

Census of
Fatal Occupational Injuries and Illnesses
Illinois, 2004

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FATAL OCCUPATIONAL INJURIES – 2004

Major Findings for the State of Illinois

- There were 208 injury-related occupational fatalities recorded in 2004 in Illinois. This represents an increase over the previous year's total of 200. A majority of these fatalities were wage and salaried workers (70.2 percent) and males (91.8 percent).
- The industries with the greatest percentage of injury-related fatalities in 2004 were construction (19.2 percent); transportation and warehousing (16.3 percent); and agriculture, forestry, fishing and hunting (15.4 percent).
- The occupations with the greatest percentage of injury-related fatalities were transportation and material moving (24.5 percent); management, which includes farm owners and operators (19.2 percent); and construction and extraction (15.9 percent).
- For all industries, transportation incidents were the leading cause of death (39.9 percent), followed by assaults and violent acts (19.7 percent), contact with objects or equipment (15.9 percent) and falls (13.9 percent). Transportation incidents were the leading cause of fatalities in the following industries: transportation and warehousing (67.6 percent) and agriculture, forestry, fishing and hunting (59.4 percent).
- Sixty-two of the state's 102 counties reported at least one fatality in 2004. Forty-four of the counties reported between one and three deaths, while 11 reported four or more deaths. Cook County, the state's most populous, reported 59 fatalities and accounted for 28.4 percent of the state total.

INTRODUCTION

As a participating partner, the Illinois Department of Public Health, Division of Epidemiologic Studies, began implementing the U.S. Department of Labor's, Bureau of Labor Statistics (BLS), Census of Fatal Occupational Injuries (CFOI), in Illinois, in 1993. The purpose of this census is to monitor, with verification, all fatal workplace injuries by collecting information on the circumstances of each fatality and on the characteristics of each decedent. This report presents data collected by Illinois' CFOI for calendar year 2004.

METHODS

Industry and occupation classifications: Beginning with the 2003 reference year, CFOI began using the 2002 North American Industry Classification System (NAICS) for industries and the Standard Occupational Classification (SOC) system for occupation. Prior to 2003, the program used the Standard Industrial Classification (SIC) system and the Bureau of the Census occupational classification system. Because of the substantial differences between the current and previous coding systems, the results by industry and occupation in 2003 constitute a break in series, and users are advised against making comparisons across 2003.

Fatal Occupational Injuries

Data were obtained from multiple source documents. These documents included coroner and medical examiner reports, death certificates, National Transportation Safety Board reports, news media reports, Mine Safety and Health Administration reports, motor vehicle accident reports, Occupational Safety and Health Administration (OSHA) reports,

police reports, workers' compensation reports and any other source that may substantiate a case.

In 2004, a total of 682 source documents were used to ensure the accuracy of the 208 injury-related occupational fatalities contained in the system (Table 1). Of the various types of documents, death certificates were used to substantiate 97.1 percent of the cases followed by news media reports (74.5 percent), OSHA 36 reports (35.1 percent), OSHA 01 reports (34.6 percent) and OSHA 170 reports (27.9 percent) (Table 1).

For verification purposes, CFOI requires at least two sources be used. These sources are matched using the decedent's name, place of employment, time and date of fatality, and other identifiers that may prevent duplication. In a few cases, verification is done using one document source and a follow-up questionnaire to an informant or employer. Fatalities identified from only one source document are reviewed by the Bureau of Labor Statistics (BLS), in consultation with the state, to determine if the information is sufficient to warrant entry into the census. If a fatality does not meet BLS requirements, it is considered out of scope and is not entered into the system.

The definition of an in-scope case differs for injury-related fatalities and illness-related fatalities. For injury-related fatalities, the incident must have taken place in Illinois, must have occurred during the calendar year 2004 and must be work-related according to CFOI criteria. For illness-related fatalities, the death must have taken place in Illinois, must have occurred in 2004, and either the illness causing the fatality must be work-related according to CFOI criteria or the illness causing the fatality must have occurred while the decedent was at work.

