Fatal Injuries to Civilian Workers in the United States, 1980-1995

(National and State Profiles)

Introduction

The National Institute for Occupational Safety and Health (NIOSH) began collecting death certificates from all 50 States and the District of Columbia in answer to the need for a comprehensive enumeration of workers who sustain a fatal work-related injury. The National Traumatic Occupational Fatalities (NTOF) surveillance system was developed to fill gaps in the knowledge of work-related injury deaths in the United States (U.S.) by providing a census of occupational injury deaths for all U.S. workers.

Surveillance data such as those gathered through NTOF allow analysis of demographic, employment, and injury characteristics and also enable the examination of trends over time. These data allow the description of the nature and magnitude of the occupational injury problem in the U.S., the identification of potential risk factors, the generation of hypotheses for further research, and the setting of research and prevention priorities.

In 1993, a comprehensive summary of fatal occupational injuries in the U.S. was published based on data collected through NTOF for the years 1980 through 1989 (Jenkins et al., 1993). The present document extends the period of analysis to 16 years, providing the most comprehensive summary of fatal occupational injuries in one document for the U.S. as a whole, and for every State. This current document however, is considerably different than the earlier publication with the primary goal of providing detailed data in tabular format. The data are being presented in this format to provide the occupational safety and health community with direct access to data from the NTOF surveillance system. This document will serve as a comprehensive resource to describe the magnitude and circumstances of occupational injury deaths in the U.S. from 1980 through 1995.

Methods

Selection Criteria

The NTOF surveillance system is composed of information obtained from death certificates from the U.S. vital statistics reporting units in the 50 States, New York City, and the District of Columbia. For a case to be included in NTOF, it must meet three criteria:

1. the decedent is 16 years of age or older;
2. the external cause of death is classified as E800-E999 (International Classification of Diseases, Ninth Revision (World Health Organization, 1977)); and
3. the "Injury at Work?" item is marked positive by the certifier.

Why Death Certificates?

While studies have shown that multiple source surveillance systems are the best approach in counting occupational fatalities, death certificates were chosen for NTOF because they are the single source that identifies the largest number of cases, and are fairly comparable between all vital statistics reporting units. Studies show that death certificates alone identify between 67% and 90% of all fatal work injuries among the various States (Baker et al., 1982; Karlson and Baker, 1978; Stout and Bell, 1991).

Data Utility

The NTOF system contains 30 variables useful for describing characteristics of victims as well as injury circumstances. Data elements include coded worker characteristics and injury circumstances such as sex, race, occupation, and cause of death. In addition, narrative text for industry, occupation, causes of death, and injury description is entered and maintained. Narrative data have been utilized in a number of focused analyses listed in the Additional Readings section of this document (Appendix VI).

Data Coding: Industry/Occupation/Cause of Death

Codes for 'usual' industry and occupation were assigned based on the narrative information contained on the death certificates. Two methods of coding were used for the periods 1980 through 1989, and 1990 through 1995. Prior to the availability of an automated coding system, narrative information from the occupation and industry items was manually hand-coded by an expert coder, starting with data year 1990. Earlier years of data had been coded using a crude software program with known problems. The Standardized Occupation and Industry Coding (SOIC) software,[1] a more sophisticated and accurate application released in 1998, was used to recode the data from 1980 through 1989. Cases that could not be assigned a code by the SOIC software were manually hand-coded if the death certificate contained adequate information. The industry and occupation narratives were coded according to the 1980 and 1990 Bureau of the Census classification schemes (Bureau of Census, 1982; Bureau of Census, 1992). Death certificates for which no occupation or industry entry was present or for which the entry was too vague were coded into the "not classified" category. Certificates which had entries such as "housewife" or "student" were also coded into the "not classified" category. Appendix I provides explanations of the abbreviations used in the tables for occupation and industry divisions. Appendices II and III provide codes for detailed industry and occupation groupings included in the tables.

Cause of death codes are based on the International Classification of Diseases, Ninth Revision (ICD-9) supplementary chapter for the classification of external causes of injury and poisoning (World Health Organization, 1977) as assigned by trained nosologists and compiled by the National Center for Health Statistics (NCHS) for the Vital Statistics Mortality data (National Center for Health Statistics, 1980-1995). Codes from this chapter, denoted with a preceding "E," cover the spectrum of unintentional and intentional causes of death, with the actual E-code rubrics of the aggregated categories shown in Appendix IV. E-codes in this report were aggregated in a manner

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[1]The Standardized Occupation and Industry Coding (SOIC) System is a software application developed collaboratively by NIOSH and other agencies and organizations. The software system takes real-world literal descriptions of occupations and industries from death certificates and other documents, and translates them into the 1990 Bureau of the Census occupation and industry codes. Based on a comparison of cases that were coded both by the SOIC software and by hand, it was determined that 87% of the cases matched for both industry and occupation.

believed to be most beneficial for demonstrating exposures specific to traumatic occupational death. Alternative methods for grouping E-codes have been proposed, including the use of a matrix to present mechanism of injury within the major intent categories of unintentional, intentional, and self-inflicted (Centers for Disease Control and Prevention, 1997). While our rubric does not directly match the intent categories laid out in the suggested matrix framework, the authors believe the categories presented in this report are more beneficial for occupational death analysis and provide for continuity of earlier research. A footnote on Table US-8 provides information that may be used to calculate totals based on major intent categories.

Calculation of Rates

For this analysis, death certificates identified for inclusion in the NTOF data represent a complete count of traumatic occupational fatalities. These data therefore are not subject to sampling error, though they are subject to measurement error such as misclassification or failure to identify positive cases. The tables in this document include cells with counts of three or more deaths. Additionally, data for "Unknown" or "Not Classified" categories are only included for univariate tabulations.

Employment estimates for rate calculations were obtained from the Bureau of Labor Statistics' (BLS) Current Population Survey (CPS), a population-based household sample survey of the civilian noninstitutionalized population. These data were extracted from the BLS *Employment and Earnings* and the CPS monthly micro data files (Bureau of Labor Statistics, 1981-1996; Bureau of Labor Statistics, 1992). Because the employment data are based on a sample survey, standard errors are associated with the workforce estimates. However, confidence intervals for fatality rates were not calculated for this publication but are addressed elsewhere.[1]

Fatality rates were calculated as deaths per 100,000 workers. Rates were not calculated for categories with less than three fatalities or less than 20,000 employees, due to the instability of rates based on small numbers. In addition to this safeguard, considerable caution should be exercised in the interpretation of rates based on less than 20 deaths due to the possibility of rate instability (National Center for Health Statistics, 1999). It should be noted that in some instances rates were calculated for 1983 through 1995 only (e.g., industry division by occupation division), due to the lack of comparably coded denominator data for the earlier period.

The employment data used for rate calculations were based on the number of workers, rather than hours of work (or full-time equivalents). Using the number of workers does not account for the difference in exposure for groups that commonly work less than a full-time schedule of 40 hours per week (e.g., youth and older workers). For most workers however, the injury rates are similar regardless of which type of employment measure is used (Ruser, 1998). In addition, crude rates are presented in this report rather than age-adjusted rates. Age adjustments made when calculating occupational injury death rates, in nearly all cases, have only a negligible effect as age is not the primary risk factor (Bailer et al., 1998). Lastly, there is a dissimilarity between death and employment data when State-specific rates are calculated. The death data indicate the State where the death occurred while the employment data indicate the State of residence. This should be kept in mind when reviewing State fatality rates as net commuter in- and outflows may artificially increase or decrease State-specific rates.

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[1]Standard errors associated with the CPS are explained in BLS' "Employment and Earnings" and "Geographic Profiles of Employment and Unemployment" (Bureau of Labor Statistics, 1981-1996; Bureau of Labor Statistics, 1982-1997).

Limitations of Death Certificate Data

Limitations of death certificates used to ascertain work-related fatality information have previously been described (Bell et al., 1990; Jenkins et al., 1993; Russell and Conroy, 1991; Stout and Bell, 1991). Incomplete or unclear information on the death certificate and the lack of a national standard for the completion of the "Injury at Work?" item on the death certificate during this period are particular problems. Motor vehicle crashes and homicides accentuate the difficulty of attempting to identify occupational injuries (Colorado Dept. of Health, 1988; Russell and Conroy, 1991). Furthermore, because death certificates ask if the injury occurred at work, the death certificate may not be a true measure of work-relatedness for certain causes of death. For instance, a suicide that takes place at work may or may not be associated with work per se.

Standardized guidelines for coding the "Injury at Work?" item on the death certificates were not introduced until 1992.[1] Certifier interpretation without the aid of standardized guidelines probably accentuated the problem of false positives being included in the data and false negatives not being identified. The improvements in the quality of the data, such as the sensitivity and positive predictive value, that resulted from these guidelines are unknown.

There are potential discrepancies in the collection of race and ethnicity in death data.[2] NCHS made the first official recommendation to the States to include separate questions for race and ethnicity on their respective death certificates in January 1987 (Tolson et al., 1991). Variation in the collection methods employed by States is possible prior to the implementation of this recommendation. Additionally, studies have shown that race and ethnicity can be confused, and the manner in which the information is gathered affects the subsequent estimates (Tucker and Kojetin, 1996; Bureau of Census, 1996; Bureau of Census, 1997). As a result of the different approaches to collecting "race" and "ethnicity" information, rates should be interpreted with caution (Hahn, 1992).

