | Personal service occupations, n.e.c. | 43 | 1.4 | 1.0 | 1.9 |
| 435 | Waiters and waitresses | 251 | 1.4 | 1.3 | 1.6 |
| 303 | Supervisors, general office | 60 | 1.3 | 1.0 | 1.7 |
| 458 | Hairdressers and cosmetologists | 188 | 1.3 | 1.1 | 1.4 |
| 337 | Bookkeepers, accounting, and auditing clerks | 138 | 1.2 | 1.0 | 1.4 |
| 505 | Automobile mechanics | 310 | 1.2 | 1.1 | 1.3 |
| 905 | Military occupations | 590 | 1.1 | 1.1 | 1.2 |
| 453 | Janitors and cleaners | 450 | 1.1 | 1.0 | 1.2 |
| 019 | Managers and administrators, n.e.c. | 866 | 1.1 | 1.0 | 1.1 |
| | All other occupations within this sector | 6,564 | | | |
| | Occupation not reported within this sector | 131 | | | |
| | TOTAL | 9,680 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with lung cancer reported was 37,562 in these same selected states and year, and the comparable number of lung cancer deaths in the entire United States for this same time period was 162,546.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Services Sector

Table 7-18. NORA *services* sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 891 | Research, development and testing services | 15 | 2.1 | 1.2 | 3.5 |
| 700 | Banking | 43 | 1.4 | 1.0 | 1.9 |
| | All other industries within this sector | 1,084 | | | |
| | TOTAL | 1,142 | | | |
| COC | Occupation | | | | |
| 007 | Financial managers | 16 | 1.9 | 1.1 | 3.0 |
| | All other occupations within this sector | 1,107 | | | |
| | Occupation not reported within this sector | 19 | | | |
| | TOTAL | 1,142 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of other interstitial pulmonary diseases was 4,471 in these same selected states and year, and the comparable number of other interstitial pulmonary diseases deaths in the entire United States for this same time period was 18,655.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 7-19. NORA services sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 803 | Supervisors, motor vehicle operators | 10 | 2.8 | 1.3 | 5.1 |
| | All other occupations within this sector | 12,123 | | | |
| | Occupation not reported within this sector | 144 | | | |
| | TOTAL | 12,277 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with pneumonia and influenza reported was 52,295 in these same selected states and year, and the comparable number of pneumonia and influenza deaths in the entire United States for this same time period was 229,136.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Section 8

NORA Transportation, Warehousing, and Utilities (TWU) Sector

NORA Transportation, Warehousing, and Utilities Sector

Table 8-1. NORA transportation, warehousing, and utilities sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | Percent |
|---|-------------------------|----------------|
| All Pneumoconioses | 460 | 0.2 |
| Asbestosis | 287 | 0.1 |
| Coal Workers' Pneumoconiosis | 103 | 0.0 |
| Unspecified and Other Pneumoconioses | 52 | 0.0 |
| Malignant Mesothelioma (all sites)* | 51 | 0.0 |
| Silicosis | 26 | 0.0 |
| Hypersensitivity Pneumonitis | 6 | 0.0 |
| Byssinosis | 0 | 0.0 |
| All other conditions within this sector | 303,233 | 99.7 |
| TOTAL | 304,218 | 100.0 |

NORA - National Occupational Research Agenda

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-2. NORA transportation, warehousing, and utilities sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | PMR | 95% Confidence Interval | |
|---|------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Malignant Mesothelioma (all sites)* | 51 | 1.2 | 0.9 | 1.6 |
| Asbestosis | 287 | 1.1 | 1.0 | 1.2 |
| Hypersensitivity Pneumonitis | 6 | 0.7 | 0.3 | 1.5 |
| All Pneumoconioses | 460 | 0.5 | 0.5 | 0.5 |
| Unspecified and Other Pneumoconioses | 52 | 0.4 | 0.3 | 0.5 |
| Silicosis | 26 | 0.3 | 0.2 | 0.5 |
| Coal Workers' Pneumoconiosis | 103 | 0.2 | 0.2 | 0.3 |
| Byssinosis | 0 | - | - | - |
| All other conditions within this sector | 303,233 | | | |
| TOTAL | 304,218 | | | |