To meet CFOI criteria, an event or exposure resulting in a fatality via injury or illness must have occurred on the employer's premises while the person was there to work, or off the employer's premises while the person was working, or the event or exposure causing the fatality was related to the person's work or status as an employee. Work is defined as duties, activities or tasks that produce a product or result; that are done in exchange for money, goods, services, profit or benefit; and that are legal activities in the United States.

In the case of a decedent being stricken by a heart attack, the fatality is captured in the registry and classified as an illness. Because there are many factors that contribute to a heart attack, often making it difficult to establish a relationship to the workplace, heart attacks are covered separately in this report.

Fatal Occupational Illnesses

The census also attempts to monitor deaths linked to occupational illnesses. Surveillance of these deaths is gathered by abstracting death certificates, OSHA reports and workers' compensation claims. No follow-up questionnaire or secondary source document is necessary before an illness-related fatality is entered into the census, because previous scientific research has already determined an association between the industry and occupation and the illness of the decedent. The census screens occupations and industries associated with cancer of the biliary tract, bladder, brain, colon, kidney, larynx, liver, lungs, nasal sinuses, nasal cavity, oral cavity and pharynx, pancreas, prostate, and skin; and with leukemia, acute myeloid leukemia, multiple myeloma and chronic obstructive pulmonary disease. All decedents entered into the census are younger than 85 years of age.

Results

Fatal Occupational Injuries

To better understand the issue of fatal occupational injuries, CFOI collects data on both the demographics of the decedent and the circumstances surrounding the incident. In 2004, there were 208 (Figure 1) of these injuries. Of the total of injury-related fatalities, 146 (70.2 percent) of them occurred among wage and salaried workers, and 191 (91.8 percent) occurred among men (Table 2). The majority of the fatalities occurred among those 45 to 54 years of age (30.3 percent), followed by those 35 to 44 years of age (22.1 percent) (Table 2). With respect to race, the majority of fatalities occurred among whites (88 percent), followed by blacks (8.7 percent) (Table 2). With respect to ethnicity, 13.9 percent of those fatally injured were of Hispanic origin (Table 2).

The construction industry incurred the most injury-related fatalities with 40 (19.2 percent), followed by transportation and warehousing (16.3 percent), agriculture (15.4 percent) and manufacturing (7.2 percent) (Table 3). As stated in the methods section, it is inadvisable to compare post 2003 CFOI data to previous years due to the change from Standard Industrial Classification to the North American Industry Classification System.

The occupations suffering the most injury-related fatalities were transportation and material moving occupations with 51 (24.5 percent), followed by management occupations with 40 (19.2 percent) and construction and extraction occupations with 33 (15.9 percent). Of note were protective service occupations with 13 fatalities (6.3 percent); installation, maintenance, and repair occupations, also with 13 (6.3 percent); and production occupations with 11 fatalities (5.3 percent) (Table 4). In the past, farmers

were not classified as managers and this change in definition is the reason management occupation is high when compared to previous years.

The event or exposure leading to the injury-related fatality is another important variable in describing work-related deaths. In 2004, transportation incidents accounted for more than one-third of all injury-related occupational fatalities with 83 (39.9 percent), followed by assaults and violent acts with 41 (19.7 percent), contact with objects or equipment with 33 (15.9 percent), falls with 29 (13.9 percent), and exposure to harmful substances or environments with 14 (6.7 percent) (Table 5).

When cross tabulating the event or exposure that caused the injury-related fatality with the industry sector in which the fatality occurred, some industries are shown to be more susceptible to certain events. Transportation incidents were the leading cause for agriculture, forestry, fishing and hunting (59.4 percent) fatalities, as well as transportation and warehousing (67.6 percent). Falls were the leading cause of death for the construction industry (51.1 percent), fires and explosions were the leading cause of death for manufacturing (33.3 percent), and assaults and violent acts were the leading cause of death for the retail trade industry (57.1 percent) (Table 6). Most of the fatalities recorded in the real estate rental and leasing industry were the result of assaults or violent acts (60 percent). Overall, transportation incidents was the leading cause of injury-related deaths in seven of the 20 major industry sectors under the NAICS classification system, while assaults and violent acts were the leading factor in three of the industries. Other less prevalent causes of fatalities were falls, exposure to harmful substances and environments, and fires and explosions.