Death certificates query for the "usual" occupation and industry of the decedent. Studies comparing the reliability of "usual" occupation and industry reported on death certificates to information derived from personal interviews prior to death reported agreement for "usual" occupation to be 48% to 76%, and 57% to 76% for "usual" industry (Gute and Fulton, 1985; Schade and Swanson, 1988; Schumacher, 1986; Swanson et al., 1984; Turner et al., 1987). Studies comparing death certificate entries for usual occupation and industry to employment information at the time of death reported agreement for occupation to be 64% to 74%, and 60% to 76% for industry (Davis, 1988; Illis et al., 1987; Schade and Swanson, 1988). Additionally, "most recent" occupation and industry were incorrectly entered in the "usual" occupation and industry fields on death certificates in about 6% to 11% of the cases (Davis, 1988; Schade and Swanson, 1988). For these reasons, there exists the possibility that for any surveillance system based on death certificates, cases may be misclassified with respect to industry and occupation.

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[1]In 1992, national guidelines for completing the "Injury at Work?" item were developed and disseminated by the Association for Vital Records and Health Statistics (now the National Association for Public Health Statistics and Information Systems), NIOSH, NCHS, and the National Center for Environmental Health (Appendix V).

[2]During the period from 1980 through 1995, categories for race and ethnicity were defined by the Office of Management and Budget's Statistical Policy Directive 15. Racial and ethnic categories are not to be interpreted as biological or genetic, but are simply a social-political construct designed for collecting data. Race categories include: White, Black, Native American, and Asian/Pacific Islander. Ethnicity categories are: "Hispanic or Latino" and "Not Hispanic or Latino" (Office of Management and Budget, 1977).

Finally, this report only includes information on deaths of civilians who died at work in the U.S. Civilians who died at work while abroad, and military personnel, regardless of their duty station, are excluded. The number of U.S. civilian workers killed while abroad is not known. And while NTOF does contain military cases for those who died at work in the U.S., they were excluded from this report primarily because of difficulties in establishing a definition of work-relatedness comparable to that of civilians. Unlike civilians, whose death is generally considered work-related if the incident occurred (1) on an employer's premise, or (2) off the worksite premises but while the worker was conducting legitimate work duties, active duty military personnel are considered to be on-duty 24 hours per day (Helmkamp and Kennedy, 1996).

Comparison of Data to Previously Published Fatal Occupational Injury Data

The data contained in the current publication are comparable to those from the 1993 document with a few exceptions. In the current report, the industry and occupation narrative data from 1980 through 1989 were recoded, thus frequency counts and rates for these two variables may differ from what was published in the earlier document. Additionally, rates by industry, overall rates by state, and industry rates by state were calculated based on a different source of employment data. The fatality rates by industry, overall rates by state, and industry rates by state included in the earlier publication were calculated using County Business Patterns (CBP), an establishment-based census of employers, supplemented with data from the 1982 Agricultural Census and data for the public administration industry from the CPS. The CBP excludes agricultural production workers, domestic-service workers, railroad workers subject to the Railroad Retirement Act, most government workers, and the self-employed. These exclusions introduce a bias in the calculation of industry-specific incidence rates, resulting in artificially high rates. Because the CPS, which is a population-based survey, includes wage and salaried, self-employed, and all agricultural workers, it best matches the worker population included in NTOF. These differences are discussed in more detail elsewhere (Biddle and Kisner, 1998).

To address some of the limitations of death certificates and other existing data sources in the surveillance of fatal occupational injuries, in 1992 the BLS began collecting national work-related death data through the Census of Fatal Occupational Injuries (CFOI) system. The CFOI requirement that work-relatedness be substantiated by at least two sources has led to improvements in both the number of cases identified and the overall data accuracy. While CFOI and NTOF identified similar patterns from 1992 through 1995, NTOF captured 21,038 cases for this period compared to the 25,455 cases captured by CFOI (Toscano and Windau, 1998). Another difference between the two surveillance systems is that the coding systems used to specify cause of death differ. NTOF uses E-codes from the ICD-9 (World Health Organization, 1977) and CFOI uses the BLS-designed Occupational Injury and Illness Classification System (Toscano et al., 1996). Direct comparisons of the two systems are complicated, but broad results for cause of death are similar.

Additional Readings

The last section in this document (Appendix VI) includes a list of articles and other publications that can be referred to for additional information. While not exhaustive, this list includes journal articles, NIOSH publications, and other articles that involved NTOF analyses.

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National Data

Table US-1. *Number and Rate (per 100,000 workers) of Traumatic Occupational Fatalities by Year, US, 1980-1995.*

YEAR OF DEATH	NUMBER OF DEATHS	RATE PER 100,000
1980	7,343	7.4
1981	7,061	7.0
1982	6,378	6.4
1983	5,784	5.7
1984	6,113	5.8
1985	6,192	5.8
1986	5,624	5.1
1987	5,813	5.2
1988	5,710	5.0
1989	5,679	4.8
1990	5,384	4.6
1991	5,219	4.5
1992	5,032	4.3
1993	5,286	4.4
1994	5,406	4.4
1995	5,314	4.3
Total	**93,338**	**5.2**

Table US-2. *Number and Average Annual Rate (per 100,000 workers) of Traumatic Occupational Fatalities by State of Death, US, 1980-1995.*

STATE	NO. OF DEATHS	RATE PER 100,000
Alabama	1,864	6.8
Alaska	897	24.3
Arizona	590	2.4
Arkansas	1,335	8.2
California	9,670	4.7
Colorado	1,631	6.2
Connecticut	445	1.7
Delaware	203	4.0
Dist Columbia	296	6.3
Florida	5,596	6.5
Georgia	3,253	7.1
Hawaii	348	4.4
Idaho	784	10.7
Illinois	4,169	4.9
Indiana	2,284	5.5
Iowa	1,373	6.2
Kansas	1,177	6.1
Kentucky	2,037	8.0
Louisiana	2,288	8.3
Maine	404	4.6
Maryland	1,213	3.3
Massachusetts	990	2.1
Michigan	2,433	3.7
Minnesota	1,093	3.1
Mississippi	1,683	10.1
Missouri	1,815	4.8

STATE	NO. OF DEATHS	RATE PER 100,000
Montana	750	12.4
Nebraska	1,004	8.0
Nevada	678	7.7
New Hampshire	256	3.0
New Jersey	1,523	2.6
New Mexico	755	7.5
New York	3,567	2.8
North Carolina	2,657	5.4
North Dakota	441	8.9
Ohio	2,662	3.4
Oklahoma	1,328	5.8
Oregon	1,546	7.3
Pennsylvania	3,926	4.7
Rhode Island	194	2.6
South Carolina	1,408	5.8
South Dakota	495	9.2
Tennessee	1,970	5.7
Texas	9,423	7.7
Utah	926	7.8
Vermont	194	4.4
Virginia	2,495	5.4
Washington	1,783	5.2
West Virginia	1,142	10.4
Wisconsin	1,729	4.5
Wyoming	615	16.7

Table US-3. *Number and Average Annual Rate[*] (per 100,000 workers) of Traumatic Occupational Fatalities by Sex, Race, and Age Group, US, 1980-1995.*

DEMOGRAPHICS	NUMBER OF DEATHS	RATE PER 100,000
Sex		
Male	87,254	8.8
Female	6,078	0.8
Unknown	6	---
Race		
White	79,487	5.1
Black	10,273	5.8
Other	2,693	4.9
Unknown	885	---
Age Group		
16-17	892	2.2
18-19	2,508	3.9
20-24	10,012	4.7
25-34	24,109	4.8
35-44	20,184	4.6
45-54	15,983	5.3
55-64	12,633	7.0
65+	6,922	13.6
Unknown	95	---

[*] Rates not calculated for “unknown” or “not classified” categories.

Table US-4. *Number[*] and Rate (per 100,000 workers) of Traumatic Occupational Fatalities for Sex, Race, and Age Group, by Year, US, 1980-1995.*

