Profiles in safety and health: the soft drink industry

Soft drink drivers commonly sustain disabling injuries while delivering America's most popular beverages to retailers; the soft drink manufacturing industry has one of the highest rates of serious injuries and illnesses

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". . tonics in New England,
soda water in Dixie,
soda pop in the Mid West,
and soft drinks in the Far West.
Call them what you will,
but drink your fill."

—Advertising slogan, 1929

British scientist Joseph Priestley experimented two centuries ago with artificially carbonated water, unwittingly launching one of the Nation's most important food industries—soft drink manufacturing.[1]

Officially dubbed "bottled carbonated beverages" earlier this century, such effervescent drinks in the United States have taken on less formal, regional names. Whatever the name, soft drinks have become even more popular than milk or coffee. In 1989, Americans consumed, on average, 32 gallons of carbonated soft drinks per person—roughly the equivalent of 12 ounces each day of the year.[2] This article focuses on the injuries and illnesses of workers who produce, stock, and deliver bottled and canned soft drinks and carbonated waters in the soft drink manufacturing industry.

Soft drink manufacturers continue to experience a high incidence of work place accidents and injuries. The industry's 1990 injury and illness rate of 21.5 per 100 full-time workers, for example, was well above the 13.2 rate in manufacturing as a whole and more than double the private industry rate, which was 8.8.[3] In 1990, moreover, nearly three-fifths of the injury and illness cases in the soft drink industry were serious enough to require workers to take time off from their jobs or be assigned duties restricted to light work or a shortened schedule.[4]

Illnesses and injuries that resulted in lost worktime in the soft drink industry took a variety of forms, depending largely on the job and its risks. Of special note were injuries to drivers-salesworkers, the industry's largest occupational group. Their injuries related primarily to manual material handling activities, such as unloading trucks filled with soda cans and bottles and carting and stacking the containers on customers' premises. By repeatedly maneuvering heavy loads, many soft drink drivers eventually sustained serious sprains and strains due to overexertion.[5] The following sections examine some characteristics of soft drink manufacturing and analyze the injury and illness record of the industry in more detail.

The industry at a glance

The Nation's soft drink industry traces its roots to Philadelphia, PA, where Joseph Hawkins and Elias Durand began producing bottled soda waters in the early 1830's.[6] Small bottling plants spread quickly to other localities (primarily in

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the East and Midwest) and by 1879, the Census of Manufactures counted 512 mineral and soda water factories employing a total of 3,000 workers.[7] The bottled flavor of choice that year was ginger ale.[8]

Today, about 1,300 soft drink manufacturers, employing more than 100,000 workers, compete in a $25 billion market for nonalcoholic beverages.[9] In response to changing consumer tastes and needs, the soft drink market offers a broad selection of products in various shapes and sizes. Diet drinks, for example, were about one-fourth of all carbonated soft drinks shipped in bottles or cans in 1987—double their share 20 years earlier.[10] Also, the popularity of noncarbonated beverages (such as fruit drinks and bottled water) is on the rise, with such shipments in the soft drink industry valued at nearly $2.5 billion in 1987.[11] And used as soft drink packaging, cans surpassed glass and plastic bottles as the container of choice in the late 1980's.[12]

Once the dominant employer, many small bottlers have left the soft drink industry largely because they had difficulty adapting their operations to constantly changing products and packaging strategies.[13] As a result, the industry operated in 1990 with approximately 1,300 plants, less than half the 3,400 in business in the late 1960's. But the work force size of a typical soft drink plant has risen sharply, from an average of roughly 35 employees per plant in 1967 to about 80 employees in 1990.[14]

Unlike most other beverage producers, soft drink manufacturers commonly employ drivers to deliver their products directly to individual retailers, such as grocery stores, drug stores, and gasoline service stations.[15] These drivers-salesworkers accounted for about one-seventh of the roughly 100,000 workers in the soft drink industry. Inside the soft drink plant and warehouse areas, some common production jobs are packaging and filling machine operator, forklift operator, and manual laborer; none, however, appears to include as many workers as does the driver-salesworker job classification.[16]

Safety and health measures

As part of its annual survey of occupational injuries and illnesses, the Bureau of Labor Statistics develops a variety of measures to gauge the frequency and severity of recordable work place incidents in an industry. (See appendix for definitions of such measures.) Based on the broadest of such measures, the soft drink industry has shown improvement in its overall record of safety and health since the mid-1970's.