In addition to Cook County recording approximately one-third of the state's occupational fatalities, Cook County also recorded 16 of the 40 (40 percent) fatalities resulting from assaults.

In addition to the 208 injury-related fatalities, the CFOI program also recorded 30 fatalities caused by heart attack (Table 8). Heart attacks are difficult to classify because there are many contributing factors. Because of this, it is often difficult to establish an exclusive relationship with any one specific work activity, and numbers of heart attacks should be interpreted cautiously. Of these fatalities, the industries most affected were agriculture (23.3 percent) and services (20 percent). The occupations suffering the most heart attacks were operators, fabricators and laborers (36.7 percent), and farming, forestry and fishing (23.3 percent).

Fatal Occupational Illnesses

In 2004, Illinois recorded 1,103 illness related occupational fatalities. The industries most affected by these illnesses were manufacturing (51.9 percent), construction (14.2 percent) and agriculture (9.1 percent).

The occupations with the greatest percentage of occupation related illnesses resulting in a fatality were operators, fabricators and laborers (39.1 percent); precision production, craft and repair (33.2 percent); and managerial and professional specialty (12.4 percent).

The breakdown by illness showed a similar distribution to previous years. Lung cancer contributed to 40.1 percent of occupationally-related illness fatalities (36.6 percent in 2003), chronic obstructive pulmonary disease was listed on 22.8 percent of death certificates (21.6 percent in 2003), prostate cancer was implicated in 11.3 percent,

mesothelioma appeared on 9.7 percent of death certificates, skin cancer and melanoma accounted for 3.4 percent, and bladder cancer was responsible for 3.6 percent of occupationally related illness fatalities (Table 10).

Table 1. Distribution of Injury Source Documents by Type, Illinois, 2004

Source Document	Number	Percentage of total documents	Percentage per Fatality
Death Certificate	202	29.6	97.1
News Media Report	155	22.7	74.5
OSHA 36 ¹	73	10.7	35.1
OSHA 01 ²	72	10.6	34.6
OSHA 170 ³	58	8.5	27.9
Worker's Compensation Report	30	4.4	14.4
Coroner's Report	23	3.4	11.1
Toxicology Report	12	1.8	5.8
Autopsy Report	9	1.2	4.3
Medical Examiner Report	8	1.2	3.8
Police Report	7	1.0	3.7
National Traffic Safety Board Report	2	<1	<1

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Census of Fatal Occupational Injuries, in cooperation with the Illinois Department of Public Health.

¹OSHA 36 is a pre-inspection form used to record data pertaining to fatality/catastrophe that occurs in an establishment under OSHA's or a state OSHA's jurisdiction. It is completed at the time the event is initially reported to OSHA. Its purpose is to provide OSHA with enough information on the event to determine whether to investigate