DEMOGRAPHICS		YEAR OF DEATH															
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Sex																	
Male	No.	6,914	6,677	6,007	5,461	5,758	5,807	5,258	5,428	5,334	5,285	5,035	4,836	4,688	4,908	4,970	4,888
	Rate	12.3	11.6	10.7	9.6	9.7	9.7	8.6	8.7	8.4	8.2	7.8	7.6	7.3	7.5	7.5	7.3
Female	No.	429	384	371	323	355	385	366	385	376	394	349	381	343	378	433	426
	Rate	1.0	0.9	0.9	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.7	0.8	0.7
Race																	
White	No.	6,312	6,128	5,522	5,002	5,313	5,302	4,837	4,955	4,901	4,865	4,486	4,284	4,200	4,389	4,516	4,475
	Rate	7.3	6.9	6.3	5.6	5.8	5.7	5.1	5.1	4.9	4.8	4.4	4.2	4.1	4.3	4.3	4.2
Black	No.	841	739	661	594	629	689	614	689	585	644	611	616	531	591	628	611
	Rate	9.2	7.9	7.2	6.3	6.2	6.6	5.7	6.1	5.0	5.4	5.1	5.2	4.4	4.9	4.9	4.6
Other	No.	126	141	137	139	138	167	123	145	142	147	147	203	222	266	252	198
	Rate	7.0	6.0	5.6	5.4	5.0	5.7	3.9	4.3	4.1	3.9	3.8	5.1	5.3	6.1	5.0	3.9
Age Group																	
16-17	No.	125	100	86	45	53	52	60	53	48	47	47	28	39	34	40	35
	Rate	4.0	3.5	3.4	1.9	2.2	2.1	2.3	1.9	1.8	1.8	2.0	1.3	1.8	1.5	1.6	1.4
18-19	No.	320	267	207	204	180	155	171	146	141	123	137	101	80	86	89	101
	Rate	6.9	6.1	5.1	5.0	4.4	3.9	4.4	3.7	3.4	2.9	3.3	2.7	2.3	2.4	2.4	2.6
20-24	No.	1,051	988	843	721	786	728	614	615	568	509	495	445	408	410	444	387
	Rate	7.4	7.0	6.1	5.2	5.5	5.2	4.5	4.5	4.3	3.9	3.7	3.4	3.2	3.2	3.5	3.1
25-34	No.	1,842	1,896	1,641	1,472	1,644	1,682	1,519	1,550	1,550	1,561	1,403	1,332	1,241	1,294	1,296	1,186
	Rate	6.8	6.7	5.8	5.1	5.4	5.4	4.7	4.7	4.6	4.6	4.1	4.0	3.8	4.0	4.0	3.7
35-44	No.	1,281	1,190	1,204	1,193	1,237	1,331	1,201	1,217	1,230	1,257	1,242	1,290	1,274	1,351	1,346	1,340
	Rate	6.6	5.9	5.8	5.4	5.2	5.4	4.6	4.5	4.4	4.3	4.0	4.1	4.0	4.1	4.0	3.9
45-54	No.	1,176	1,178	1,068	939	971	939	917	913	939	970	942	926	945	1,001	1,055	1,104
	Rate	7.2	7.2	6.7	5.9	6.0	5.7	5.4	5.2	5.1	5.0	4.8	4.7	4.5	4.5	4.5	4.5
55-64	No.	1,026	963	865	805	824	895	747	857	795	777	692	692	627	673	700	695
	Rate	8.8	8.4	7.6	7.1	7.2	7.8	6.5	7.5	7.0	6.8	6.2	6.3	5.7	6.1	6.2	6.1
65+	No.	509	472	458	402	414	398	387	457	436	427	424	401	417	432	429	459
	Rate	17.0	15.8	15.5	13.5	14.4	14.1	13.2	15.0	13.6	12.7	12.6	12.1	12.4	12.9	11.6	12.4

[*]Numbers not reported for “unknown” or “not classified” categories.

Table US-5. *Number[*] and Average Annual Rate (per 100,000 workers) of Traumatic Occupational Fatalities for Race and Age Group, by Sex, US, 1980-1995.*

DEMOGRAPHICS	SEX			
	MALE		FEMALE	
	No.	Rate	No.	Rate
Race				
White	74,446	8.6	5,037	0.7
Black	9,521	10.7	752	0.8
Other	2,446	7.8	245	0.9
Age Group				
16-17	814	3.8	78	0.4
18-19	2,321	7.1	186	0.6
20-24	9,262	8.2	750	0.7
25-34	22,439	8.0	1,668	0.8
35-44	18,869	7.9	1,313	0.7
45-54	15,012	9.0	970	0.7
55-64	11,966	11.4	667	0.9
65+	6,480	21.5	442	2.1

[*]Numbers not reported for "unknown" or "not classified" categories.

Table US-6. *Number[*] and Average Annual Rate (per 100,000 workers) of Traumatic Occupational Fatalities by Age Group and Race, US, 1980-1995.*

AGE GROUP	RACE					
	WHITE		BLACK		OTHER	
	No.	Rate	No.	Rate	No.	Rate
16-17	785	2.1	77	2.6	23	2.3
18-19	2,229	4.0	193	3.4	66	3.8
20-24	8,674	4.7	950	4.3	285	4.3
25-34	20,308	4.7	2,749	5.0	812	4.6
35-44	16,809	4.5	2,487	5.5	681	4.4
45-54	13,485	5.2	1,898	6.7	449	4.7
55-64	10,907	6.7	1,338	8.6	281	6.5
65+	6,234	13.5	560	14.6	90	9.5

[*]Numbers not reported for "unknown" or "not classified" categories.

Table US-7. *Number and Average Annual Rate[*] (per 100,000 workers) of Traumatic Occupational Fatalities by Cause of Death and Sex, US, 1980-1995.*

CAUSE OF DEATH	TOTAL		MALE		FEMALE	
	No.	Rate	No.	Rate	No.	Rate
Motor Vehicle	21,715	1.2	20,175	2.0	1,539	0.2
Homicide	12,863	0.7	10,302	1.0	2,560	0.3
Machine	12,334	0.7	12,053	1.2	281	< 0.1
Fall	9,070	0.5	8,760	0.9	308	< 0.1
Electrocution	6,233	0.3	6,190	0.6	43	< 0.1
Struck by Falling Object	5,984	0.3	5,917	0.6	67	< 0.1
Air Transport	3,261	0.2	3,043	0.3	218	< 0.1
Suicide	3,155	0.2	2,907	0.3	248	< 0.1
Nature/Environment	2,394	0.1	2,280	0.2	114	< 0.1
Explosion	2,344	0.1	2,254	0.2	90	< 0.1
Flying Object/Caught In	2,172	0.1	2,130	0.2	42	< 0.1
Water Transport	1,813	0.1	1,779	0.2	34	< 0.1
Suffocation	1,715	0.1	1,674	0.2	41	< 0.1
Fire	1,591	0.1	1,449	0.1	142	< 0.1
Poisoning	1,455	0.1	1,389	0.1	66	< 0.1
Drowning	1,358	0.1	1,292	0.1	66	< 0.1
Rail Transport	661	< 0.1	650	0.1	11	< 0.1
Other	2,622	0.1	2,461	0.2	159	< 0.1
Unknown/Undetermined	598	---	549	---	49	---

[*] Rates not calculated for “unknown” or “not classified” categories.

Table US-8. *Number[*] of Traumatic Occupational Fatalities by Cause of Death and Year, US, 1980-1995.*

CAUSE OF DEATH	YEAR OF DEATH															
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Motor Vehicle	1,639	1,544	1,326	1,333	1,523	1,426	1,246	1,350	1,407	1,463	1,300	1,104	1,129	1,268	1,338	1,319
Homicide	913	935	854	719	657	750	681	674	714	696	735	901	888	951	928	867
Machine	979	1,025	956	798	815	837	772	826	739	745	699	678	664	623	580	598
Fall	702	699	608	545	570	635	523	576	570	553	587	491	446	476	553	536
Electrocution	575	509	498	439	484	399	440	406	381	329	320	311	270	274	294	304
Struck by Falling Object	476	442	426	383	407	431	428	420	350	371	355	341	286	295	310	263
Air Transport	283	262	251	199	236	232	201	224	163	191	141	162	180	188	179	169
Suicide	151	164	197	167	182	223	189	242	212	206	185	198	197	208	205	229
Nature/Environment	174	174	159	152	143	120	136	162	157	140	123	126	157	161	156	154
Explosion	201	254	162	166	159	199	134	111	133	159	143	112	105	102	99	105
Flying Object/Caught In	203	187	141	151	155	139	140	137	152	134	128	99	100	91	115	100
Water Transport	153	135	124	140	115	137	93	89	120	137	125	108	101	100	69	67
Suffocation	149	140	131	100	115	134	118	122	110	86	101	75	79	81	82	92
Fire	161	113	123	85	156	136	93	78	109	87	87	118	53	46	77	69
Poisoning	119	121	92	80	110	101	84	89	97	111	77	61	80	74	90	69
Drowning	109	88	98	99	102	76	77	86	66	93	77	96	66	82	79	64
Rail Transport	74	43	46	45	45	34	44	56	35	45	29	29	25	46	36	29
Other[†]	226	159	129	143	115	164	151	140	167	107	137	179	181	190	190	244

[*]Numbers not reported for "unknown" or "not classified" categories.

[†]For the purpose of cross-classification, the "Other" category contains 47 cases coded as E970-E978 and 45 in E990-E999.

Table US-9. *Rate (per 100,000 workers) of Traumatic Occupational Fatalities by Cause of Death and Year, US, 1980-1995.*

CAUSE OF DEATH	YEAR OF DEATH															
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Motor Vehicle	1.7	1.5	1.3	1.3	1.5	1.3	1.1	1.2	1.2	1.2	1.1	0.9	1.0	1.1	1.1	1.1
Homicide	0.9	0.9	0.9	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.8	0.8	0.8	0.8	0.7
Machine	1.0	1.0	1.0	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5
Fall	0.7	0.7	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
Electrocution	0.6	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Struck by Falling Object	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2
Air Transport	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1
Suicide	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nature/Environment	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Explosion	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Flying Object/Caught In	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Water Transport	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Suffocation	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Fire	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	< 0.1	< 0.1	0.1	0.1
Poisoning	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Drowning	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Rail Transport	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Other	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2

Table US-10. *Number[*] and Average Annual Rate (per 100,000 workers) of Traumatic Occupational Fatalities by Cause of Death and Race, US, 1980-1995.*

CAUSE OF DEATH	RACE					
	WHITE		BLACK		OTHER	
	No.	Rate	No.	Rate	No.	Rate
Motor Vehicle	19,128	1.2	2,139	1.2	359	0.7
Homicide	9,138	0.6	2,479	1.4	1,106	2.0
Machine	11,028	0.7	1,044	0.6	174	0.3
Fall	7,862	0.5	835	0.5	175	0.3
Electrocution	5,696	0.4	444	0.3	51	0.1
Struck by Falling Object	5,075	0.3	769	0.4	70	0.1
Air Transport	3,140	0.2	57	< 0.1	51	0.1
Suicide	2,855	0.2	179	0.1	103	0.2
Nature/Environment	2,072	0.1	255	0.1	41	0.1
Explosion	2,025	0.1	264	0.1	41	0.1
Flying Object/Caught In	1,847	0.1	256	0.1	41	0.1
Water Transport	1,355	0.1	197	0.1	236	0.4
Suffocation	1,504	0.1	172	0.1	26	< 0.1
Fire	1,308	0.1	226	0.1	30	0.1
Poisoning	1,254	0.1	162	0.1	23	< 0.1
Drowning	1,002	0.1	274	0.2	61	0.1
Rail Transport	561	< 0.1	81	< 0.1	8	< 0.1
Other	2,153	0.1	370	0.2	71	0.1

[*]Numbers not reported for “unknown” or “not classified” categories.