But as the following tabulation shows, the improvement occurred almost entirely in less serious cases, which include those that generally require medical treatment but do not result in lost worktime. The frequency of disabling (lost worktime) cases in the industry, in contrast, remained basically unchanged over this period.

	Average rate		
	1976–80	*1981–85*	*1986–90*
Total recordable cases	26.3	22.0	21.0
Lost workday cases	11.8	11.0	11.6
Nonfatal cases without lost workdays	14.5	11.0	9.5

Soft drink manufacturers remain among the most hazardous industries, based on how often lost worktime incidents occur. At 12.2 per 100 full-time workers, its 1990 injury and illness rate for lost workday cases ranked sixth highest among corresponding rates reported for some 370 individual manufacturing industries.[17] Ten years earlier, the industry's lost workday case rate (11.9) ranked 13th highest.

Although soft drink workers face a comparatively high risk of sustaining a serious injury or illness, they return to their regular jobs more quickly, on average, than do workers in most other industries. Soft drink workers were away from their regular jobs, on average, 18 workdays per lost workday case in 1990; this was 3 days fewer than for disabling injury and illness cases in private industry as a whole or in all manufacturing. A nationwide trend to longer periods of recuperation has been evident since 1980, when lost worktime per lost workday case averaged 13 workdays in soft drinks and 16 workdays each in private industry and all manufacturing.

Separate State data are useful in spotting variations in injury and illness experience in an industry. In the soft drink industry, for example, the injury and illness rate for total recordable cases ranged from 25.7 in California to 14.8 in North Carolina in 1989, the latest period for which a full complement of State data are currently available. (See table 1 for a seven-State comparison.) Overall rates, however, were not necessarily indicative of accident severity in the soft drink industry. Recuperation time in California (15 days per lost workday case), for instance, was of shorter duration than average time required to return to work in Arizona (21 days) and Louisiana (22 days).

Injury and illness characteristics

The Bureau's annual survey reports on injury and illness rates by industry, but does not provide information about the characteristics of work place incidents. Such information is avail-

able, at least to some extent, from another Bureau program—the Supplementary Data System—based on the State workers' compensation systems. Unlike the annual survey, the Supplementary Data System does not produce nationwide estimates and lacks uniform treatment among States of what is a compensable work place injury or illness.[18] Nonetheless, despite these and several other analytical and statistical limits, the Supplementary Data System helps spot general patterns (or their absence) in the characteristics of work-related injuries and illnesses involving lost worktime.

To obtain the broadest geographic profile possible for this analysis, injury and illness cases from the 14 States participating in the 1988 Supplementary Data System were combined with comparable cases from 13 jurisdictions that participated in the 1987 Supplementary Data System but did not participate in the 1988 System due to resource constraints. The aggregated total for the 27 jurisdictions amounted to nearly 5,200 disabling cases in soft drink manufacturing.[19] The following profiles identify the principal characteristics of these cases and note some instances where the characteristics of injured soft drink workers differ from those of injured workers in all manufacturing. (Such comparisons, however, are subject to the same types of limits previously attributed to the Supplementary Data System.)

The Supplementary Data System identifies four basic injury and illness case characteristics: (1) physical condition (nature) of injury or illness; (2) part of the body affected by the condition; (3) event or exposure (type) of injury or illness (the manner in which the condition was inflicted or produced); and (4) source of injury or illness (the object, substance, exposure, or bodily motion that directly produced or inflicted the condition). These features help determine the "what and how" of disabling incidents in the work place.

With regard to principal physical characteristics, sprain and strain is, by far, the leading category under *nature of injury and illness*, constituting three-fifths of the soft drink cases and two-fifths of all manufacturing cases reported by the Supplementary Data System. Other notable "nature" categories in soft drink manufacturing, each accounting for between one-twentieth and one-tenth of the industry total, included contusion, crushing, and bruise; cut, laceration, and puncture; and fracture.

The back and other portions of the trunk (such as the abdomen and shoulders) were the *major parts of the body affected* by injuries and illnesses, accounting for one-half of the soft drink cases recorded by the Supplementary Data System. Another two-fifths of the industry's cases were divided evenly between two other major body parts: the lower extremities (especially the legs and knees) and the upper extremities (particularly the fingers). In all manufacturing, upper extremity injuries and trunk injuries shared top ranking among major body parts affected, each constituting about one-third of the case total.