NORA - National Occupational Research Agenda

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-3. NORA transportation, warehousing, and utilities sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 400 | Railroads | 89 | 31.0 |
| 460 | Electric light and power | 55 | 19.2 |
| 410 | Trucking service | 46 | 16.0 |
| 420 | Water transportation | 24 | 8.4 |
| 462 | Electric and gas, and other combinations | 14 | 4.9 |
| 412 | U.S. Postal Service | 10 | 3.5 |
| 432 | Services incidental to transportation | 8 | 2.8 |
| 471 | Sanitary services | 8 | 2.8 |
| 472 | Not specified utilities | 8 | 2.8 |
| 401 | Bus service and urban transit | 7 | 2.4 |
| 461 | Gas and steam supply systems | 7 | 2.4 |
| | All other industries within this sector | 11 | 3.8 |
| | TOTAL | 287 | 100.0 |
| COC | Occupation | | |
| 804 | Truck drivers | 35 | 12.2 |
| 019 | Managers and administrators, n.e.c. | 16 | 5.6 |
| 507 | Bus, truck, and stationary engine mechanics | 15 | 5.2 |
| 633 | Supervisors, production occupations | 14 | 4.9 |
| 575 | Electricians | 13 | 4.5 |
| 889 | Laborers, except construction | 12 | 4.2 |
| 829 | Sailors and deckhands | 11 | 3.8 |
| 823 | Railroad conductors and yardmasters | 10 | 3.5 |
| 585 | Plumbers, pipefitters, and steamfitters | 9 | 3.1 |
| 516 | Heavy equipment mechanics | 7 | 2.4 |
| 577 | Electrical power installers and repairers | 7 | 2.4 |
| 643 | Boilermakers | 7 | 2.4 |
| | All other occupations within this sector | 129 | 44.9 |
| | Occupation not reported within this sector | 2 | 0.7 |
| | TOTAL | 287 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-4. NORA transportation, warehousing, and utilities sector and asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|------|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 462 | Electric and gas, and other combinations | 14 | 3.1 | 1.7 | 5.1 |
| 460 | Electric light and power | 55 | 2.7 | 2.0 | 3.5 |
| 420 | Water transportation | 24 | 2.3 | 1.5 | 3.4 |
| 400 | Railroads | 89 | 1.6 | 1.3 | 2.0 |
| | All other industries within this sector | 105 | | | |
| | TOTAL | 287 | | | |
| COC | Occupation | | | | |
| 643 | Boilermakers | 7 | 18.4 | 7.4 | 38.0 |
| 058 | Marine and naval architects | 5 | 10.0 | 3.2 | 23.4 |
| 585 | Plumbers, pipefitters, and steamfitters | 9 | 8.1 | 3.7 | 15.3 |
| 575 | Electricians | 13 | 4.8 | 2.5 | 8.2 |
| 829 | Sailors and deckhands | 11 | 4.2 | 2.1 | 7.6 |
| 549 | Not specified mechanics and repairers | 5 | 4.1 | 1.3 | 9.5 |
| 507 | Bus, truck, and stationary engine mechanics | 15 | 3.2 | 1.8 | 5.3 |
| 633 | Supervisors, production occupations | 14 | 2.9 | 1.6 | 4.8 |
| | All other occupations within this sector | 206 | | | |
| | Occupation not reported within this sector | 2 | | | |
| | TOTAL | 287 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-5. NORA transportation, warehousing, and utilities sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 400 | Railroads | 39 | 37.9 |
| 410 | Trucking service | 29 | 28.2 |
| 412 | U.S. Postal Service | 7 | 6.8 |
| 461 | Gas and steam supply systems | 7 | 6.8 |
| 460 | Electric light and power | 6 | 5.8 |
| 471 | Sanitary services | 5 | 4.9 |
| 402 | Taxicab service | 3 | 2.9 |
| | All other industries within this sector | 7 | 6.8 |
| | TOTAL | 103 | 100.0 |
| COC | Occupation | | |
| 804 | Truck drivers | 29 | 28.2 |
| 889 | Laborers, except construction | 16 | 15.5 |
| 019 | Managers and administrators, n.e.c. | 6 | 5.8 |
| 823 | Railroad conductors and yardmasters | 4 | 3.9 |
| 355 | Mail carriers, postal service | 3 | 2.9 |
| 453 | Janitors and cleaners | 3 | 2.9 |
| 516 | Heavy equipment mechanics | 3 | 2.9 |
| 783 | Welders and cutters | 3 | 2.9 |
| 824 | Locomotive operating occupations | 3 | 2.9 |
| 843 | Supervisors, material moving equipment operators | 3 | 2.9 |
| | All other occupations within this sector | 29 | 28.2 |
| | Occupation not reported within this sector | 1 | 1.0 |
| | TOTAL | 103 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with coal workers' pneumoconiosis reported was 4,893 in these same selected states and years, and the comparable number of coal workers' pneumoconiosis deaths in the entire United States for this same time period was 15,036.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-6. NORA transportation, warehousing, and utilities sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 410 | Trucking service | 9 | 34.6 |
| 400 | Railroads | 6 | 23.1 |
| 412 | U.S. Postal Service | 4 | 15.4 |
| 461 | Gas and steam supply systems | 2 | 7.7 |
| 470 | Water supply and irrigation | 2 | 7.7 |
| | All other industries within this sector | 3 | 11.5 |
| | TOTAL | 26 | 100.0 |
| COC | Occupation | | |
| 804 | Truck drivers | 8 | 30.8 |
| 889 | Laborers, except construction | 2 | 7.7 |
| | All other occupations within this sector | 15 | 57.7 |
| | Occupation not reported within this sector | 1 | 3.8 |