Table US-11. *Number*[*†] *of Traumatic Occupational Fatalities by Cause of Death and Age Group, US, 1980-1995.*

CAUSE OF DEATH	AGE GROUP (IN YEARS)							
	16-17	18-19	20-24	25-34	35-44	45-54	55-64	65+
Motor Vehicle	223	567	2,235	5,708	4,757	3,961	2,950	1,298
Homicide	113	312	1,314	3,379	3,031	2,207	1,572	908
Machine	143	392	1,261	2,591	2,089	1,911	2,038	1,906
Fall	53	187	810	2,072	1,776	1,678	1,619	867
Electrocution	92	265	1,094	2,223	1,332	735	385	104
Struck by Falling Object	34	157	596	1,473	1,355	1,161	827	380
Air Transport	4	18	258	1,035	943	636	301	62
Suicide	19	61	282	626	752	668	536	210
Nature/Environment	30	66	231	538	523	374	360	265
Explosion	15	59	249	698	612	391	251	68
Flying Object/Caught In	20	63	283	565	459	382	295	105
Water Transport	16	60	295	568	393	267	164	45
Suffocation	30	76	220	502	363	255	188	77
Fire	10	33	165	441	331	268	194	143
Poisoning	23	56	198	467	350	198	110	53
Drowning	33	60	235	380	264	169	151	65
Rail Transport	---	10	29	145	174	163	129	10
Other	26	52	201	531	548	466	478	316

[*]Numbers not reported for cells with less than 3 deaths.
[†]Numbers not reported for “unknown” or “not classified” categories.

Table US-12. *Average Annual Rate[*] (per 100,000 workers) of Traumatic Occupational Fatalities by Cause of Death and Age Group, US, 1980-1995.*

CAUSE OF DEATH	AGE GROUP (IN YEARS)							
	16-17	18-19	20-24	25-34	35-44	45-54	55-64	65+
Motor Vehicle	0.5	0.9	1.0	1.1	1.1	1.3	1.6	2.5
Homicide	0.3	0.5	0.6	0.7	0.7	0.7	0.9	1.8
Machine	0.4	0.6	0.6	0.5	0.5	0.6	1.1	3.7
Fall	0.1	0.3	0.4	0.4	0.4	0.6	0.9	1.7
Electrocution	0.2	0.4	0.5	0.4	0.3	0.2	0.2	0.2
Struck by Falling Object	0.1	0.2	0.3	0.3	0.3	0.4	0.5	0.7
Air Transport	< 0.1	< 0.1	0.1	0.2	0.2	0.2	0.2	0.1
Suicide	< 0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4
Nature/Environment	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5
Explosion	< 0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Flying Object/Caught In	< 0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Water Transport	< 0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Suffocation	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Fire	< 0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
Poisoning	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Drowning	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Rail Transport	---	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.1	< 0.1
Other	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.6

[*]Rates not calculated for categories with less than 3 deaths or less than 20,000 employed.

Table US-13. *Number and Average Annual Rate[*] (per 100,000 workers) of Traumatic Occupational Fatalities by Industry Division, US, 1980-1995.*

INDUSTRY DIVISION	NUMBER OF DEATHS	RATE PER 100,000
Construction	17,140	15.3
Trans/Comm/PU	15,604	12.6
Manufacturing	14,034	4.2
Ag/For/Fish	10,737	19.6
Services	10,056	1.7
Retail Trade	8,631	2.9
Public Admin	4,343	5.1
Mining	3,995	30.4
Wholesale Trade	2,741	3.8
Finance/Insur/RE	1,271	1.1
Not Classified	4,786	---

[*] Rates not calculated for “unknown” or “not classified” categories.

Table US-14. *Number* and Rate (per 100,000 workers) of Traumatic Occupational Fatalities by Industry Division and Year, US, 1980-1995.*

INDUSTRY DIVISION		YEAR OF DEATH															
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Ag/For/Fish	No.	821	794	744	658	717	752	653	702	645	683	603	615	598	608	587	557
	Rate	23.7	23.0	20.8	18.6	20.7	22.5	19.5	20.6	19.4	20.2	18.0	18.1	17.7	18.7	16.4	15.5
Mining	No.	414	505	368	289	357	277	218	174	162	193	219	175	147	170	168	159
	Rate	44.0	46.8	35.8	31.4	37.3	29.5	24.8	21.3	21.5	26.8	30.0	23.9	22.1	25.4	25.1	25.4
Construction	No.	1,271	1,230	1,087	1,035	1,113	1,190	1,102	1,197	1,098	1,104	1,077	893	890	885	967	1,001
	Rate	21.0	20.8	18.9	16.8	16.7	17.0	15.1	16.1	14.4	14.4	14.0	12.6	12.7	12.3	12.9	13.1
Manufacturing	No.	1,135	1,089	952	884	967	926	893	898	885	866	838	793	736	713	727	732
	Rate	5.3	5.1	4.7	4.4	4.6	4.4	4.3	4.3	4.2	4.0	4.0	3.9	3.7	3.6	3.6	3.6
Trans/Comm/PU	No.	1,223	1,139	1,078	961	1,041	1,101	938	918	970	987	847	853	828	927	897	896
	Rate	19.1	17.5	16.5	13.8	14.1	14.6	12.3	11.6	12.0	12.2	10.4	10.4	10.0	10.9	10.3	10.3
Wholesale Trade	No.	195	193	165	170	176	182	167	159	172	152	167	169	153	169	177	175
	Rate	5.1	4.9	4.0	3.9	4.2	4.2	3.8	3.5	3.8	3.3	3.6	3.6	3.2	3.7	3.8	3.5
Retail Trade	No.	625	618	567	485	460	506	439	489	497	474	544	581	574	634	631	507
	Rate	3.9	3.8	3.4	2.9	2.6	2.8	2.4	2.6	2.6	2.4	2.8	3.0	2.9	3.1	3.0	2.4
Finance/Insur/RE	No.	75	91	71	72	84	63	76	84	73	77	75	89	76	85	88	92
	Rate	1.3	1.5	1.1	1.1	1.2	0.9	1.0	1.1	0.9	1.0	0.9	1.1	1.0	1.1	1.1	1.2
Services	No.	714	642	649	597	590	621	563	595	635	625	606	656	596	642	678	647
	Rate	2.6	2.2	2.2	1.9	1.8	1.9	1.6	1.7	1.7	1.6	1.6	1.7	1.5	1.5	1.6	1.5
Public Admin	No.	323	312	284	290	262	249	270	283	295	254	213	183	246	261	273	345
	Rate	6.2	6.0	5.4	6.2	5.5	5.0	5.3	5.4	5.4	4.6	3.8	3.2	4.4	4.5	4.7	5.8

*Numbers not reported for "unknown" or "not classified" categories.

Table US-15. *Number*[*†] *of Traumatic Occupational Fatalities by Cause of Death and Industry Division, US, 1980-1995.*

CAUSE OF DEATH	INDUSTRY DIVISION									
	AG/FOR/ FISH	MINING	CONSTRUC-TION	MANUFAC-TURING	TRANS/ COMM/ PU	WHOLESALE TRADE	RETAIL TRADE	FINANCE/ INSUR/RE	SERVICES	PUBLIC ADMIN
Motor Vehicle	1,767	664	2,846	2,100	7,268	1,061	1,302	277	2,009	1,350
Homicide	281	36	493	887	1,258	232	4,917	429	2,329	1,193
Machine	3,625	952	2,272	2,616	747	327	319	65	641	194
Fall	573	227	4,456	1,115	583	178	311	108	913	198
Electrocution	655	276	2,293	813	1,018	126	142	32	481	111
Struck by Falling Object	597	539	1,261	2,043	449	140	147	13	474	95
Air Transport	287	81	116	312	1,327	68	90	76	451	321
Suicide	241	24	263	391	251	119	526	133	815	186
Nature/Environment	584	173	434	461	217	47	74	13	207	55
Explosion	87	312	354	719	209	103	118	11	274	45
Flying Object/Caught In	176	173	428	654	286	70	71	14	151	34
Water Transport	728	63	115	107	557	14	35	---	83	37
Suffocation	220	102	672	214	96	84	53	7	122	37
Fire	125	93	220	446	104	45	104	12	197	150
Poisoning	135	101	209	306	160	31	86	13	269	36
Drowning	325	76	212	115	203	16	27	17	201	61
Rail Transport	12	15	24	64	490	13	8	---	21	7
Other	262	67	408	596	285	55	227	34	331	186

[*]Numbers not reported for cells with less than 3 deaths.

[†]Numbers not reported for "unknown" or "not classified" categories.