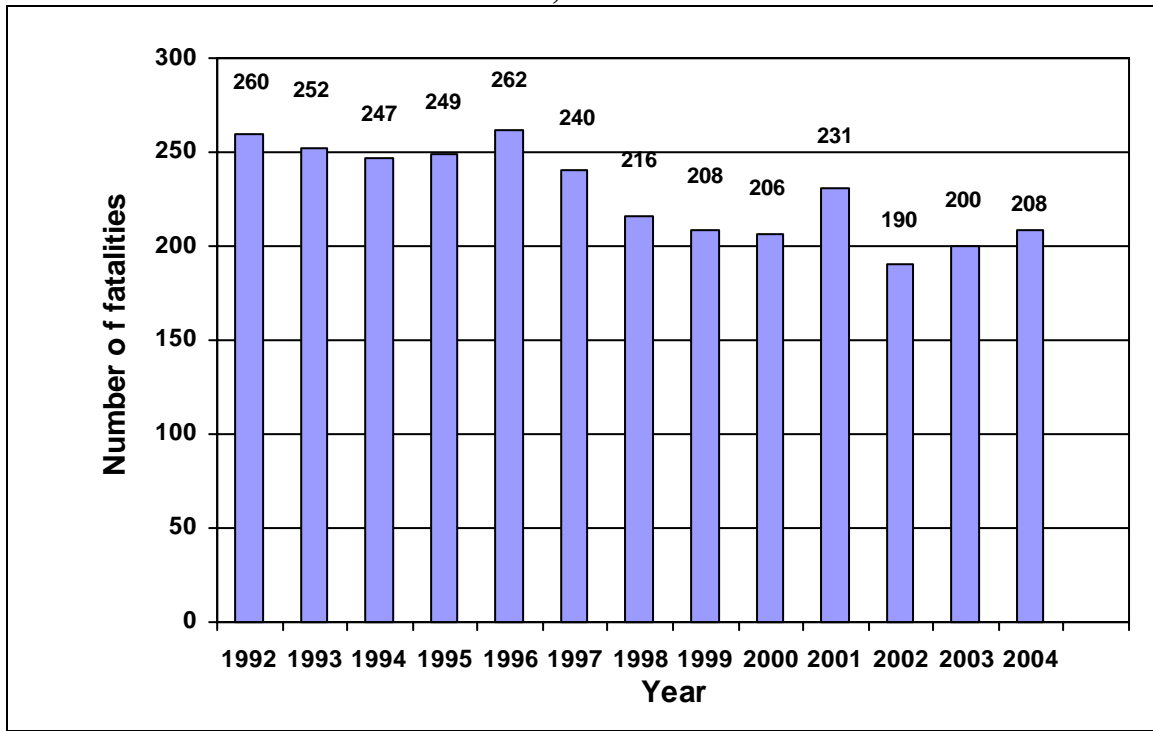
²OSHA 01 is used to record data related to the inspection of a workplace. It also is used to record whether an anticipatory warrant/subpoena was served, denial of entry information, and information on cases that are terminated before becoming inspections.

³OSHA 170 is used to record a summary of the results of investigations of all events involving fatalities, catastrophes, amputations, hospitalizations of two or more days, and significant publicity or property damage.

NOTE: Numbers and percentages may not add to totals due to exclusion of categories that do not meet publication criteria (equal to or less than 3 cases).

Figure 1.

**Number of Fatal Occupational Injuries
Illinois, 1992-2004**



SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Census of Fatal Occupational Injuries, in cooperation with the Illinois Department of Public Health.

**Table 2. Distribution of Fatal Occupational Injuries by Selected
Socio-Demographic Characteristics, Illinois, 2004**

	Number	Percentage
Employee Status		
Wage and salary workers	146	70.2
Self-employed ¹	62	29.8
Gender		
Male	191	91.8
Female	17	8.2
Age		
<20	5	2.4
20-24	10	4.8
25-34	28	13.5
35-44	46	22.1
45-54	63	30.3
55-64	34	16.3
65 years and older	22	10.6
Race		
White	183	88.0
Black	18	8.7
Other	7	3.4
Hispanic Origin		
Hispanic ²	29	13.9
Non-Hispanic	176	84.6
Unknown	3	1.4
Total	208	100.0

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Census of Fatal Occupational Injuries, in cooperation with the Illinois Department of Public Health.

¹Includes paid and unpaid family workers and may include owners of incorporated businesses or members of partnerships.

²Persons identified as Hispanic may be of any race.

NOTE: Numbers and percentages may not add to totals due to exclusion of categories that do not meet publication criteria (equal to or less than three cases).

**Table 3. Distribution of Fatal Occupational Injuries by Industry¹
Illinois, 2004**

	Number	Percentage
Agriculture, Forestry, Fishing and Hunting	32	15.4
Crop Production	25	12.0
Animal Production	4	1.9
Construction	40	19.2
Construction of Buildings	10	4.8
Heavy and Civil Engineering Construction	4	1.9
Specialty Trade Contractors	25	12.0
Manufacturing	15	7.2
Chemical Manufacturing	6	2.9
Paper Manufacturing	--	--
Wholesale Trade	5	2.4
Merchant Wholesalers, Nondurable	4	1.9
Retail Trade	11	5.5
Grocery Stores	3	1.4
Health and Personal Care	3	1.4
Automobile Dealers	3	1.4
Transportation and Warehousing	34	16.3
Truck Transportation	22	10.6
Support Activities for Transportation	5	2.4
Real Estate and Rental and Leasing	5	2.4
Real Estate	4	1.9
Administrative and Support and Waste Management and Remediation Services	6	2.9
Administrative and Support Services	3	1.4
Waste Management and Remediation Services	3	1.4
Healthcare and Social Assistance	4	1.9
Arts, Entertainment, and Recreation	4	1.9
Food Services and Drinking Places	7	3.4
Full-Service Restaurants	3	1.4
Repair and Maintenance	5	2.4
Automotive Repair and Maintenance	4	1.9
Justice, Public Order and Safety Activities	8	3.8
Police Protection	6	2.9

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Census of Fatal Occupational Injuries, in cooperation with the Illinois Department of Public Health.