| | TOTAL | 26 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-7. NORA transportation, warehousing, and utilities sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 400 | Railroads | 17 | 32.7 |
| 410 | Trucking service | 11 | 21.2 |
| 460 | Electric light and power | 6 | 11.5 |
| 470 | Water supply and irrigation | 4 | 7.7 |
| 471 | Sanitary services | 4 | 7.7 |
| 412 | U.S. Postal Service | 2 | 3.8 |
| 420 | Water transportation | 2 | 3.8 |
| 432 | Services incidental to transportation | 2 | 3.8 |
| | All other industries within this sector | 4 | 7.7 |
| | TOTAL | 52 | 100.0 |
| COC | Occupation | | |
| 804 | Truck drivers | 8 | 15.4 |
| 889 | Laborers, except construction | 8 | 15.4 |
| 019 | Managers and administrators, n.e.c. | 4 | 7.7 |
| 825 | Railroad brake, signal, and switch operators | 3 | 5.8 |
| 844 | Operating engineers | 3 | 5.8 |
| 875 | Garbage collectors | 3 | 5.8 |
| 355 | Mail carriers, postal service | 2 | 3.8 |
| 516 | Heavy equipment mechanics | 2 | 3.8 |
| 823 | Railroad conductors and yardmasters | 2 | 3.8 |
| | All other occupations within this sector | 17 | 32.7 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 52 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with unspecified and other pneumoconioses reported was 1,440 in these same selected states and years, and the comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-8. NORA transportation, warehousing, and utilities sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 400 | Railroads | 146 | 31.7 |
| 410 | Trucking service | 92 | 20.0 |
| 460 | Electric light and power | 68 | 14.8 |
| 420 | Water transportation | 27 | 5.9 |
| 412 | U.S. Postal Service | 23 | 5.0 |
| 471 | Sanitary services | 18 | 3.9 |
| 461 | Gas and steam supply systems | 17 | 3.7 |
| 462 | Electric and gas, and other combinations | 15 | 3.3 |
| 432 | Services incidental to transportation | 10 | 2.2 |
| 472 | Not specified utilities | 10 | 2.2 |
| | All other industries within this sector | 34 | 7.4 |
| | TOTAL | 460 | 100.0 |
| COC | Occupation | | |
| 804 | Truck drivers | 77 | 16.7 |
| 889 | Laborers, except construction | 37 | 8.0 |
| 019 | Managers and administrators, n.e.c. | 27 | 5.9 |
| 507 | Bus, truck, and stationary engine mechanics | 18 | 3.9 |
| 633 | Supervisors, production occupations | 16 | 3.5 |
| 823 | Railroad conductors and yardmasters | 15 | 3.3 |
| 575 | Electricians | 14 | 3.0 |
| 355 | Mail carriers, postal service | 12 | 2.6 |
| 516 | Heavy equipment mechanics | 12 | 2.6 |
| 453 | Janitors and cleaners | 11 | 2.4 |
| 824 | Locomotive operating occupations | 11 | 2.4 |
| 829 | Sailors and deckhands | 11 | 2.4 |
| | All other occupations within this sector | 195 | 42.4 |
| | Occupation not reported within this sector | 4 | 0.9 |
| | TOTAL | 460 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-9. NORA transportation, warehousing, and utilities sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 643 | Boilermakers | 7 | 4.6 | 1.9 | 9.6 |
| 585 | Plumbers, pipefitters, and steamfitters | 10 | 2.5 | 1.2 | 4.6 |
| | All other occupations within this sector | 439 | | | |
| | Occupation not reported within this sector | 4 | | | |
| | TOTAL | 460 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-10. NORA transportation, warehousing, and utilities sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 460 | Electric light and power | 10 | 19.6 |
| 400 | Railroads | 9 | 17.6 |
| 410 | Trucking service | 8 | 15.7 |
| 412 | U.S. Postal Service | 6 | 11.8 |
| 461 | Gas and steam supply systems | 4 | 7.8 |
| 462 | Electric and gas, and other combinations | 4 | 7.8 |
| 432 | Services incidental to transportation | 2 | 3.9 |
| 470 | Water supply and irrigation | 2 | 3.9 |
| | All other industries within this sector | 6 | 11.8 |
| | TOTAL | 51 | 100.0 |
| COC | Occupation | | |
| 804 | Truck drivers | 5 | 9.8 |
| 019 | Managers and administrators, n.e.c. | 4 | 7.8 |
| 633 | Supervisors, production occupations | 4 | 7.8 |
| 823 | Railroad conductors and yardmasters | 3 | 5.9 |
| 053 | Civil engineers | 2 | 3.9 |
| 318 | Transportation ticket and reservation agents | 2 | 3.9 |
| 453 | Janitors and cleaners | 2 | 3.9 |
| 503 | Supervisors, mechanics and repairers | 2 | 3.9 |
| 549 | Not specified mechanics and repairers | 2 | 3.9 |
| 695 | Power plant operators | 2 | 3.9 |
| | All other occupations within this sector | 22 | 43.1 |
| | Occupation not reported within this sector | 1 | 2.0 |
| | TOTAL | 51 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-11. NORA transportation, warehousing, and utilities sector and malignant mesothelioma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry | | Number of Deaths* | PMR | 95% Confidence Interval | |
|---------------------------|---|----------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 460 | Electric light and power | 10 | 3.1 | 1.5 | 5.7 |
| | All other industries within this sector | 41 | | | |
