Showing How Worker Fatigue Harms the Bottom Line

As safety coordinator, you need to be aware of the dangers of workplace fatigue and warn company management to consider the economic impact of driving workers too hard. But you'll need solid evidence to support your argument. There are 2 studies published in the *Journal of Occupational and Environmental Medicine* (JOEM) you can use: One is on the relationship between fatigue and health-related lost productive time and the other links weekly work schedules of 60 or more hours to health and safety problems.

Fatigue in the Workforce

Workers suffering from fatigue—physical and mental—are not only less productive and more prone to illness but also more distracted and thus more likely to be involved in a safety incident. For example, studies show that fatigued workers are more than twice as likely to experience health-related lost productive time. One study found that 37.9% of U.S. workers experience fatigue, costing companies approximately $136 billion in lost productivity.

Fatigue can be broadly defined as a feeling of weariness, tiredness or lack of energy. Fatigue is a common complaint but, medically speaking, it's recognized more as a symptom or cause of other conditions than as a condition itself. The best way to understand fatigue is along a continuum. On one end of the spectrum is the fatigue that most of us occasionally experience in the course of our lives when we get physically or mentally overburdened. This kind of fatigue isn't serious and can usually be resolved simply and quickly, such as by getting extra rest. On the other end is a less common but more serious form of fatigue that's symptomatic of a more chronic and disabling condition, such as major depressive disorder or chronic fatigue syndrome. This form of fatigue is an acute and/or ongoing state of tiredness that leads to mental or physical exhaustion and prevents people from functioning as usual.

Fatigue clearly impairs work ability. Studies have shown that workers with fatigue are significantly more likely to miss work and experience long-term work absences than workers without fatigue. But there were no studies on the prevalence of fatigue within the workforce (at least in the U.S.) and how fatigue affected productive work time.

THE FATIGUE STUDY

The JOEM fatigue study was the first to examine the relationship between fatigue and health-related lost productive work time (LPT) in U.S. workers. The researchers used data from the Caremark American Productivity Audit (the Audit), a random telephone survey of U.S. residents that measures the relation between health and productivity.

The Audit used the Caremark Work and Health Interview (WHI) to gather information from workers about their:

- Self-reported employment status;
- Occupational characteristics;
- Health conditions and symptoms;
- Lifestyle factors;
- Health-related quality of life; and
- Demographic characteristics, such as annual salary.

The WHI measures LPT as the sum of self-reported hours per week absent from work for a health-related reason (absenteeism) and the hour-equivalent per week of self-reported health-related reduce performance while at work (presenteeism). The presenteeism analysis focused on 5 work behaviors:

- Loss of concentration;
- Repeating a job;
- Working more slowly than usual;
- Feeling fatigued at work; and
- Doing nothing at work.

The researchers interviewed a sample of 28,902 adults ages 18 to 65 who'd participated in the Audit and were employed in the week before the interview. To identify which individuals were suffering from fatigue, researchers posed the following question to participants: "Did you have low levels of energy, poor sleep or a feeling of fatigue in the past 2 weeks?"

The Study Results

Based on the information gathered on the participants through the WHI and from the researchers own interviews, they concluded the following:

- The estimated prevalence of fatigue in the U.S. workforce for a two-week period was 37.9%.
- Fatigue was more prevalent in women, workers under age 50, white workers and workers earning more than $30,000 per year in "high control" positions—that is, jobs with a lot of latitude in making decisions.
- Overall, 9.2% of U.S. workers with fatigue reported LPT specifically due to fatigue in the previous two weeks. Such workers lost an average of *4.1 productive work hours* per week, most of which was reflected in reduced performance at work rather than absence from work, i.e., presenteeism rather than absenteeism. For these workers, fatigue affected their work performance primarily by impairing their concentration and increasing the time it took them to complete tasks. And distracted workers are naturally more likely to have safety incidents.

Bottom line: The researchers estimated that workers with fatigue cost U.S. employers $136.4 billion per year in health-related LPT—$101 billion more than workers without fatigue.

THE LONG WORK HOURS STUDY

A separate set of JOEM researchers set about to analyze the impact of long work hours on workers' health and safety. The researchers relied on a database put together by a truck and engine manufacturer to gauge the impact of long work hours on its workforce. Working overtime at the manufacturer's worksites was voluntary. But it was common practice for the company to ask workers to work more than 40 hours per week. In fact, company operations were, in large part, based on the presumption that many—if not most—workers *would* work overtime if asked. That assumption proved to be correct as workers averaged 43.79 hours per week.

The database included information on 2,746 workers who completed 2 surveys that covered a wide range of topics, including:

- Health status;
- Chronic disease;
- Presenteeism and absenteeism;
- Workplace incidents;
- Behaviors that pose a health risk; and
- Use of health services.

The database also included information on workplace incidents that adversely impacted worker health or safety, which was gathered from the manufacturer's databases on:

- Workers' comp and short-term disability claims;
- Group health claims and paid prescriptions; and
- Eligibility and absenteeism.

The Study Results

Researchers found that for workers who worked less than 60 hours per week, the injury rate was negligible. But at the 60-hour mark, the injury rate increased steadily, peaking at the 80 hours per week mark. (Note that the only workers who reported averaging workweeks above 80 hours were salaried workers who performed sedentary jobs. So it's not surprising that the injury rate for this group was low.) In addition, working 60+ hours per week led to the onset of one or more diseases and to the greater likelihood of at least one acute or other work injury. In contrast, working moderate overtime (defined as 48.01-59.99 hours per week) didn't have any significant impact on workers' health or safety.

Conclusion

The JOEM fatigue study shows that fatigued workers cost their employers billions of dollars a year in lost productivity. Of course, fatigue can be caused by many factors—including ones that are unrelated to the workplace, such as family demands, health problems and financial pressures. But as the long hours study shows, fatigue can certainly be caused by working excessive hours. When workers work 60 hours or more per week, they're more likely not only to get sick or injured and miss work but also to work less productively when they do show up for work. And both forms of productivity loss—absenteeism and presenteeism—directly hit the company's bottom line.

So while pushing workers to work harder and longer may seem to make financial sense on its face, in reality, an overworked and overtired workforce will ultimately cost the company money. Instead, you should encourage senior management to take steps to address fatigue in the workplace. How? In August 2008, WorkSafe Victoria and WorkCover New South Wales published a guide called *"Fatigue – Prevention in the Workplace,"* which provides information on how to:

- Identify potential work-related fatigue hazards;
- Determine work-related fatigue risks;
- Control work-related fatigue hazards and risks; and
- Monitor and review work-related fatigue control measures.

The guide, which is available at WorkSafe New South Wales notes that preventing and reducing fatigue may lead to:

- Better health and safety outcomes;
- Fewer workplace incidents and injuries;
- Reductions in absenteeism and staff turnover; and
- Better performance and productivity.

Sources:

“Do Long Work Hours Impact Health , Safety, and Productivity at a Heavy Manufacturer?” Allen, Slavin and Bunn, *Journal of Occupational and Environmental Medicine,* Vol. 49, No. 2, Feb. 2007.

“Fatigue in the U.S. Workforce: Prevalence and Implications for Lost Productive Work Time,” Ricci, Chee, Lorandeau and Berger,*Journal of Occupational and Environmental Medicine,* Vol. 49, No. 1, Jan. 2007.