Table US-16. *Average Annual Rate[*] (per 100,000 workers) of Traumatic Occupational Fatalities by Cause of Death and Industry Division, US, 1980-1995.*

CAUSE OF DEATH	INDUSTRY DIVISION									
	AG/FOR/ FISH	MINING	CONSTRUC-TION	MANUFAC-TURING	TRANS/ COMM/ PU	WHOLESALE TRADE	RETAIL TRADE	FINANCE/ INSUR/RE	SERVICES	PUBLIC ADMIN
Motor Vehicle	3.2	5.1	2.5	0.6	5.9	1.5	0.4	0.2	0.3	1.6
Homicide	0.5	0.3	0.4	0.3	1.0	0.3	1.7	0.4	0.4	1.4
Machine	6.6	7.3	2.0	0.8	0.6	0.5	0.1	0.1	0.1	0.2
Fall	1.0	1.7	4.0	0.3	0.5	0.2	0.1	0.1	0.2	0.2
Electrocution	1.2	2.1	2.1	0.2	0.8	0.2	< 0.1	< 0.1	0.1	0.1
Struck by Falling Object	1.1	4.1	1.1	0.6	0.4	0.2	< 0.1	< 0.1	0.1	0.1
Air Transport	0.5	0.6	0.1	0.1	1.1	0.1	< 0.1	0.1	0.1	0.4
Suicide	0.4	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2
Nature/Environment	1.1	1.3	0.4	0.1	0.2	0.1	< 0.1	< 0.1	< 0.1	0.1
Explosion	0.2	2.4	0.3	0.2	0.2	0.1	< 0.1	< 0.1	< 0.1	0.1
Flying Object/Caught In	0.3	1.3	0.4	0.2	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Water Transport	1.3	0.5	0.1	< 0.1	0.5	< 0.1	< 0.1	---	< 0.1	< 0.1
Suffocation	0.4	0.8	0.6	0.1	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fire	0.2	0.7	0.2	0.1	0.1	0.1	< 0.1	< 0.1	< 0.1	0.2
Poisoning	0.2	0.8	0.2	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Drowning	0.6	0.6	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.1
Rail Transport	< 0.1	0.1	< 0.1	< 0.1	0.4	< 0.1	< 0.1	---	< 0.1	< 0.1
Other	0.5	0.5	0.4	0.2	0.2	0.1	0.1	< 0.1	0.1	0.2

[*]Rates not calculated for categories with less than 3 deaths or less than 20,000 employed.

Table US-17. *Number[*†] and Average Annual Rate[‡] (per 100,000 workers) of Traumatic Occupational Fatalities by Industry Division and Age Group, US, 1983-1995.*

INDUSTRY DIVISION		AGE GROUP (IN YEARS)							
		16-17	18-19	20-24	25-34	35-44	45-54	55-64	65+
Ag/For/Fish	No.	48	196	734	1,609	1,362	1,201	1,329	1,884
	Rate	2.8	10.5	14.7	15.1	15.2	18.1	22.8	48.0
Mining	No.	6	39	321	939	651	428	230	91
	Rate	28.0	35.5	42.5	29.0	21.1	23.9	24.8	59.5
Construction	No.	51	349	1,559	3,895	3,113	2,275	1,694	608
	Rate	6.2	12.9	13.3	12.7	13.0	15.5	19.9	36.4
Manufacturing	No.	17	202	1,011	2,750	2,548	2,006	1,671	651
	Rate	1.2	4.0	3.7	3.4	3.5	4.0	5.8	16.0
Trans/Comm/PU	No.	8	125	872	3,327	3,295	2,451	1,618	460
	Rate	2.4	10.0	10.4	10.9	10.4	12.0	16.0	30.9
Wholesale Trade	No.	5	56	193	593	512	395	287	144
	Rate	1.2	4.7	3.1	3.2	3.3	4.0	4.7	8.2
Retail Trade	No.	35	215	762	1,624	1,500	1,171	931	574
	Rate	0.2	0.9	1.7	2.6	3.4	4.0	4.8	8.0
Finance/Insur/RE	No.	---	9	59	231	220	223	185	107
	Rate	---	0.5	0.5	0.8	0.9	1.3	1.9	3.2
Services	No.	21	152	778	2,075	1,838	1,434	1,121	632
	Rate	0.3	1.1	1.5	1.6	1.4	1.7	2.2	3.8
Public Admin	No.	---	33	238	1,021	929	625	421	157
	Rate	---	5.6	5.4	5.3	4.3	4.2	5.6	9.4

[*]Numbers not reported for cells with less than 3 deaths.

[†]Numbers not reported for "unknown" or "not classified" categories.

[‡]Rates not calculated for categories with less than 3 deaths or less than 20,000 employed.

Table US-18. *Number and Average Annual Rate[*] (per 100,000 workers) of Traumatic Occupational Fatalities by Detailed Industry Groupings, US, 1983-1995.*

DETAILED INDUSTRY	NO. OF DEATHS	RATE
Ag/For/Fish		
Ag Production	6,139	20.0
Ag Services	1,183	10.1
Forestry & Fisheries	1,056	47.7
Mining		
Metal/Coal/Nonmetal Mining	1,262	30.0
Oil and Gas Extraction	1,446	24.6
Construction	13,552	14.3
Manufacturing		
Food & Kindred Prod	1,015	4.5
Textile Mill Prod	227	2.5
Apparel & Other Textile Pr	84	0.6
Paper & Allied Products	319	3.5
Printing/Publishing/Allied	347	1.5
Chemical/Petroleum/Rubber	1,099	3.9
Lumber & Wood	2,843	29.8
Furniture	141	1.7
Stone/Clay/Concrete	459	6.0
Primary Metals	1,006	9.7
Fabricated Metals	453	2.7
Mach, Ex Elect	640	2.0
Elect Mach, Equip Supplies	346	1.3
Motor Vehicles Equip	332	2.2
Aircraft & Parts	153	2.0
Other Transport Equip	337	3.6
Prof & Photo Equip/Watches	50	0.5
Toys/Amusement/Sporting Goods	15	0.8
Misc & NEC Industries	992	12.1
Trans/Comm/PU		
Trucking/Warehousing/Storage	5,966	23.3
Other Transportation	3,936	10.2
Telephone Communications	222	1.5
Other Communications	204	3.5
Electric Light and Power	814	9.4
Other Utility/Sanitary Service	1,022	9.0
Wholesale Trade	2,188	3.7

DETAILED INDUSTRY	NO. OF DEATHS	RATE
Retail Trade		
Food Stores	1,771	4.3
Motor Veh/Auto Supply Dealer	1,138	4.2
Apparel & Accessory Stores	126	1.0
Eating & Drinking Places	1,482	2.0
Other Retail Trade	2,304	2.4
Finance/Insur/RE		
Banking and Other Finance	288	0.7
Insurance and Real Estate	746	1.3
Services		
Business Services	1,583	2.6
Automobile and Repair Services	2,086	7.9
Private Household Services	162	1.1
Pers Serv Exc Priv Household	912	2.1
Entertainment & Rec Services	684	3.3
Hospitals	390	0.6
Health Services, Exc Hosp	405	0.7
Educational Services	823	0.7
Other Professional Services	1,006	1.1
Public Admin		
Justice, Pub Order, & Safety	1,990	7.9
Admin of Hum Res Programs	47	0.5
National Sec/Internal Affairs	311	2.9
Other Pub Admin	1,035	4.1
Not Classified	3,419	---

[*] Rates not calculated for "unknown" or "not classified" categories.

Table US-19. *Number of Traumatic Occupational Fatalities by Selected Detailed Industry Groupings[*] and Year, US, 1983-1995.*

DETAILED INDUSTRY	YEAR OF DEATH												
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Forestry & Fisheries	67	75	93	66	73	77	125	85	87	92	81	77	58
Metal/Coal/Nonmetal Mining	113	158	92	113	91	69	88	100	99	89	93	70	87
Lumber & Wood MFG	238	237	246	251	259	245	250	224	211	204	163	158	157
Oil and Gas Extraction	176	199	185	105	83	93	105	119	76	58	77	98	72
Trucking/Warehousing/Storage	476	545	551	480	460	533	493	406	376	371	405	428	442
Ag Production	523	549	586	502	541	494	449	420	430	429	426	401	389
Construction	1,035	1,113	1,190	1,102	1,197	1,098	1,104	1,077	893	890	885	967	1,001
Other Transportation	295	301	326	287	291	270	297	284	330	309	354	306	286
Ag Services	68	93	73	85	88	74	109	98	98	77	101	109	110
Primary Metals MFG	93	95	88	92	90	89	75	73	62	62	68	55	64
Electric Light and Power	74	79	87	78	64	74	78	62	39	50	42	37	50
Other Utility/Sanitary Service	80	91	103	66	72	61	89	66	75	70	87	87	75
Automobile and Repair Services	171	143	171	150	159	181	166	165	157	129	178	130	186
Justice, Pub Order, & Safety	150	138	153	153	159	183	168	120	123	147	167	152	177
Stone/Clay/Concrete MFG	48	54	59	41	42	29	26	25	30	30	30	21	24

[*] The selected groupings had the highest rates per 100,000 workers.