Overexertion from lifting, pulling, or pushing heavy or unwieldy objects was the major *event or exposure* leading to disabling injuries and illnesses in soft drink manufacturing. These cases accounted for nearly half of all soft drink cases and one-third of all manufacturing cases reported by the Supplementary Data System. Other notable events related to disabling injuries in soft drinks included falls, striking against objects, and being struck by objects, which together account for one-third of the industry's case total. In contrast, motor vehicle accidents to soft drink drivers and their passengers (helpers) were relatively rare.[20]

In soft drink manufacturing, the leading category under *source of injury and illness*, was "boxes, barrels, and containers." This classification, which includes crates and cartons of soft drinks and other products, was cited in more than one-third of the soft drink cases and in one-eighth of all manufacturing cases. Another prominent source of soft drink injuries involved powered and nonpowered vehicles, such as delivery trucks, forklifts, and handtrucks, accounting for about one-sixth of the industry's case total. Working surfaces, primarily the ground or floor, comprised another notable

Table 1. **Occupational injuries and illnesses in soft drink manufacturing, by type of case, 1989 annual survey**

State	Incidence rates[1]				Average lost workdays per lost workday case
	Total cases[2]	Nonfatal cases without lost workdays	Lost workday cases	Lost workdays	
Arizona	20.9	11.3	9.6	200.6	21
Arkansas	16.3	7.7	8.6	128.6	15
California	25.7	10.3	15.4	234.1	15
Florida	19.4	9.0	10.4	165.6	16
Louisiana	19.3	9.3	10.0	216.5	22
Maryland	19.1	8.7	10.3	166.2	16
North Carolina	14.8	7.3	7.5	93.9	13

[1] Incidence rates represent the number of injury and illness cases or the number of lost workdays per 100 full-time workers. See footnote 3 to text for method of calculation.

[2] Includes fatalities. Because of rounding, the difference between the total and the sum of the rates for lost workday cases and nonfatal cases without lost workdays may not reflect the fatality rate.

source of injury, mentioned in about one-eighth of the soft drink cases.

Besides case characteristics, the Supplementary Data System also identifies the sex, age, length of service, and occupation of the injured or ill worker—the "who" of disabling incidents in the work place. Such worker characteristics can help analysts zero in on workers sharing risks commonly associated with work place injury, such as those with short job tenure or those in relatively hazardous jobs.[21] The latter jobs are discussed below.

Driver-salesworker was the leading *occupation* of the injured or ill worker in soft drink manufacturing, accounting for slightly more than one-third of the industry's cases reported by the Supplementary Data System. Compared with its one-seventh share of the industry's work force, the driver-salesworker classification clearly held a disproportionate share of total soft drink cases.[22] Four other occupations—freight and stock handlers, industrial laborers, mechanics, and packaging and filling machine operators— constituted three-tenths of the soft drink case total. The balance of cases was spread among many other jobs, including retail salesworkers, food batchmakers, machinery repairers, and forklift operators, to name a few.

Injury profiles can vary by occupation partly due to differing work activities, materials and equipment used, and work processes. Not surprisingly, the profile of how injuries occurred to soft drink drivers differed from that for soft drink packers and fillers.

The following tabulation illustrates this point by contrasting the relative shares (percentage ranges of total cases) of various categories that describe the event (manner) and source of injury and illness for the two jobs.

Category	*Drivers-salesworkers*	*Packaging and filling machine operators*
All events and sources (percent)	100	100
Event:		
Overexertion	55–59	25–29
Struck by or against	10–14	20–24
Fall	10–14	20–24
All other events	15–19	25–29
Source:		
Box, barrel, or container	40–44	25–29
Motor vehicle	20–24	5–9
Working surface	10–14	15–19
All other sources	20–24	50–54

Fostering safer work places

Most types of occupational injuries and illnesses are considered preventable—through classroom and on-the-job training and by following safety standards prescribed by government, industry, and labor. However, heavy lifting and other manual exertions that commonly lead to many injuries in soft drink manufacturing are difficult to control.[23] The Bureau's cross-industry study of back injuries associated with lifting, for example, showed that most workers lifted without mechanical assistance and a clear majority of those studied were injured while lifting objects weighing at least as much as the heaviest weight normally lifted on the job.[24]

