Occupational Health & Safety-Where Are We Now?

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Published: August 2001
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Abstract

The economic and personal costs of accidents are explored and these costs are put into perspective by using easily recognisable economic indicators. Past safety and health legislation is used to put a humorous perspective upon previous attempts to manage health & safety and it is indicated that present safety approaches may not necessarily be much in advance of our fore-fathers. Finally problems with current approaches to safety management in business are explored.

Introduction

Damage to people from work is one of Australia's largest industries (McDonald, 2001, 1)

Dr. Jukha Takata (quoted in McDonald, 2001, 1), Chief of the I.L.O. Health & Safety Program draws attention to the workplace hectacomb* and gave the following figures for average annual deaths.

Work	1 000 000
Road	999 000
Violence	563 000
War	502 000
HIV / AIDS	312 000

- Hectacomb = from ancient Greece or Rome, a great public sacrifice, origin of 100 oxen, any extensive sacrifice.

A Federal Government study into Occupational Health and Safety in 1992-3 (Industry Commission Report) indicated the cost of occupational accidents and disease in that year was $20 Billion (George suggests this is a conservative estimate)
This figure equates to approx. 5 % of Gross Domestic Product or more than the Mine Gate Product of $18.4 Billion and Agriculture, Forestry and Fishing combined $17.2 Billion, twice the Defense expenditure of $9.2 Billion,5 times the estimated cost of Road Crashes requiring medical treatment, hospitalisation, burial or cremation($3.9 Billion)and 2.5 months of retail sales including dining out.

Somewhere near 2,500 people lose their lives each year as a result of having worked and 50,000 are permanently disabled (source-Geoff McDonald &Associates, Brisbane)
That is six to eight deaths and 137 permanently disabled each day, seven days a week,52 weeks of the year. Permanent disability accounts for 80.5%($16.1 Billion) of the damage.

Past Approaches to Health &Safety

The first recorded advice I could find about health & safety was in the period 1347-1350 when the Black Death decimated Europe, approximately half of the population of England died.
The causes of the back death were said to be

Excessive masturbation (no-one said how much is too much)
Conjunction of the planets
Wrath of God
Evil spirits

The first recorded piece of Health & Safety legislation I could find was the Plague Regulation in Rouen , France 1507

Do not gamble, drink, fornicate or curse
Avoid other sinful excesses that are likely to arouse the anger of God

The British Health & Morals of Apprentices of Apprentices Act 1802 appears to be one of the first pieces of health & safety legislation in England

No night work
Not to work over 12 hours per day
Separate sex sleeping accommodation (apparently not all the accidents were industrial)
Religious instruction provided
Toilet facilities to be provided
Clothes to be provided

The next major piece of health & safety legislation in England was the Factories Act 1844

No children under 8 employed
Meals not in work rooms
Dangerous machines fenced
Alternate days of school & work
Hours by public clock
Children 8-13 to work a max. of 6.5 hours per day

Of course the legislative efforts and approaches to health & safety outlined above appear outmoded and ridiculous in our modern times.
Can we really be sure however that current approaches to health & safety are not similarly dated?

Effects of workplace accidents and disease

Effects on the employer

Replacement costs of skilled worker
Loss of productivity
Time spent in investigation & Admin.
Increased compensation costs
Damage to equipment / morale / reputation
Closure of business
Overtime

Effects on the worker

Loss of income
Pain & suffering
Loss of future earnings
Medical / travel costs
Psychological damage
Loss of physical & mental abilities

Disfigurement

Quotable Quote

"A health & safety problem can be described by statistics but cannot be understood by statistics. It can only be understood by knowing and feeling the pain, anguish, and depression and shattered hopes of the victim and of wives, husbands, parents children, grandparents and friends, and the hope, struggle and triumph of recovery and rehabilitation in a world often unsympathetic, ignorant, unfriendly and unsupportive, only those with close experience of severe permanent disability have this understanding"

Recent Perceptions

There was a serious incident at a Qld. mine recently where an employee was caught in part of underground mining equipment and his legs had to be amputated to free him. My wife has a caring, intelligent female friend who made the comment to us that according to the paper the incident was the individuals fault. I am not familiar with the particular incident so can not comment on factors essential to the occurrence.

As a safety professional I was tempted to remonstrate with her and explain the realities of an employers common law duties and how an incident is a complex mixture of person, machine and environment factors and that there is likely to be a lot more to the incident than simply saying it was the individuals fault. I thought better of it as this is really a societal problem. This comment of our friend said to me that the safety profession in Australia really had not made many gains in the last 25 years.

Current Problems

Some of the problems I currently see with Occupational Health and Safety in Australia include these-

- There is only half-hearted leadership from government , unions and many companies with regard to safety. Admitting to being a cynic I suggest the rhetoric is not always accompanied by action. I suppose it is naive to think the tripartite partners can put aside their industrial and political agenda when discussing safety.
- There is a poor understanding in the community of the reasons why accidents occur. We are quick to make the assumption that the worker was careless, when one examines accidents carefully one identifies a range of work system factors that contributed to the accident as well, most of these work system factors are the responsibility of the employer at both common and statute law. Blaming workers for their careless behavior is an emotionally appealing approach that is usually not all that productive in the bigger picture of preventing personal damage at work.
- It is often said about safety that it is just common sense, if this is the case why are we doing such a poor job of managing it in this country? I am reminded of an un-named Chinese philosopher who was reported to have said "The trouble with common sense is that it is never common and rarely sensible"
- The media emphasises personal fault in news releases about incidents and does not consider design and system issues that contribute to incidents.
- We do not have a centralised, consistent method of reporting and recording incident and disease statistics. How can we examine the beast and learn from it if we do not record and report it in a consistent manner?