Table US-20. *Rate (per 100,000 workers) of Traumatic Occupational Fatalities by Selected Detailed Industry Groupings* and Year, US, 1983-1995.*

DETAILED INDUSTRY	YEAR OF DEATH												
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Forestry & Fisheries	41.3	49.5	58.6	35.2	38.2	49.8	68.3	48.3	54.1	52.1	43.9	44.2	37.8
Metal/Coal/Nonmetal Mining	33.0	46.7	26.4	32.8	26.6	21.3	26.2	29.1	31.7	29.8	30.8	24.9	30.2
Lumber & Wood MFG	35.9	33.5	35.6	36.2	34.7	32.0	31.6	28.5	29.4	29.4	22.8	21.4	19.2
Oil and Gas Extraction	30.1	32.5	31.2	19.4	17.4	21.7	27.4	30.8	17.9	15.9	20.6	25.5	21.7
Trucking/Warehousing/Storage	31.1	32.2	31.1	26.9	24.4	27.2	25.0	20.2	18.3	17.9	18.6	18.3	19.0
Ag Production	19.0	20.5	23.7	20.9	22.8	21.5	19.8	19.0	18.9	19.1	20.5	17.2	16.5
Construction	16.7	16.6	17.0	15.1	16.0	14.4	14.3	13.8	12.5	12.5	12.1	12.9	13.0
Other Transportation	11.6	11.5	12.1	10.1	9.9	9.0	9.7	9.3	11.0	10.3	11.2	9.4	8.8
Ag Services	10.4	14.3	10.4	11.1	10.4	8.5	11.7	9.6	9.7	7.5	9.7	10.1	10.0
Primary Metals MFG	11.6	11.1	10.8	11.9	11.2	11.2	9.0	8.6	7.9	8.0	9.3	7.3	8.2
Electric Light and Power	11.6	12.0	13.3	12.1	9.4	11.0	11.8	8.8	5.5	7.4	6.5	5.8	7.9
Other Utility/Sanitary Service	9.7	10.8	12.4	8.1	8.4	7.0	10.6	7.5	8.6	7.4	9.2	9.5	8.5
Automobile and Repair Services	10.1	7.9	8.7	7.9	8.2	9.2	8.1	7.8	7.5	6.0	8.2	5.8	8.5
Justice, Pub Order, & Safety	9.5	8.5	9.2	8.9	8.6	9.5	8.7	6.0	5.9	7.0	7.7	6.7	7.7
Stone/Clay/Concrete MFG	8.7	9.2	10.2	6.6	7.0	4.7	4.1	4.0	5.2	5.5	5.6	3.8	4.1

* The selected groupings had the highest rates per 100,000 workers.

Table US-21. *Number of Traumatic Occupational Fatalities by Selected Detailed Industry Groupings[*] and Cause of Death, US, 1983-1995.*

DETAILED INDUSTRY	CAUSE OF DEATH									
	MOTOR VEHICLE	HOMICIDE	MACHINE	FALL	ELECTRO-CUTION	STRUCK BY FALLING	AIR TRANSPORT	SUICIDE	EXPLOSION	NATURE/ ENVIRON
Forestry & Fisheries	51	22	36	20	20	33	28	16	3	30
Metal/Coal/Nonmetal Mining	191	10	271	57	85	279	9	9	77	61
Lumber & Wood MFG	355	38	535	87	65	1,236	25	20	18	118
Oil and Gas Extraction	280	17	388	85	104	70	32	13	125	56
Trucking/Warehousing/Storage	4,532	204	224	114	98	213	19	69	65	67
Ag Production	1,164	141	2,568	259	305	340	52	150	58	381
Construction	2,352	374	1,784	3,543	1,754	970	85	226	272	354
Other Transportation	539	734	186	145	51	73	962	80	31	59
Ag Services	213	47	133	176	153	103	131	34	6	50
Primary Metals MFG	95	41	233	112	56	88	5	16	60	35
Electric Light and Power	80	15	40	74	445	20	12	9	24	13
Other Utility/Sanitary Service	390	45	96	48	90	47	10	32	42	27
Automobile and Repair Services	447	282	174	105	126	232	13	187	133	45
Justice, Pub Order, & Safety	665	746	21	56	22	18	97	93	16	13
Stone/Clay/Concrete MFG	94	20	93	45	46	38	3	18	12	13

[*] The selected groupings had the highest rates per 100,000 workers.

Table US-22. *Average Annual Rate (per 100,000 workers) of Traumatic Occupational Fatalities by Selected Detailed Industry Groupings* and Cause of Death, US, 1983-1995.*

DETAILED INDUSTRY	CAUSE OF DEATH									
	MOTOR VEHICLE	HOMICIDE	MACHINE	FALL	ELECTRO-CUTION	STRUCK BY FALLING	AIR TRANSPORT	SUICIDE	EXPLOSION	NATURE/ ENVIRON
Forestry & Fisheries	2.3	1.0	1.6	0.9	0.9	1.5	1.3	0.7	0.1	1.4
Metal/Coal/Nonmetal Mining	4.5	0.2	6.5	1.4	2.0	6.6	0.2	0.2	1.8	1.5
Lumber & Wood MFG	3.7	0.4	5.6	0.9	0.7	13.0	0.3	0.2	0.2	1.2
Oil and Gas Extraction	4.8	0.3	6.6	1.4	1.8	1.2	0.5	0.2	2.1	1.0
Trucking/Warehousing/Storage	17.7	0.8	0.9	0.4	0.4	0.8	0.1	0.3	0.3	0.3
Ag Production	3.8	0.5	8.4	0.8	1.0	1.1	0.2	0.5	0.2	1.2
Construction	2.5	0.4	1.9	3.7	1.9	1.0	0.1	0.2	0.3	0.4
Other Transportation	1.4	1.9	0.5	0.4	0.1	0.2	2.5	0.2	0.1	0.2
Ag Services	1.8	0.4	1.1	1.5	1.3	0.9	1.1	0.3	0.1	0.4
Primary Metals MFG	0.9	0.4	2.2	1.1	0.5	0.8	< 0.1	0.2	0.6	0.3
Electric Light and Power	0.9	0.2	0.5	0.9	5.2	0.2	0.1	0.1	0.3	0.2
Other Utility/Sanitary Service	3.5	0.4	0.8	0.4	0.8	0.4	0.1	0.3	0.4	0.2
Automobile and Repair Services	1.7	1.1	0.7	0.4	0.5	0.9	< 0.1	0.7	0.5	0.2
Justice, Pub Order, & Safety	2.6	3.0	0.1	0.2	0.1	0.1	0.4	0.4	0.1	0.1
Stone/Clay/Concrete MFG	1.2	0.3	1.2	0.6	0.6	0.5	< 0.1	0.2	0.2	0.2

* The selected groupings had the highest rates per 100,000 workers.

Table US-23. *Number and Average Annual Rate[*] (per 100,000 workers) of Traumatic Occupational Fatalities by Occupation Division, US, 1980-1995.*

OCCUPATION DIVISION	NUMBER OF DEATHS	RATE PER 100,000
Crafts	19,296	9.2
Transport	16,259	21.6
Farm/For/Fish	12,381	21.9
Laborers	10,251	13.7
Service	6,653	2.8
Sales	6,367	3.0
Exec/Adm/Mgr	5,778	2.7
Mach Operators	4,523	3.5
Prof/Spec	3,710	1.6
Tech/Support	2,395	4.3
Clerical	1,944	0.7
Not Classified	3,781	---

[*] Rates not calculated for “unknown” or “not classified” categories.

Table US-24. *Number* and Rate (per 100,000 workers) of Traumatic Occupational Fatalities by Occupation Division and Year, US, 1980-1995.*

OCCUPATION DIVISION		YEAR OF DEATH															
		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Exec/Adm/Mgr	No.	351	369	357	352	319	356	317	353	370	340	386	373	331	387	394	423
	Rate	3.4	3.5	3.4	3.3	2.8	2.9	2.5	2.7	2.6	2.3	2.6	2.5	2.2	2.5	2.4	2.5
Prof/Spec	No.	284	266	239	218	214	244	223	207	202	216	196	237	227	251	240	246
	Rate	2.4	2.2	1.9	1.7	1.6	1.8	1.6	1.4	1.3	1.4	1.2	1.5	1.4	1.5	1.4	1.4
Tech/Support	No.	199	181	150	145	149	171	140	145	139	160	139	138	129	125	144	141
	Rate	7.0	6.1	5.0	4.7	4.7	5.3	4.2	4.3	3.9	4.4	3.6	3.6	3.0	3.1	3.7	3.6
Sales	No.	451	432	414	384	362	390	315	361	359	363	360	402	436	466	469	403
	Rate	4.2	3.9	3.7	3.2	2.9	3.1	2.4	2.7	2.6	2.6	2.5	2.9	3.1	3.3	3.2	2.7
Clerical	No.	124	134	119	118	106	128	124	124	118	137	118	97	105	106	155	131
	Rate	0.7	0.8	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.7	0.6	0.5	0.6	0.6	0.8	0.7
Service	No.	476	447	432	387	388	389	411	427	426	412	389	395	384	413	446	431
	Rate	3.6	3.4	3.2	2.8	2.7	2.7	2.8	2.8	2.8	2.6	2.5	2.5	2.4	2.5	2.6	2.5
Farm/For/Fish	No.	923	889	862	802	840	888	788	841	772	796	696	701	672	665	640	606
	Rate	25.4	24.1	23.0	21.7	23.3	25.6	22.9	24.0	22.5	23.3	20.4	20.3	19.4	20.0	17.6	16.6
Crafts	No.	1,533	1,581	1,393	1,159	1,293	1,265	1,171	1,162	1,180	1,129	1,152	1,074	1,013	1,076	1,034	1,081
	Rate	12.5	12.9	11.8	9.4	9.9	9.5	8.7	8.6	8.6	8.2	8.4	8.2	7.7	8.1	7.7	8.0
Mach Operators	No.	375	358	312	272	297	303	255	285	247	285	268	267	242	230	252	275
	Rate	4.2	4.1	4.0	3.5	3.7	3.9	3.2	3.6	3.0	3.5	3.3	3.5	3.2	3.1	3.2	3.5
Transport	No.	1,259	1,241	1,029	1,042	1,139	1,098	964	955	1,054	998	947	900	853	943	915	922
	Rate	28.0	28.3	24.5	24.8	25.5	24.2	21.1	20.3	21.8	20.4	19.5	18.5	17.5	18.8	17.8	17.8
Laborers	No.	933	777	732	640	711	721	654	706	630	611	598	485	504	470	558	521
	Rate	19.9	16.6	16.3	15.4	16.1	16.2	14.0	14.8	12.9	12.5	12.3	10.6	11.1	10.2	11.2	10.4

*Numbers not reported for "unknown" or "not classified" categories.