| | TOTAL | 51 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-12. NORA transportation, warehousing, and utilities sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 410 | Trucking service | 4 | 66.7 |
| | All other industries within this sector | 2 | 33.3 |
| | TOTAL | 6 | 100.0 |
| COC | Occupation | | |
| 804 | Truck drivers | 3 | 50.0 |
| | All other occupations within this sector | 3 | 50.0 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 6 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with hypersensitivity pneumonitis reported was 122 in these same selected states and years, and the comparable number of hypersensitivity pneumonitis deaths in the entire United States for this same time period was 398.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-13. NORA transportation, warehousing, and utilities sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|----------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 208 | Health technologists and technicians, n.e.c. | 5 | 3.4 | 1.1 | 7.9 |
| | All other occupations within this sector | 1,090 | | | |
| | Occupation not reported within this sector | 17 | | | |
| | TOTAL | 1,112 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with asthma reported was 29,703 in these same selected states and years, and the comparable number of asthma deaths in the entire United States for this same time period was 115,729.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-14. NORA transportation, warehousing, and utilities sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 410 | Trucking service | 1,281 | 1.3 | 1.2 | 1.4 |
| | All other industries within this sector | 2,358 | | | |
| | TOTAL | 3,639 | | | |
| COC | Occupation | | | | |
| 804 | Truck drivers | 1,063 | 1.3 | 1.3 | 1.4 |
| 507 | Bus, truck, and stationary engine mechanics | 72 | 1.3 | 1.0 | 1.6 |
| | All other occupations within this sector | 2,450 | | | |
| | Occupation not reported within this sector | 54 | | | |
| | TOTAL | 3,639 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with chronic obstructive pulmonary disease reported was 57,073 in the same selected states and year, and the comparable number of chronic obstructive pulmonary disease deaths in the entire United States for this same time period was 245,415.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-15. NORA transportation, warehousing, and utilities sector and respiratory tuberculosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 829 | Sailors and deckhands | 11 | 2.5 | 1.2 | 4.4 |
| 875 | Garbage collectors | 25 | 1.8 | 1.2 | 2.6 |
| | All other occupations within this sector | 414 | | | |
| | Occupation not reported within this sector | 6 | | | |
| | TOTAL | 456 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with respiratory tuberculosis reported was 8,071 in these same selected states and years, and the comparable number of respiratory tuberculosis deaths in the entire United States for this same time period was 35,417.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-16. NORA transportation, warehousing, and utilities sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 472 | Not specified utilities | 63 | 1.3 | 1.0 | 1.7 |
| 410 | Trucking service | 1,004 | 1.2 | 1.1 | 1.3 |
| 400 | Railroads | 385 | 1.1 | 1.0 | 1.2 |
| | All other industries within this sector | 1,246 | | | |
| | TOTAL | 2,698 | | | |
| COC | Occupation | | | | |
| 235 | Technicians, n.e.c. | 6 | 3.4 | 1.3 | 7.4 |
| 339 | Billing clerks | 5 | 3.2 | 1.0 | 7.4 |
| 823 | Railroad conductors and yardmasters | 58 | 1.4 | 1.1 | 1.8 |
| 804 | Truck drivers | 840 | 1.2 | 1.1 | 1.3 |
| | All other occupations within this sector | 1,748 | | | |
| | Occupation not reported within this sector | 41 | | | |
| | TOTAL | 2,698 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with lung cancer reported was 37,562 in these same selected states and year, and the comparable number of lung cancer deaths in the entire United States for this same time period was 162,546.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-17. NORA transportation, warehousing, and utilities sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 460 | Electric light and power | 32 | 1.7 | 1.1 | 2.3 |
| | All other industries within this sector | 214 | | | |
| | TOTAL | 246 | | | |
| COC | Occupation | | | | |
| 508 | Aircraft engine mechanics | 5 | 3.7 | 1.2 | 8.7 |
| | All other occupations within this sector | 230 | | | |
| | Occupation not reported within this sector | 11 | | | |
| | TOTAL | 246 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of other interstitial pulmonary diseases was 4,471 in these same selected states and year, and the comparable number of other interstitial pulmonary diseases deaths in the entire United States for this same time period was 18,655.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Transportation, Warehousing, and Utilities Sector

