

# Risk Management Bulletin

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Volume 1 | Issue 4



## Guiding Your Safety Efforts with Incident Rates

**Incident rates are a very useful tool for companies to use in benchmarking their performance. Developing these benchmarking tools can be a very helpful first step in monitoring your safety performance. This article discusses what incident rates are, what they mean, and different ways they can be used to help push safety performance forward.**

### **What are these incident rates and why do they exist?**

Incident rates “can be used to show the relative level of injuries and illnesses among different industries, firms, or operations within a single firm.” (Source: <http://www.bls.gov/iif/osheval.htm>) The Bureau of Labor Statistics (BLS) uses incident rates to calculate the incidence rates for all industries using the North American Industry Classification System (NAICS). An organization is required to complete the OSHA 300 log and post the 300(a) summary every year. These injury logs “record” certain categories of injuries, and the summary that is posted contains the information needed to calculate the rates. The BLS will send out random sample surveys of

businesses working in the different NAICS codes asking for copies of the 300(a) summaries. They use these surveys to calculate the industry averages and the result is a listing of industry injury and illness incident rates that can be found at <http://www.bls.gov/iif/oshsum.htm>.

**How are the rates calculated?** The basic formula is the same for just about all of the standard incident rates (there are a couple of rates at the bottom of OSHA Frequency and Severity Rates Chart below whose formulas are different, but they are explained there). In essence, they determine how many employees per hundred per year are affected; whether it is total injuries, lost time injuries, or even first aid



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incidents. It is all dependent on the number that is plugged into the formula. The exact formula is outlined below:

$$\frac{\text{Number of \{Cases\} \times 200,000}}{\text{Total Number of Labor Hours Worked}} = \text{Incident Rate}$$

### The terms of the formula are as follows:

The term **“Number of Cases”** in the formula refers to the count of the type of cases being analyzed. For example, if you want to calculate the rate of OSHA recordable cases, you would enter the total number of OSHA recordable cases recorded on the OSHA 300 (a) summary in section (M). If you wanted to calculate the total number of lost time cases, you would enter the number from the OSHA 300 (a) summary recorded on line (H). Whatever criteria used in this place, the result will be an indication of how many incidents per hundred people per year.

The **constant “200,000”** used in the calculation is what has been determined by the BLS to be 100 employees working 2,000 hours per year. This puts all of the organizations on relatively equal footing when it comes to measuring rates. The rates equate to the pace at which the company incurs injuries per hundred employees per year. I use the term “relatively” to indicate that some organizations use fewer labor hours than others and have fewer incidents than others. The way the rates are affected by this reality is that the indicated rate for a smaller company could increase dramatically with a small number of incidents. A company that has only 100,000 labor hours, for example, would incur a frequency rate of 2.0 with only one lost time incident. Many industries have a lost time rate of less than 1.0, so depending on the industry, one incident could put a company over the industry average twofold. The more labor hours a company has the more accurate and closer to reality the rate is.

### Incident Rates

The term **“Total Number of Labor Hours Worked”** is also taken from the OSHA 300 (a) log and is intended to include all of the hours of employee exposure at a facility. A common error is a company will run a report of all production hourly workers and use that number. It is permissible to use all of the labor hours employees work at the organization, which includes hours worked by salaried, hourly, part-time, and seasonal workers, as well as hours worked by other workers who are subject to day-to-day supervision, such as temporary help services workers. If you do not have records of these hours, not to worry. The standard recognizes this and it is permissible to estimate these hours. I would encourage all organizations to do this.

When we talk about incident rates, we can start by saying that they are a lagging indicator. This means that it measures what has already happened, so obviously they are only an indicator of what might happen in the future if nothing changes within the company. They are, however, a useful tool to show what has happened in the past, and what trend or trajectory the company’s loss results are on. Leading indicators such as training rates, hazard assessment results, and/or close-call reporting are also extremely useful to measure more immediate potential results, (and should absolutely be included in any benchmarking company program), but for more long-term forecasting, these lagging indicators are numbers that cannot be contradicted nor discounted. There are quite a few different types of rates, and we will discuss a few below. This, of course, is not an all inclusive list, but these are some of the most common.

There are a few incident rates that are at the core of the incident rate world. They include Total Recordable Rate and Lost Time Case Rate (sometimes known as the Days Away Rate). There is also something called a DART Rate (Days Away-Restricted or Transfer) which is also used extensively. The chart on the next page contains many of the typical rates used:

## OSHA Frequency and Severity Rates

### Total Recordable Rate (TRC)

This rate is the Total Number of Recordable cases on the 300 log. Indicates all of the company's injuries and how many people per hundred per year the company is on pace to incur an injury.

### Days Away-Rest. Duty (DART)

This rate includes every injury that resulted in lost time or any restricted duty or transfer cases. Recordable injuries where the employee went back to work would not be included.

### Days Away Rate (DAFW)

This rate only includes recordable cases that resulted in lost time. This is also known as the lost time case rate.

### Job Transfer or Restriction (DJTR)

This rate includes only recordable injuries that resulted in some sort of job restriction, modification, or transfer of the injured employee. One item of note, the DJTR rate added to the DAFW rate should equal the DART rate as the DART rate is a compilation of the two.

### Other Recordable Rate (ORC)

This is a catchall rate that would include all injuries that cannot be otherwise classified. Cases that require more than first aid treatment or meet other recordability criteria, but where there is no lost work time or have transferred/restricted duty are classified as an "other recordable case".

### Avg. Lost Workdays per Case

This rate is different from all of the rest in that it is not a measurement of the rate of injury per hundred per year. Measures the average number of lost days for every lost time case. It is a way to measure how severe the company's lost time injuries are.

### Average Days Away From Work

This rate is very similar to the previous rate, but the difference is that it measures the impact of lost time cases on the entire case management system by telling us the average days away from work for all injuries. If there is a large contrast here, it is an indication that the company may be doing a good job with their claims management or return to work program. If there is a small or no difference in the rates, the converse would be true.



Different rates can be used to tell the past tendencies of an organization. For example, if a company has a Total Recordable Rate that is the same as the Days Away Rate (all of their injuries are lost time injuries), this could indicate that the company may not be implementing a return-to-work program as aggressively as they could. This would help management guide the loss control efforts by developing and implementing a program, talk to the claims administrator to see if any of the injuries had the potential to use return to work, review the incident investigations to see if return to work was discussed, and/or see if any existing injuries have the potential ability for the employee to come back to work.

Quite often, these rates are used in contractor and subcontractor pre-qualification questionnaires. These are used by general contractors, owners, governmental agencies, and other entities who will hire an organization to do a job. When these contracts are entered into, these entities are exposed to various legal obligations, some of which involve safety. One example of this would be the Multi-employer Worksite regulation that applies to contractors, owners, subcontractors, and any other employer working on a construction site. So, as a way to limit this exposure they develop minimum criteria that a contractor must meet before they are allowed to bid on the

work. Some of the most common criteria used are OSHA citation history, Experience Modification Rate, and/or one, some, or all of the rates discussed above. Knowing and monitoring your rates on an ongoing basis is extremely important for employers in the construction industry.

Hopefully, the information presented here has given you a better understanding of frequency and severity rates, what they are, why they exist, and why it is a good idea to use them in your loss prevention and safety effort as a benchmark

**If you would like to know more about this or other safety topics, please contact:**

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