Table US-25. *Number* of Traumatic Occupational Fatalities by Cause of Death and Occupation Division, US, 1980-1995.*

CAUSE OF DEATH	OCCUPATION DIVISION										
	EXEC/ ADM/MGR	PROF/ SPEC	TECH/ SUPPORT	SALES	CLERICAL	SERVICE	FARM/ FOR/FISH	CRAFTS	MACH OPERATORS	TRANSPORT	LABORERS
Motor Vehicle	1,072	801	291	1,223	562	1,388	1,727	2,371	410	9,317	1,725
Homicide	1,703	600	85	3,203	594	2,340	281	896	285	1,082	1,085
Machine	404	228	84	243	139	274	3,932	2,404	955	1,702	1,528
Fall	480	322	78	235	146	569	603	4,021	512	378	1,445
Electrocution	229	143	91	89	32	197	673	2,980	279	459	807
Struck by Falling Object	192	84	28	118	44	109	1,814	1,579	382	615	868
Air Transport	388	488	1,422	171	44	205	112	237	19	36	33
Suicide	468	305	58	500	103	371	231	511	112	170	143
Nature/Environment	66	99	18	60	42	87	682	521	162	241	328
Explosion	137	66	57	73	24	91	93	849	379	180	311
Flying Object/Caught In	68	44	12	42	29	79	350	554	237	301	376
Water Transport	31	89	23	21	7	44	691	151	52	531	119
Suffocation	84	44	10	45	11	62	230	391	99	159	495
Fire	106	47	26	68	28	219	123	422	203	104	174
Poisoning	87	89	37	55	20	126	133	408	122	125	169
Drowning	56	104	13	23	17	126	326	204	58	157	199
Rail Transport	16	14	7	3	17	15	14	94	34	345	91
Other	157	116	39	140	63	275	310	600	205	270	293

*Numbers not reported for "unknown" or "not classified" categories.

Table US-26. *Average Annual Rate (per 100,000 workers) of Traumatic Occupational Fatalities by Cause of Death and Occupation Division, US, 1980-1995.*

CAUSE OF DEATH	OCCUPATION DIVISION										
	EXEC/ ADM/MGR	PROF/ SPEC	TECH/ SUPPORT	SALES	CLERICAL	SERVICE	FARM/ FOR/FISH	CRAFTS	MACH OPERATORS	TRANSPORT	LABORERS
Motor Vehicle	0.5	0.3	0.5	0.6	0.2	0.6	3.1	1.1	0.3	12.4	2.3
Homicide	0.8	0.3	0.2	1.5	0.2	1.0	0.5	0.4	0.2	1.4	1.5
Machine	0.2	0.1	0.2	0.1	< 0.1	0.1	7.0	1.1	0.7	2.3	2.0
Fall	0.2	0.1	0.1	0.1	0.1	0.2	1.1	1.9	0.4	0.5	1.9
Electrocution	0.1	0.1	0.2	< 0.1	< 0.1	0.1	1.2	1.4	0.2	0.6	1.1
Struck by Falling Object	0.1	< 0.1	0.1	0.1	< 0.1	< 0.1	3.2	0.8	0.3	0.8	1.2
Air Transport	0.2	0.2	2.5	0.1	< 0.1	0.1	0.2	0.1	< 0.1	< 0.1	< 0.1
Suicide	0.2	0.1	0.1	0.2	< 0.1	0.2	0.4	0.2	0.1	0.2	0.2
Nature/Environment	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1.2	0.2	0.1	0.3	0.4
Explosion	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	0.2	0.4	0.3	0.2	0.4
Flying Object/Caught In	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.3	0.2	0.4	0.5
Water Transport	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1.2	0.1	< 0.1	0.7	0.2
Suffocation	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.2	0.1	0.2	0.7
Fire	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.2	0.2	0.2	0.1	0.2
Poisoning	< 0.1	< 0.1	0.1	< 0.1	< 0.1	0.1	0.2	0.2	0.1	0.2	0.2
Drowning	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.6	0.1	< 0.1	0.2	0.3
Rail Transport	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.5	0.1
Other	0.1	< 0.1	0.1	0.1	< 0.1	0.1	0.5	0.3	0.2	0.4	0.4

Table US-27. *Number[*†] and Average Annual Rate[‡] (per 100,000 workers) of Traumatic Occupational Fatalities by Occupation Division and Age Group, US, 1983-1995.*

OCCUPATION DIVISION		AGE GROUP (IN YEARS)							
		16-17	18-19	20-24	25-34	35-44	45-54	55-64	65+
Exec/Adm/Mgr	No.	5	31	195	932	1,140	1,089	859	448
	Rate	2.8	3.5	1.8	1.9	2.0	2.7	4.0	8.3
Prof/Spec	No.	4	22	181	689	741	552	447	285
	Rate	0.8	1.8	1.4	1.2	1.2	1.4	2.3	5.3
Tech/Support	No.	---	11	156	589	532	352	182	43
	Rate	---	2.0	2.7	3.3	4.1	5.1	6.3	9.2
Sales	No.	16	85	358	988	1,167	1,004	869	580
	Rate	0.2	0.8	1.5	2.2	3.0	3.6	4.8	8.8
Clerical	No.	7	36	173	388	350	268	211	133
	Rate	0.3	0.5	0.5	0.6	0.6	0.7	0.9	2.3
Service	No.	13	101	594	1,586	1,243	843	609	308
	Rate	0.1	0.8	1.9	3.1	3.1	3.0	3.1	4.1
Farm/For/Fish	No.	54	237	872	1,973	1,676	1,436	1,513	1,931
	Rate	2.4	10.5	16.1	18.5	19.3	21.8	25.2	47.6
Crafts	No.	22	230	1,437	4,274	3,652	2,560	1,879	730
	Rate	2.6	6.7	7.8	7.8	7.9	8.5	11.0	24.9
Mach Operators	No.	7	82	379	951	832	593	460	174
	Rate	1.1	2.8	2.9	3.0	3.3	3.4	4.5	11.7
Transport	No.	14	162	1,008	3,519	3,248	2,535	1,774	460
	Rate	3.7	11.7	16.0	19.3	19.9	22.2	26.0	31.5
Laborers	No.	55	382	1,269	2,399	1,598	1,107	757	230
	Rate	1.2	6.1	10.0	14.5	15.6	17.8	19.8	23.6

[*]Numbers not reported for cells with less than 3 deaths.
[†]Numbers not reported for "unknown" or "not classified" categories.
[‡]Rates not calculated for categories with less than 3 deaths or less than 20,000 employed.

Table US-28. *Number and Average Annual Rate* (per 100,000 workers) of Traumatic Occupational Fatalities by Detailed Occupation Groupings, US, 1983-1995.*

DETAILED OCCUPATION	NO. OF DEATHS	RATE
Exec/Adm/Mgr		
Officials & Administrators, Public Admin	160	2.1
Other Executive, Admin & Managerial	4,037	3.2
Management Related Occupations	504	1.0
Prof/Spec		
Engineers	844	3.3
Mathematical and Computer Scientists	56	0.5
Natural Scientists	204	3.6
Health Diagnosing Occupations	193	1.8
Health Assessment and Treatment Occupations	237	0.8
Teachers, College and University	68	0.7
Teachers, Except College and University	388	0.8
Lawyers and Judges	147	1.5
Other Professional Specialty Occupations	784	1.6
Tech/Support		
Health Technologists and Technicians	119	0.7
Engineering and Science Technicians	462	3.1
Technicians, Exc Health/Engineering/Science	1,284	8.5
Sales		
Supervisors and Proprietors, Sales Occupations	2,834	5.8
Sales Reps, Finance and Business Services	405	1.4
Sales Reps, Commodities, Except Retail	359	1.8
Sales Workers, Retail & Personal Services	1,456	1.8
Sales Related Occupations	16	1.7
Clerical		
Supervisors, Administrative Support	74	0.8
Computer Equipment Operators	27	0.3
Secretaries, Stenographers, and Typists	184	0.3
Financial Records Processing	84	0.3
Mail and Message Distribution	318	2.7
Other Admin. Support, Including Clerical	880	0.8

DETAILED OCCUPATION	NO. OF DEATHS	RATE
Service		
Private Household Service Occupations	92	0.8
Protective Service	2,765	10.8
Food Service	652	0.9
Health Service	129	0.5
Cleaning and Building Service	1,331	3.5
Personal Service	329	1.1
Farm/For/Fish		
Farm Operators and Managers	4,646	27.1
Farm Workers and Related Occupations	2,439	9.3
Forestry and Fishing Occupations	2,622	112.4
Crafts		
Mechanics and Repairers	3,595	6.3
Construction Trades	7,691	12.0
Other Precision Production, Craft, and Repair	3,503	6.7
Mach Operators		
Machine Operators/Tenders, Except Precision	2,188	3.2
Fabricators, Assemblers, Inspectors, Samplers	1,290	3.7
Transport		
Motor Vehicle Operators	9,561	20.7
Other Transport and Material Moving Occ	3,169	19.8
Laborers		
Construction Laborers	3,726	39.5
Freight, Stock, & Materials Handlers	998	4.4
Other Handlers,Equip. Cleaner,Helper,Laborer	3,085	10.5
Other or Not Classified	2,621	---

* Rates not calculated for “unknown” or “not classified” categories.