Table 8-18. NORA transportation, warehousing, and utilities sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 466 | Baggage porters and bellhops | 14 | 1.9 | 1.0 | 3.2 |
| | All other occupations within this sector | 2,565 | | | |
| | Occupation not reported within this sector | 42 | | | |
| | TOTAL | 2,621 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with pneumonia and influenza reported was 52,295 in these same selected states and year, and the comparable number of pneumonia and influenza deaths in the entire United States for this same time period was 229,136.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Section 9

NORA Wholesale and Retail Trade (TRD) Sector

Table 9-1. NORA *wholesale and retail trade* sector: Number and percent of deaths with selected work-related respiratory condition, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | Percent |
|---|-------------------------|----------------|
| All Pneumoconioses | 300 | 0.1 |
| Asbestosis | 166 | 0.0 |
| Coal Workers' Pneumoconiosis | 70 | 0.0 |
| Malignant Mesothelioma (all sites)* | 44 | 0.0 |
| Silicosis | 32 | 0.0 |
| Unspecified and Other Pneumoconioses | 32 | 0.0 |
| Hypersensitivity Pneumonitis | 8 | 0.0 |
| Byssinosis | 1 | 0.0 |
| All other conditions within this sector | 467,338 | 99.9 |
| TOTAL | 467,991 | 100.0 |

NORA - National Occupational Research Agenda

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Wholesale and Retail Trade Sector

Table 9-2. NORA wholesale and retail trade sector: Proportionate mortality ratio (PMR) adjusted for age, sex, and race for selected work-related respiratory conditions, U.S. residents age 15 and over, selected states and years, 1990–1999

| Condition | Number of Deaths | PMR | 95% Confidence Interval | |
|---|------------------|-----|-------------------------|-----|
| | | | LCL | UCL |
| Malignant Mesothelioma (all sites)* | 44 | 0.9 | 0.6 | 1.2 |
| Hypersensitivity Pneumonitis | 8 | 0.7 | 0.3 | 1.4 |
| Asbestosis | 166 | 0.6 | 0.5 | 0.7 |
| Silicosis | 32 | 0.4 | 0.3 | 0.5 |
| All Pneumoconioses | 300 | 0.3 | 0.3 | 0.3 |
| Unspecified and Other Pneumoconioses | 32 | 0.2 | 0.2 | 0.3 |
| Byssinosis | 1 | - | - | - |
| Coal Workers' Pneumoconiosis | 70 | 0.1 | 0.1 | 0.2 |
| All other conditions within this sector | 467,338 | | | |
| TOTAL | 467,991 | | | |

NORA - National Occupational Research Agenda

- indicates no PMR was calculated because there were fewer than 5 deaths.

* data for malignant mesothelioma are for 1999 only.

NOTE: The sum of the individual and all other condition death totals may be greater than the total number of deaths in the selected states and years because some decedents have more than one condition listed on their death certificates. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 9-3. NORA wholesale and retail trade sector and asbestosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 502 | Lumber and construction materials | 20 | 12.0 |
| 601 | Grocery stores | 14 | 8.4 |
| 580 | Lumber and building material retailing | 11 | 6.6 |
| 521 | Hardware, plumbing and heating supplies | 10 | 6.0 |
| 612 | Motor vehicle dealers | 10 | 6.0 |
| 550 | Groceries and related products | 9 | 5.4 |
| 621 | Gasoline service stations | 7 | 4.2 |
| 632 | Furniture and home furnishings stores | 6 | 3.6 |
| 640 | Household appliances, TV, and radio stores | 6 | 3.6 |
| 672 | Fuel dealers | 6 | 3.6 |
| 691 | Not specified retail trade | 6 | 3.6 |
| | All other industries within this sector | 61 | 36.7 |
| | TOTAL | 166 | 100.0 |
| COC | Occupation | | |
| 243 | Supervisors and proprietors, sales occupations | 50 | 30.1 |
| 804 | Truck drivers | 11 | 6.6 |
| 889 | Laborers, except construction | 11 | 6.6 |
| 534 | Heating, air conditioning, and refrigeration mechanics | 6 | 3.6 |
| 274 | Sales workers, other commodities | 5 | 3.0 |
| 637 | Machinists | 5 | 3.0 |
| 259 | Sales representatives, mining, manufacturing, and wholesale | 4 | 2.4 |
| 268 | Sales workers, hardware and building supplies | 4 | 2.4 |
| 453 | Janitors and cleaners | 4 | 2.4 |
| 777 | Miscellaneous machine operators, n.e.c. | 4 | 2.4 |
| | All other occupations within this sector | 61 | 36.7 |
| | Occupation not reported within this sector | 1 | 0.6 |
| | TOTAL | 166 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Wholesale and Retail Trade Sector