¹North American Industry Classification System, 2002 edition.

NOTE: Numbers and percentages may not add to totals due to exclusion of categories that do not meet publication criteria (equal to or less than three cases).

**Table 4. Distribution of Fatal Occupational Injuries by Occupation¹
Illinois, 2004**

	Number	Percentage
Management Occupations	40	19.2
Agricultural Managers	21	10.1
Construction Managers	6	2.9
Food Service Managers	6	2.9
Business and Financial Operations Occupations	3	1.4
Protective Service Occupations	13	6.3
Law Enforcement Workers	7	3.4
Other Protective Service Workers	4	1.9
Building & Grounds Cleaning & Maintenance Occupations	4	1.9
Supervisors, Building & Grounds Cleaning & Maintenance	3	1.4
Personal Care and Service Occupations	4	1.9
Sales and Related Occupations	13	6.3
Supervisors, Sales Workers	7	3.4
Retail Sales Workers	4	1.9
Construction and Extraction Occupations	33	15.9
Carpenters	4	1.9
Construction Laborers	9	4.3
Electricians	4	1.9
Brick Mason and Block Mason	3	1.4
Other Construction and Related Workers	6	2.9
Installation, Maintenance and Repair Occupations	13	6.3
Production Occupations	11	5.3
Production Workers, All Other	7	3.4
Transportation and Material Moving Occupations	51	24.5
Truck Drivers, Heavy and Tractor-Trailer	24	11.5
Taxi Drivers and Chauffeurs	3	1.4
Laborers and Material Movers, Hand	8	3.8

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Census of Fatal Occupational Injuries, in cooperation with the Illinois Department of Public Health.

¹Standard Occupational Classification Manual, 2000 edition.

NOTE: Numbers and percentages may not add to totals due to exclusion of categories that do not meet publication criteria (equal to or less than three cases).

**Table 5. Distribution of Fatal Occupational Injuries by Event or Exposure¹
Illinois, 2004**

	Number	Percentage
Transportation incidents	83	39.9
Highway	49	23.6
Non-highway	16	7.7
Pedestrian struck by vehicle	13	6.3
Assaults and violent acts	41	19.7
Assaults and violent acts by person(s)	25	12.0
Self-inflicted injury	15	7.2
Falls	29	13.9
Fall from ladder	9	4.3
Fall from roof	5	2.4
Fall from scaffold, staging	3	1.4
Fall from non-moving vehicle	3	1.4
Fall to lower level, NEC	3	1.4
Contact with objects and equipment	33	15.9
Caught in or compressed by equipment or objects	11	5.3
Struck by object	14	6.7
Caught in or crushed in collapsing materials	7	3.4
Exposure to harmful substances or environments	14	6.7
Exposure to caustic, noxious or allergenic substances	6	2.9
Contact with electric current	5	2.4
Fires and explosions	8	3.8
TOTAL	208	100.0

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Census of Fatal Occupational Injuries, in cooperation with the Illinois Department of Public Health.

¹Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

NOTE: Numbers and percentages may not add to totals due to exclusion of categories that do not meet publication criteria (equal to or less than three cases).