Industry and government standards address several other prominent safety and health issues in soft drink manufacturing, including problems with hazardous materials, machinery and machine guarding, and electrical equipment (especially wiring).[25] In addressing such potential hazards, these work place standards prescribe a variety of preventive actions, such as furnishing adequate facilities for flushing and drenching chemicals from the eyes; providing guarding devices for use at the point of operation of machines; and requiring at least one entrance of sufficient area where electrical equipment is located. Such standards are designed to foster safer working conditions and practices, particularly in manufacturing operations. □

Footnotes

[1] The manufacture of bottled and canned soft drinks and carbonated waters has been designated industry number 2086 in the 1987 edition of the *Standard Industrial Classification Manual*, prepared by the Office of Management and Budget. Excluded from this classification are establishments primarily producing fruit and vegetable juices, ciders, or flavoring extracts and syrups and those chiefly bottling natural spring waters.

For an account of the various products shipped by the soft drink industry, see *1987 Census of Manufactures: Beverages*, MC87-3I-20H (Bureau of the Census, 1990).

[2] Department of Agriculture figures show the following diverging trends in per capita consumption (in gallons) of popular beverages:

	1970	1980	1989
Milk	31.2	27.6	25.5
Whole	25.4	17.0	11.1
Low fat	5.8	10.6	14.4
Coffee	33.4	26.7	26.7
Carbonated soft drinks	20.8	27.1	32.0

For technical details on how these data are developed, see *Food Consumption, Prices, and Expenditures, 1989*, Bulletin 825 (Economic Research Service, 1991). The author calculated per capita consumption of carbonated soft drinks at slightly more than 11 ounces daily in 1989, using this method: multiply 32 gallons by 128 ounces per gallon, divide the product by 365 calendar days. It should be noted that the Agriculture Department figures do not include noncarbonated soft drinks or bottled waters.

Consistent with higher per-capita consumption, consumers spent more of their food-at-home budget on soft drinks and related products in 1989 (7 percent) than they did in 1980 (5 percent), according to detailed data from BLS Consumer Expenditure Surveys.

[3] *Incidence rates* reported in this article represent the number of injuries and illnesses per 100 full-time workers and were calculated as

$$N/EH \times 200{,}000$$

where

N = number of injuries and or illnesses;

EH = total hours worked by all employees of the industry during the calendar year; and

200,000 = base for 100 full-time equivalent workers (employees working 40 hours per week, 50 weeks per year).

A variety of useful incidence rates may be computed by making N equal to the number of lost workday cases, or lost workdays, for example. In each instance, the result is an estimate of the number of cases or lost workdays per 100 full-time workers.

[4] For soft drink manufacturing, the injury and illness rate for lost workday cases (12.2) was 57 percent of the rate (21.5) for total cases. For all manufacturing, the corresponding calculation was 44 percent.

[5] Derived from the Supplementary Data System, as discussed later in the text.

[6] For a comprehensive chronicle of how the soft drink industry evolved in the United States through World War II, see John J. Riley, *Organization in the Soft Drink Industry* (Washington, DC, American Bottlers of Carbonated Beverages, 1946). The Introduction (pp. 3–9) covers the early years, including the first efforts in this country to manufacture soda water apparatus.

[7] *Organization*, p. 8. Riley points out that many soda water plants also bottled alcoholic beverages, primarily malt brews.

[8] *Ibid.*, p. 7. Bottling drinks containing kola extracts, today's most popular flavor, began in the South in the 1890's. For a history of one such extract, see *A Study of Coca-Cola Contracts* prepared by the Eastern Conference of Teamsters, Brewery and Soft Drink Division in the early 1950's.

[9] The number of soft drink plants and their employees are published in *Employment and Wages, Annual Averages, 1990*, Bulletin 2393 (Bureau of Labor Statistics, 1991). The market size corresponds to the 1990 value of shipments classified in the bottled and canned soft drinks industry produced by all industries, as published in *1991 U.S. Industrial Outlook* (Department of Commerce, International Trade Administration, 1991), ch. 33, p. 32.

[10] Calculated using *1987 Census of Manufactures: Beverages*, table 6a, pp. 17–18 and *1967 Census of Manufactures: Industry Statistics, Major Groups 20–24* (Bureau of the Census, 1971), table 6A, pp. 17–18.