Table 9-4. NORA wholesale and retail trade sector and asbestosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 502 | Lumber and construction materials | 20 | 7.0 | 4.2 | 10.8 |
| | All other industries within this sector | 146 | | | |
| | TOTAL | 166 | | | |
| COC | Occupation | | | | |
| 534 | Heating, air conditioning, and refrigeration mechanics | 6 | 7.5 | 2.8 | 16.4 |
| 637 | Machinists | 5 | 6.9 | 2.2 | 16.0 |
| | All other occupations within this sector | 154 | | | |
| | Occupation not reported within this sector | 1 | | | |
| | TOTAL | 166 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with asbestosis reported was 2,859 in these same selected states and years, and the comparable number of asbestosis deaths in the entire United States for this same time period was 10,914.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 9-5. NORA wholesale and retail trade sector and coal workers' pneumoconiosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 601 | Grocery stores | 11 | 15.7 |
| 691 | Not specified retail trade | 7 | 10.0 |
| 612 | Motor vehicle dealers | 6 | 8.6 |
| 620 | Auto and home supply stores | 6 | 8.6 |
| 621 | Gasoline service stations | 5 | 7.1 |
| 672 | Fuel dealers | 5 | 7.1 |
| 580 | Lumber and building material retailing | 4 | 5.7 |
| 600 | Miscellaneous general merchandise stores | 4 | 5.7 |
| 550 | Groceries and related products | 2 | 2.9 |
| 581 | Hardware stores | 2 | 2.9 |
| 640 | Household appliances, TV, and radio stores | 2 | 2.9 |
| | All other industries within this sector | 16 | 22.9 |
| | TOTAL | 70 | 100.0 |
| COC | Occupation | | |
| 243 | Supervisors and proprietors, sales occupations | 32 | 45.7 |
| 889 | Laborers, except construction | 8 | 11.4 |
| 804 | Truck drivers | 3 | 4.3 |
| 263 | Sales workers, motor vehicles and boats | 2 | 2.9 |
| 269 | Sales workers, parts | 2 | 2.9 |
| 274 | Sales workers, other commodities | 2 | 2.9 |
| 505 | Automobile mechanics | 2 | 2.9 |
| 844 | Operating engineers | 2 | 2.9 |
| | All other occupations within this sector | 15 | 21.4 |
| | Occupation not reported within this sector | 2 | 2.9 |
| | TOTAL | 70 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with coal workers' pneumoconiosis reported was 4,893 in these same selected states and years, and the comparable number of coal workers' pneumoconiosis deaths in the entire United States for this same time period was 15,036.
 NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Wholesale and Retail Trade Sector

Table 9-6. NORA wholesale and retail trade sector and silicosis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 682 | Miscellaneous retail stores | 7 | 21.9 |
| 601 | Grocery stores | 5 | 15.6 |
| 580 | Lumber and building material retailing | 3 | 9.4 |
| 502 | Lumber and construction materials | 2 | 6.3 |
| 521 | Hardware, plumbing and heating supplies | 2 | 6.3 |
| 620 | Auto and home supply stores | 2 | 6.3 |
| 621 | Gasoline service stations | 2 | 6.3 |
| 691 | Not specified retail trade | 2 | 6.3 |
| | All other industries within this sector | 7 | 21.9 |
| | TOTAL | 32 | 100.0 |
| COC | Occupation | | |
| 243 | Supervisors and proprietors, sales occupations | 16 | 50.0 |
| 804 | Truck drivers | 3 | 9.4 |
| 019 | Managers and administrators, n.e.c. | 2 | 6.3 |
| 675 | Hand molders and shapers, except jewelers | 2 | 6.3 |
| 889 | Laborers, except construction | 2 | 6.3 |
| | All other occupations within this sector | 7 | 21.9 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 32 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 9-7. NORA *wholesale and retail trade* sector and silicosis: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry | | Number of Deaths* | PMR | 95% Confidence Interval | |
|----------------------------------|---|------------------------------|------------|--------------------------------|------------|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 682 | Miscellaneous retail stores | 7 | 3.2 | 1.3 | 6.5 |
| | All other industries within this sector | 25 | | | |
| | TOTAL | 32 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with silicosis reported was 881 in these same selected states and years, and the comparable number of silicosis deaths in the entire United States for this same time period was 2,407.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Wholesale and Retail Trade Sector