- In business vast amounts of money can be spent on safety without really defining desired outcomes (I am not doubting peoples motives however, just their effectiveness)
- Government, unions and many companies treat safety as a second priority and industrial relations imperititives dominate.
- The standard of Occupational Health and Safety practitioner may not be as high as it could be. In Qld the basic requirement to become a qualified Workplace Health Safety Officer is 2 courses of a total duration of some 2 weeks. It is difficult to think we can have a truly professional approach to Occupational Health and Safety with a practitioner who has only received 2 weeks training (most of this training is on the particular states safety legislation and there is little on modern safety management techniques).Managing Occupational Health and Safety successfully is very complex and companies really need professional, high quality advice to assist them if we are going to advance. I see some advantages in a government accredited safety officer course but it runs the risk that employers only look for this qualification when employing safety staff. That is not to say that committed people with just this qualification and operating within their limitations can not have some effect.
- The messages of past incidents are not utilised enough in safety decision making. For this to happen past incident information has to be collected ,presented and organised in a useable manner.
- The Lost Time Injury Frequency Rate predominates discussions about safety performance. How can a company be proud of a decrease of L.T.I.F.R. from 60 to 10 if there have been 2 fatalities and 1 case of paraplegia amongst the lost time injuries? The L.T.I.F.R. trivialises serious personal damage and is a totally inappropriate measure of safety performance. With a bit of thought companies can devise positive measures of what is being done to improve safety and this seems more appropriate to me than counting accidents. L.T.I.F.R.. is an outcome measure not a measure of what the company is doing to improve safety performance.

Accident Ratio Studies Mis-direct Efforts

My grandmother used to say "Look after the pence and the pounds will look after themselves" In the world of traditional safety there seems to be similar thinking that if you prevent minor damage you will automatically prevent major damage. Accident ratio studies (insisting on set ratios between near misses, minor accidents and serious accidents) are prominent and accepted unthinkingly.

The result is a furious effort to eliminate lost time injuries in the belief that major incidents will be eliminated in the process. Certainly there are minor incidents that have the potential to result in more extensive damage(and we should learn from them) ,but personal experience tells me the majority of minor damage incidents do not have this potential. It is a matter of looking at the energy that was available to be exchanged in the incident .

The concept that preventing the minor incidents will automatically prevent the major ones seems to me to be fundamentally flawed.

All organisations have limited resources to devote to safety, it seems more efficient to prevent one incident resulting in paraplegia than to prevent 20 incidents where people have a couple of days off work (some will say this comment is heresy)

Somewhere in the push to reduce L.T.I's ,reduce the L.T.I.F.R. and consequently achieve good ratings in safety programme audits the focus on serious personal damage tends to be lost.

I know of companies that have made great reductions in L.T.I.F.R. yet they are still seriously injuring their people.

Classifying Personal Damage

A method of classifying personal damage that seems appropriate is the following-
CLASS 1-Damage that permanently alters a persons life e.g. death, paraplegia, amputation of a leg, severe psychological damage.
CLASS 2- Damage that temporarily alters a persons life e.g. fractured leg that repairs with no lasting impediment ,deep laceration that has no underlying tissue damage and repairs without significant scarring
CLASS 3 Inconveniences a persons life (source-Geoff McDonald & Associates, Brisbane)

Focus on Class 1 Damage

The report of the Industry Commission 1995 indicates that safety in Australia is fundamentally a class 1 problem (87% of occurrences were class 2 with18% of cost,13% of occurrences were class 1 with 82% of cost)
This report further strengthens the argument that instead of concentrating on reducing L.T.I.F.R. we should be focusing on Class 1 damage reduction.
Class 1 incidents have more energy available to be exchanged than the usual Lost Time Injury and thus require a different preventative approach. Methods of class 1 damage reduction can be found in the paper" Change For The Future-Not Blame For The Past" by G.L.McDonald

The message about class 1 damage reduction has yet to sink in to many peoples minds.

Behaviour versus Systems of Work

The Report of the Industry Commission into Work Health & Safety (1995, xx) says

> "The key to controlling injury and disease at work is to be found in the design and control of the workplace and the activities conducted within it. Only very limited control, if any, control is possible by focussing on the behaviour of those who may be injured."

In the Industry Commission report (1995, 121) McDonald & Associates state

> "Historically too much reliance has been placed on behaviour control and too little on organising the work methods, environment and equipment to allow for the realities of human behaviour"

In the Industry Commission Report (1995, 5, sub 132) Dr. Wigglesworth supported a preventative approach based on workplace systems rather than human behavior.

> "One of the basic principles of the management of other public health problems is that passive countermeasures, which apply equally to all persons at risk without their active involvement are more effective than those that are active, that is which requires some component of human behavior."

Conclusion

In my view Occupational Health and Safety in Australia has made some gains in recent times but there are still significant obstacles to be overcome to reduce the unacceptable personal and economic drain on the nation.

References

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