[11] *1987 Census of Manufactures: Beverages*, p. 18.

[12] *Ibid.*, calculated from data on pp. 17–18.

[13] For an account of such changes in industry organization, see Edwin Adelman and Charles Ardolini, "Productivity in the soft drinks industry," *Monthly Labor Review*, December 1970, pp. 28–30.

[14] *Ibid.*, p. 29 for 1967 figure and *Employment and Wages, Annual Averages, 1990* to calculate average work force size for soft drink manufacturing in 1990.

[15] The authors thank the staff of the Bureau's Occupational Employment Statistics program for their special efforts in tabulating separate staffing patterns for soft drinks and malt beverages—two industries in the beverage group that were surveyed in June 1989. The special tabulations show that employment of drivers-salesworkers was negligible in malt beverage manufacturing; that job, however, constituted about one-seventh of the employment total for the soft drink industry.

Industry differences in the use of drivers-salesworkers—a relatively hazardous job category—help explain why the injury and illness rate per 100 full-time workers is typically much higher for soft drink manufacturing than malt beverage manufacturing, as shown in the following tabulation:

	Average rate		
	1976–80	*1981–85*	*1986–90*
Soft drinks	26.3	22.0	21.1
Malt beverages	19.0	12.7	14.1

Malt beverages are evidently distributed to retailers by wholesalers rather than by manufacturers. The Bureau's data support this contention. According to the 1988 Occupational Employment Statistics survey, drivers-salesworkers made up slightly more than one-eighth of total employment in wholesaling of beer, wine, and distilled beverages (industry number 518), larger than its one-twenty-fifth share of the work force total for all nondurable goods wholesalers (industry number 51).

[16] Unpublished tabulations from the Bureau's Occupational Employment Statistics program.

[17] See *Survey of Occupational Injuries and Illnesses*, Summary 92–1 (Bureau of Labor Statistics, 1992) and *Occupational Injuries and Illnesses in the United States by Industry, 1980*, Bulletin 2130 (Bureau of Labor Statistics, 1982). The top rankings of industries with high rates of injuries and illnesses involving lost worktime were filled from the manufacturing sector.

The Bureau has conducted special studies of hazardous industries. See, for example, *Injuries and Injury Rates in the Bottled Soft-Drink Industry*, Report No. 104 (Bureau of Labor Statistics, 1956).

[18] The Supplementary Data System is not statistically representative of the Nation as a whole because the data cover only the jurisdictions participating in the system; for example, 14 States took part in 1988.

State laws differ, moreover, in the types of cases they require firms to report to workers' compensation agencies. While some States require reports of all occupational injuries and illnesses, regardless of length of disability, others require reports only of cases of sufficient duration to qualify for indemnity compensation payments, and still other States require reporting of cases involving a specific number of lost workdays, regardless of the indemnity "waiting period." Thus, the file of the Supplementary Data System is not a complete census of all "disabling" injuries and illnesses in the jurisdictions studied.

The Supplementary Data System, however, does standardize the classification of data using the 1972 *Standard Industrial Classification Manual*, the 1980 *Census of Population, Alphabetical Index of Industries and Occupations*, and the *1962 American National Standards Method of Recording Basic Facts Relating to the Nature and Occurrence of Work Injuries*, published by the American National Standards Institute (ANSI) and often referred to as the Z16.2—1962 standards, or simply, Z16.2.

[19] The 14 States that participated in the 1988 Supplementary Data System and their number of soft drink cases, shown in parenthesis, included Arkansas (54), California (1,006), Indiana (195), Iowa (123), Kentucky (198), Louisiana (191), Maine (60), Maryland (144), Michigan (279), Mississippi (66), Missouri (174), Oklahoma (69), Oregon

(126), and Texas (652). The comparable information tabulated for the 13 jurisdictions that participated in 1987 but not 1988 included Alaska (no soft drink plants in the State), Arizona (112), Colorado (193), Hawaii (41), Nebraska (86), New Mexico (19), Ohio (655), Tennessee (199), Virgin Islands (3), Virginia (190), Washington (145), Wisconsin (173), and Wyoming (5).

As used in this article, the aggregated tabulations for soft drink manufacturing contained about 3,340 cases reported by the 1988 participating States and 1,820 reported by the 1987 participants mentioned above. The 1987–88 total of about 5,200 cases was roughly two-fifths of the national total of 13,000 lost workday cases in soft drink manufacturing; the latter figure was an average of the 1987 and 1988 national counts for the industry as reported in the Bureau's annual survey.