Table 9-8. NORA wholesale and retail trade sector and unspecified and other pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 601 | Grocery stores | 5 | 15.6 |
| 612 | Motor vehicle dealers | 5 | 15.6 |
| 580 | Lumber and building material retailing | 3 | 9.4 |
| 591 | Department stores | 3 | 9.4 |
| 621 | Gasoline service stations | 3 | 9.4 |
| 672 | Fuel dealers | 3 | 9.4 |
| 530 | Machinery, equipment, and supplies | 2 | 6.3 |
| 640 | Household appliances, TV, and radio stores | 2 | 6.3 |
| | All other industries within this sector | 6 | 18.8 |
| | TOTAL | 32 | 100.0 |
| COC | Occupation | | |
| 243 | Supervisors and proprietors, sales occupations | 11 | 34.4 |
| 686 | Butchers and meat cutters | 3 | 9.4 |
| 019 | Managers and administrators, n.e.c. | 2 | 6.3 |
| 268 | Sales workers, hardware and building supplies | 2 | 6.3 |
| 274 | Sales workers, other commodities | 2 | 6.3 |
| | All other occupations within this sector | 12 | 37.5 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 32 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with unspecified and other pneumoconioses reported was 1,440 in these same selected states and years, and the comparable number of unspecified and other pneumoconioses deaths in the entire United States for this same time period was 3,384.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 9-9. NORA wholesale and retail trade sector and all pneumoconioses: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 601 | Grocery stores | 36 | 12.0 |
| 502 | Lumber and construction materials | 23 | 7.7 |
| 580 | Lumber and building material retailing | 21 | 7.0 |
| 612 | Motor vehicle dealers | 21 | 7.0 |
| 621 | Gasoline service stations | 16 | 5.3 |
| 691 | Not specified retail trade | 16 | 5.3 |
| 672 | Fuel dealers | 15 | 5.0 |
| 521 | Hardware, plumbing and heating supplies | 14 | 4.7 |
| 550 | Groceries and related products | 12 | 4.0 |
| 620 | Auto and home supply stores | 11 | 3.7 |
| | All other industries within this sector | 115 | 38.3 |
| | TOTAL | 300 | 100.0 |
| COC | Occupation | | |
| 243 | Supervisors and proprietors, sales occupations | 108 | 36.0 |
| 889 | Laborers, except construction | 22 | 7.3 |
| 804 | Truck drivers | 17 | 5.7 |
| 274 | Sales workers, other commodities | 10 | 3.3 |
| 019 | Managers and administrators, n.e.c. | 7 | 2.3 |
| 268 | Sales workers, hardware and building supplies | 7 | 2.3 |
| 453 | Janitors and cleaners | 7 | 2.3 |
| 686 | Butchers and meat cutters | 7 | 2.3 |
| 259 | Sales representatives, mining, manufacturing, and wholesale | 6 | 2.0 |
| 534 | Heating, air conditioning, and refrigeration mechanics | 6 | 2.0 |
| 637 | Machinists | 6 | 2.0 |
| | All other occupations within this sector | 94 | 31.3 |
| | Occupation not reported within this sector | 3 | 1.0 |
| | TOTAL | 300 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Wholesale and Retail Trade Sector

Table 9-10. NORA *wholesale and retail trade* sector and all pneumoconioses: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry | | Number of Deaths* | PMR | 95% Confidence Interval | |
|---------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 502 | Lumber and construction materials | 23 | 2.3 | 1.4 | 3.4 |
| | All other industries within this sector | 277 | | | |
| | TOTAL | 300 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with all pneumoconioses reported was 10,014 in these same selected states and years, and the comparable number of all pneumoconioses deaths in the entire United States for this same time period was 31,455.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 9-11. NORA wholesale and retail trade sector and malignant mesothelioma: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|---|-------------------|--------------|
| CIC | Industry | | |
| 691 | Not specified retail trade | 6 | 13.6 |
| 530 | Machinery, equipment, and supplies | 4 | 9.1 |
| 682 | Miscellaneous retail stores | 4 | 9.1 |
| 521 | Hardware, plumbing, and heating supplies | 3 | 6.8 |
| 601 | Grocery stores | 3 | 6.8 |
| 611 | Food stores, n.e.c. | 3 | 6.8 |
| 531 | Scrap and waste materials | 2 | 4.5 |
| 550 | Groceries and related products | 2 | 4.5 |
| 580 | Lumber and building material retailing | 2 | 4.5 |
| 591 | Department stores | 2 | 4.5 |
| 642 | Drug stores | 2 | 4.5 |
| 672 | Fuel dealers | 2 | 4.5 |
| | All other industries within this sector | 9 | 20.5 |
| | TOTAL | 44 | 100.0 |
| COC | Occupation | | |
| 243 | Supervisors and proprietors, sales occupations | 12 | 27.3 |
| 274 | Sales workers, other commodities | 6 | 13.6 |
| 019 | Managers and administrators, n.e.c. | 4 | 9.1 |
| 259 | Sales representatives, mining, manufacturing, and wholesale | 3 | 6.8 |
| 057 | Mechanical engineers | 2 | 4.5 |
| 804 | Truck drivers | 2 | 4.5 |
| | All other occupations within this sector | 15 | 34.1 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 44 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified
 * The total number of deaths with malignant mesothelioma reported was 541 in these same selected states and year, and the comparable number of malignant mesothelioma deaths in the entire United States for this same time period was 2,484.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Wholesale and Retail Trade Sector

Table 9-12. NORA *wholesale and retail trade* sector and hypersensitivity pneumonitis: Most frequently recorded industries and occupations on death certificate, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | Percent |
|--------------------------------------|--|-------------------|--------------|
| CIC | Industry | | |
| 630 | Apparel and accessory stores, except shoe | 3 | 37.5 |
| 601 | Grocery stores | 2 | 25 |
| | All other industries within this sector | 3 | 37.5 |
| | TOTAL | 8 | 100.0 |
| COC | Occupation | | |
| 243 | Supervisors and proprietors, sales occupations | 2 | 25.0 |
| | All other occupations within this sector | 6 | 75.0 |
| | Occupation not reported within this sector | 0 | 0.0 |
| | TOTAL | 8 | 100.0 |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code n.e.c. - not elsewhere classified

* The total number of deaths with hypersensitivity pneumonitis reported was 122 in these same selected states and years, and the comparable number of hypersensitivity pneumonitis deaths in the entire United States for this same time period was 398.