Table 6. Fatal Occupational Injuries by Industry and Event or Exposure Illinois, 2004

Industry	Event or Exposure												
	Total Fatalities	Transportation		Violent Acts & Assaults		Contact with Equipment		Falls		Exposure to Harmful Substances		Fires and Explosions	
	(n)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Agriculture, Forestry and Fishing	32	19	59.4	--	--	9	26.7	--	--	--	--	--	--
Construction	40	4	10.0	--	--	9	12.8	16	51.1	5	12.5	3	7.5
Manufacturing	15	--	--	--	--	4	53.8	--	--	--	--	5	33.3
Wholesale trade	5	3	60.0	--	--	--	60.0	--	--	--	--	--	--
Retail trade	21	4	19.0	12	57.1	--	--	4	--	--	--	--	--
Transportation and warehousing	34	23	67.6	5	14.7	4	--	--	--	--	--	--	--
Real estate rental and leasing	5	--	--	3	60.0	--	--	--	--	--	--	--	--
Administrative and support and waste management and remediation services	6	3	50.0	--	--	--	23.1	--	--	--	--	--	--
Accommodation and food service	7	--	--	4	57.1	--	--	--	--	--	--	--	--
Other services, except public administration	9	4	44.4	3	33.3	--	--	--	--	--	--	--	--
Total	174	60	34.5	27	15.5	26	14.9	20	11.5	5	2.9	8	4.6

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Census of Fatal Occupational Injuries, in cooperation with the Illinois Department of Public Health.

NOTE: Numbers and percentages may not add to totals due to exclusion of categories that do not meet publication criteria (equal to or less than three cases)

**Table 7. Number of Fatal Occupational Injuries by County
Illinois, 2004**

County	Number
Champaign	5
Cook	59
DuPage	4
Fayette	3
Grundy	3
Iroquois	3
Kane	7
Kankakee	3
LaSalle	3
Lake	11
McHenry	3
McLean	5
Macon	3
Madison	4
St. Clair	5
Sangamon	10
Will	9
Winnebago	6

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Census of Fatal Occupational Injuries, in cooperation with the Illinois Department of Public Health.

**Table 8. Number of Heart Attacks
by Industry and Occupation
Illinois, 2004**

Industry	Number	Percentage
Agriculture, Forestry, Fishing and Hunting	7	23.3
Manufacturing	3	10.0
Transportation and public utilities	3	10.0
Services	6	20.0
Construction	3	10.0
Retail trade	3	10.0
Government	--	--
Mining	--	--
Total	30	100.0
 Occupation		
Operators, fabricators and laborers	11	36.7
Precision production, craft and repair	--	--
Managerial and professional	--	--
Services	5	16.7
Technical, sales and administrative support	5	16.7
Farming, forestry and fishing	7	23.3
Total	30	100.0

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Census of Fatal Occupational Injuries, in cooperation with the Illinois Department of Public Health.

NOTE: Numbers and percentages may not add to totals due to exclusion of categories that do not meet publication criteria (equal to or less than three cases).

**Table 9. Distribution of Fatal Occupational Illnesses
Major Occupations and Industries as Stated on Death Certificate
Illinois, 2004**

Industry	Number	Percentage
Manufacturing	572	51.9
Construction	157	14.2
Agriculture	100	9.1
Mining	76	6.9
Services	42	3.9
Government	69	6.3
Transportation and public utilities	57	5.2
Retail	22	2.0
Finance, insurance and real estate	6	.5
Total	1,103	100.0
Occupation		
Managerial and professional specialty	137	12.4
Technical, sales and administrative support	9	.8
Service occupations	66	6.0
Farming, forestry and fishing	94	8.5
Precision production, craft and repair	366	33.2
Operators, fabricators and laborers	431	39.1
	1103	100.0

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Census of Fatal Occupational Injuries, in cooperation with the Illinois Department of Public Health.

NOTE: Numbers and percentages may not add to totals due to exclusion of categories that do not meet publication criteria (equal to or less than three cases).

**Table 10. Distribution of Fatal Occupational Illnesses
by Type of Illness
Illinois, 2004**

Type of Illness	Number	Percentage
Lung cancer	442	40.1
Chronic obstructive pulmonary disease	252	22.8
Prostate cancer	125	11.3
Mesothelioma	107	9.7
Colorectal cancer	6	.5
Bladder cancer	40	3.6
Melanoma	38	3.4
Multiple myeloma	12	1.1
Leukemia	11	1.0
Kidney	7	.6
Laryngeal	--	--
Liver	25	2.3
Pneumoconiosis	--	--
Total	1103	100.0

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Census of Fatal Occupational Injuries, in cooperation with the Illinois Department of Public Health.

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