[20] In the Supplementary Data System, the classification "motor vehicle accident" usually relates to collisions affecting the driver or passenger(s) while they are in or on the vehicle. In contrast, when a worker strikes against a stationary motor vehicle, the source of the injury remains the motor vehicle but the event is classified as "struck against."

[21] For a discussion of the relationship of age, work experience, and work injuries, see Norman Root and Michael Hoefer, "The first work-injury data available from new BLS study," *Monthly Labor Review*, January 1979, pp. 76–80. The risk of injury by occupation is examined in an article by Norman Root and Deborah Sebastian, "BLS develops measure of job risk by occupation," *Monthly Labor Review*, October 1981, pp. 26–30.

[22] The authors tried to estimate the influence of drivers-salesworkers on the comparatively high rate of lost workday cases reported for the soft drink industry by removing drivers-salesworkers from the industrywide rate. But as stated earlier, the Bureau's Annual Survey does not contain information separately by occupation, such as the number of lost workday cases and hours worked for drivers-salesworkers. Instead, the authors used that job's one-third share of soft drink cases reported in the Supplementary Data System as a proxy for nationwide lost workday cases for soft drink drivers and that job's one-seventh share of soft drink employment as a proxy for hours worked by all soft-drink drivers. After reducing industrywide cases and hours worked by estimated information for soft drink drivers, the recalculated rate of lost workday cases for soft drink manufacturing was roughly seven-tenths the industrywide rate. In other words, the relatively hazardous job of soft drink driver, by itself, appeared to account for roughly three-tenths of the 12.2 lost workday cases per 100 full-time workers reported for the soft drink industry as a whole.

[23] For a compendium of research papers on manual material handling, see *Safety in Manual Materials Handling*, DHEW (NIOSH) Publication 78–185 (National Institute for Occupational Safety and Health, 1978).

[24] *Back Injuries Associated with Lifting*, Bulletin 2144 (Bureau of Labor Statistics, 1982).

[25] See, for example, *General Industry: OSHA Safety and Health Standards* (29 CFR 1910), OSHA 2206 (Occupational Safety and Health Administration, Revised 1981), pp. 155–292, 430–475, 578–617. Based on 270 inspections of the industry conducted by the U.S. Department of Labor's Occupational Safety and Health Administration between March 1989 and March 1991, many soft drink manufacturers did not comply fully with one or more of these work standards.

APPENDIX: Work injury definitions

In this article, definitions of occupational injuries and illnesses and lost workdays conform to the recording and reporting requirements of the Occupational Safety and Health Act of 1970 and Part 1904 of Title 29, Code of Federal Regulations. Supplemental information pertaining to these definitions is in the booklet, *Recordkeeping Guidelines for Occupational Injuries and Illnesses* (Bureau of Labor Statistics, 1986).

Recordable occupational injuries and illnesses are:

1. occupational deaths, regardless of the time between injury and death, or the length of illness; or
2. nonfatal occupational illnesses; or
3. nonfatal occupational injuries that involve one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment (other than first aid).

Occupational injury is any injury, such as a cut, fracture, sprain, amputation, and so forth, that results from a work-related event or exposure involving a single incident in the work environment.

Occupational illness is any abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to environmental factors associated with employment. It includes acute and chronic illnesses or disease that may be caused by inhalation, absorption, ingestion, or direct contact.

Lost workday cases are those that involve days away from work, or days of restricted work activity, or both.

1. *Lost workday cases involving days away from work* are those that result in days away from work, or a combination of days away from work and days of restricted work activity.
2. *Lost workday cases involving restricted work activity* are those that result in restricted work activity only.

Lost workdays—days away from work are the number of workdays (consecutive or not) the employee would have worked but could not because of occupational injury or illness.

Lost workdays—restricted work activity are the number of workdays (consecutive or not) on which, because of injury or illness:

1. The employee was assigned to another job on a temporary basis; or
2. The employee worked at a permanent job less than full time; or
3. The employee worked at a permanently assigned job but could not perform all duties normally connected with it.

The number of days away from work or days of restricted work activity does not include the day of injury or onset of illness or any days on which the employee would not have worked even though able to work.