NOTE: Percentages may not total to 100% due to rounding. See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 9-13. NORA wholesale and retail trade sector and asthma: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states and years, 1990–1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 642 | Drug stores | 85 | 1.3 | 1.1 | 1.7 |
| | All other industries within this sector | 2,052 | | | |
| | TOTAL | 2,137 | | | |
| COC | Occupation | | | | |
| 426 | Guards and police, except public service | 11 | 2.1 | 1.1 | 3.8 |
| | All other occupations within this sector | 2,109 | | | |
| | Occupation not reported within this sector | 17 | | | |
| | TOTAL | 2,137 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with asthma reported was 29,703 in these same selected states and years, and the comparable number of asthma deaths in the entire United States for this same time period was 115,729.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Wholesale and Retail Trade Sector

Table 9-14. NORA wholesale and retail trade sector and chronic obstructive pulmonary disease: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 744 | Textile sewing machine operators | 7 | 3.0 | 1.2 | 6.2 |
| 567 | Carpenters | 18 | 2.4 | 1.4 | 3.7 |
| 439 | Kitchen workers, food preparation | 12 | 1.9 | 1.0 | 3.4 |
| 888 | Hand packers and packagers | 27 | 1.6 | 1.0 | 2.3 |
| 885 | Garage and service station related occupations | 38 | 1.6 | 1.1 | 2.1 |
| 889 | Laborers, except construction | 129 | 1.4 | 1.2 | 1.7 |
| 313 | Secretaries | 86 | 1.3 | 1.1 | 1.6 |
| 686 | Butchers and meat cutters | 106 | 1.3 | 1.1 | 1.6 |
| | All other occupations within this sector | 4,181 | | | |
| | Occupation not reported within this sector | 44 | | | |
| | TOTAL | 4,648 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with chronic obstructive pulmonary disease reported was 57,073 in the same selected states and year, and the comparable number of chronic obstructive pulmonary disease deaths in the entire United States for this same time period was 245,415.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 9-15. NORA *wholesale and retail trade* sector and lung cancer: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by industry and occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Industry/Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|--------------------------------------|---|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| CIC | Industry | | | | |
| 682 | Miscellaneous retail stores | 142 | 1.2 | 1.0 | 1.4 |
| | All other industries within this sector | 3,166 | | | |
| | TOTAL | 3,308 | | | |
| COC | Occupation | | | | |
| 547 | Specified mechanics and repairers, n.e.c. | 11 | 2.3 | 1.2 | 4.1 |
| 888 | Hand packers and packagers | 21 | 2.0 | 1.3 | 3.1 |
| 029 | Buyers, wholesale and retail trade except farm products | 38 | 1.6 | 1.1 | 2.1 |
| | All other occupations within this sector | 3,205 | | | |
| | Occupation not reported within this sector | 33 | | | |
| | TOTAL | 3,308 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code

n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with lung cancer reported was 37,562 in these same selected states and year, and the comparable number of lung cancer deaths in the entire United States for this same time period was 162,546.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

NORA Wholesale and Retail Trade Sector

Table 9-16. NORA wholesale and retail trade sector and other interstitial pulmonary diseases: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 453 | Janitors and cleaners | 7 | 2.8 | 1.1 | 5.8 |
| | All other occupations within this sector | 367 | | | |
| | Occupation not reported within this sector | 5 | | | |
| | TOTAL | 379 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with other interstitial pulmonary diseases reported was 4,471 in these same selected states and year, and the comparable number of other interstitial pulmonary diseases deaths in the entire United States for this same time period was 18,655.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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

Table 9-17. NORA *wholesale and retail trade* sector and pneumonia and influenza: Proportionate mortality ratio (PMR) adjusted for age, sex, and race by occupation, U.S. residents age 15 and over, selected states, 1999

| Bureau of Census Occupation | | Number of Deaths* | PMR | 95% Confidence Interval | |
|-----------------------------|--|-------------------|-----|-------------------------|-----|
| | | | | LCL | UCL |
| COC | Occupation | | | | |
| 338 | Payroll and timekeeping clerks | 8 | 2.4 | 1.0 | 4.7 |
| | All other occupations within this sector | 4,092 | | | |
| | Occupation not reported within this sector | 48 | | | |
| | TOTAL | 4,148 | | | |

NORA - National Occupational Research Agenda CIC - Census Industry Code COC - Census Occupation Code
n.e.c. - not elsewhere classified LCL - lower confidence limit UCL - upper confidence limit

* The total number of deaths with pneumonia and influenza reported was 52,295 in these same selected states and year, and the comparable number of pneumonia and influenza deaths in the entire United States for this same time period was 229,136.

NOTE: See selected limitations for general cautions regarding inferences based on small numbers of deaths, and see appendices for source description, methods, ICD codes, industry and occupation codes, industrial sector groupings, and list of selected states and years.

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