Table US-29. *Number and Rate (per 100,000 workers) of Traumatic Occupational Fatalities by Selected Detailed Occupation Groupings* and Year, US, 1983-1995.*

DETAILED OCCUPATION		YEAR OF DEATH												
		1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Forestry and Fishing Occupations	No.	199	211	236	218	220	217	263	203	200	190	159	164	142
	Rate	109.1	130.1	143.3	114.5	125.5	127.2	148.2	103.3	113.5	109.7	81.8	89.6	76.5
Construction Laborers	No.	288	337	344	318	358	310	306	283	204	240	210	269	259
	Rate	48.6	50.3	49.9	42.7	46.2	38.7	40.5	35.5	28.3	35.5	30.8	36.4	33.2
Farm Operators and Managers	No.	396	421	435	394	422	375	339	308	320	326	320	297	293
	Rate	27.3	29.2	32.1	29.4	32.2	29.2	26.7	25.4	26.0	26.8	27.6	20.4	20.2
Motor Vehicle Operators	No.	749	846	833	735	691	824	737	678	672	641	706	707	742
	Rate	24.9	26.4	25.2	21.7	19.8	22.9	20.5	18.8	18.1	17.2	18.3	18.3	19.0
Other Transport and Material Movers	No.	293	293	265	229	264	230	261	269	228	212	237	208	180
	Rate	23.8	23.1	21.5	19.3	21.6	18.6	20.4	21.1	19.1	18.0	19.8	16.5	14.2
Construction Trades	No.	565	636	653	620	633	634	612	608	550	518	513	563	586
	Rate	13.1	13.8	13.7	12.5	12.6	12.4	11.9	11.7	11.3	10.7	10.1	11.2	11.5
Protective Service	No.	190	214	198	207	206	235	218	199	194	210	226	227	241
	Rate	11.4	12.7	11.5	11.6	10.8	12.1	11.2	9.9	9.3	9.9	10.5	10.1	10.8
Other Handler, Cleaner, Helper, Laborer	No.	279	293	297	265	278	242	214	242	190	202	197	204	182
	Rate	13.6	13.4	13.7	11.9	12.0	10.4	8.9	10.0	8.3	9.1	9.1	9.2	8.0
Farm Workers and Related Occ	No.	207	208	217	176	199	180	194	185	181	156	186	179	171
	Rate	9.9	10.3	11.1	9.2	9.8	9.1	9.8	9.0	8.5	7.3	9.1	9.0	8.4
Technicians, Exc Health/ Eng/Science	No.	98	104	131	108	108	98	117	87	77	84	86	95	91
	Rate	10.7	10.6	12.7	9.9	9.8	8.6	9.6	6.6	6.3	5.3	6.3	8.7	8.3
Other Prec Production/Craft/Repair	No.	312	388	349	281	255	267	251	269	254	227	225	212	213
	Rate	8.0	9.5	8.5	6.8	6.2	6.5	6.1	6.6	6.4	5.8	5.7	5.2	5.3
Mechanics and Repairers	No.	282	269	263	270	274	279	266	275	270	268	338	259	282
	Rate	6.8	6.2	5.9	6.2	6.2	6.3	5.9	6.2	6.1	6.0	7.6	5.9	6.4

* The selected groupings had the highest rates per 100,000 workers.

Table US-30. *Number and Average Annual Rate (per 100,000 workers) of Traumatic Occupational Fatalities by Selected Detailed Occupation Groupings* and Cause of Death, US, 1983-1995.*

DETAILED OCCUPATION		CAUSE OF DEATH									
		MOTOR VEHICLE	HOMICIDE	MACHINE	FALL	ELECTRO-CUTION	STRUCK BY FALLING	AIR TRANS	SUICIDE	EXPLOSION	NATURE/ ENVIRON
Forestry and Fishing Occupations	No.	140	24	271	57	43	993	23	18	5	110
	Rate	6.0	1.0	11.6	2.4	1.8	42.6	1.0	0.8	0.2	4.7
Construction Laborers	No.	742	106	479	806	372	361	10	40	59	117
	Rate	7.9	1.1	5.1	8.6	3.9	3.8	0.1	0.4	0.6	1.2
Farm Operators and Managers	No.	695	71	2,161	219	182	294	45	120	42	278
	Rate	4.0	0.4	12.6	1.3	1.1	1.7	0.3	0.7	0.2	1.6
Motor Vehicle Operators	No.	6,841	837	357	170	217	315	15	95	77	102
	Rate	14.8	1.8	0.8	0.4	0.5	0.7	< 0.1	0.2	0.2	0.2
Other Transport and Material Movers	No.	464	50	964	119	123	191	10	53	47	86
	Rate	2.9	0.3	6.0	0.7	0.8	1.2	0.1	0.3	0.3	0.5
Construction Trades	No.	795	195	601	2,478	1,688	448	48	149	163	162
	Rate	1.2	0.3	0.9	3.9	2.6	0.7	0.1	0.2	0.3	0.3
Protective Service	No.	803	1,141	35	82	30	27	98	151	19	30
	Rate	3.2	4.5	0.1	0.3	0.1	0.1	0.4	0.6	0.1	0.1
Other Handler, Cleaner, Helper, Laborer	No.	440	352	547	283	203	249	5	57	163	110
	Rate	1.5	1.2	1.9	1.0	0.7	0.9	< 0.1	0.2	0.6	0.4
Farm Workers and Related Occ	No.	558	117	539	201	263	182	15	53	21	158
	Rate	2.1	0.4	2.0	0.8	1.0	0.7	0.1	0.2	0.1	0.6
Technicians, Exc Health/ Eng/Science	No.	51	24	21	18	12	5	1,067	17	9	6
	Rate	0.3	0.2	0.1	0.1	0.1	< 0.1	7.0	0.1	0.1	< 0.1
Other Prec Production/Craft/Repair	No.	403	239	697	326	244	380	32	111	259	146
	Rate	0.8	0.5	1.3	0.6	0.5	0.7	0.1	0.2	0.5	0.3
Mechanics and Repairers	No.	663	250	512	313	335	343	92	173	201	108
	Rate	1.2	0.4	0.9	0.5	0.6	0.6	0.2	0.3	0.4	0.2

* The selected groupings had the highest rates per 100,000 workers.

Table US-31. *Number[*†] and Average Annual Rate[‡] (per 100,000 workers) of Traumatic Occupational Fatalities by Industry and Occupation Division, US, 1983-1995.*

INDUSTRY DIVISION		OCCUPATION DIVISION										
		EXEC/ADM/ MGR	PROF/ SPEC	TECH/ SUPPORT	SALES	CLERICAL	SERVICE	FARM/FOR/ FISH	CRAFTS	MACH OPER-ATORS	TRANS-PORT	LABORERS
Ag/For/Fish	No.	49	127	138	17	11	56	7,627	59	32	201	36
	Rate	4.2	10.2	29.6	7.1	0.7	15.1	20.1	9.7	19.8	31.2	12.5
Mining	No.	107	76	43	8	13	18	5	1,624	81	512	193
	Rate	6.9	7.4	10.1	6.5	1.1	15.0	---	49.3	23.3	31.5	46.4
Construction	No.	707	183	77	47	43	46	30	6,639	355	1,615	3,752
	Rate	5.8	10.1	10.5	5.1	0.8	10.7	11.4	12.2	28.6	24.7	35.3
Manufacturing	No.	623	307	242	289	201	336	1,771	2,257	2,311	1,250	1,136
	Rate	2.0	1.4	2.6	3.0	0.7	7.4	147.1	4.4	2.7	12.2	8.0
Trans/Comm/PU	No.	464	244	905	86	442	198	21	1,608	148	7,235	741
	Rate	3.9	4.1	24.7	2.3	1.6	6.0	11.4	9.8	9.7	31.1	12.0
Wholesale Trade	No.	133	20	10	611	52	32	15	190	76	726	296
	Rate	2.0	1.8	1.8	2.6	0.5	6.0	4.7	4.7	4.2	11.9	6.4
Retail Trade	No.	879	78	12	3,372	140	686	22	322	21	468	768
	Rate	4.5	1.7	1.1	3.2	0.7	1.2	7.1	2.2	0.9	7.4	4.1
Finance/Insur/RE	No.	280	17	8	385	131	121	28	30	---	16	9
	Rate	1.1	0.6	0.4	1.6	0.3	3.3	3.4	1.5	---	8.6	3.2
Services	No.	1,044	1,638	267	202	301	1,694	131	1,622	311	337	442
	Rate	1.8	1.1	1.0	1.8	0.4	1.5	3.1	6.7	3.1	5.1	8.4
Public Admin	No.	260	202	129	7	178	2,015	29	221	48	135	116
	Rate	1.7	2.0	4.3	2.2	1.0	11.5	4.6	7.1	10.1	18.2	19.8

[*]Numbers not reported for cells with less than 3 deaths.

[†]Numbers not reported for "unknown" or "not classified" categories.

[‡]Rates not calculated for categories with less than 3 deaths or less than 20,000 employed.