

The Right to Non-Life-Threatening Play – Abstract

If a child's work is play and industrial health and safety regulations were applied, then most playgrounds would be closed and heavy penalties would be levied.

There are serious injuries in playgrounds and statistics indicate that they are on the rise. Over 75% of these injuries are falls and >65% of the injuries happen on public playgrounds. Many of the injuries are serious and involve fractures, concussions and sometime death. In the case of falls the deaths are from head injuries.

There has been a common misconception that injuries from falls are related to the height, design or complexity of the play structure, whereas the actual cause of the injury is the impact attenuation properties of the surface upon which the child lands. One result of this thinking is the lowering of structures and the removal of challenge with the effect of driving the children from the playground to other locations. This will lead to injuries from falling from trees and rock walls, skewing the statistics for playgrounds, but not solving the problem.

There have been studies in Canada and Australia that focus on the injuries other than the fatal head injury, which is the basis for the performance values in the various surfacing standards throughout the world. These studies suggest that lower values of Gmax might have the effect of reducing the debilitating long bone injury.

A review of the playground standards, the predominance of falls and the seriousness of the injuries would suggest that we place the emphasis on the wrong portion of the playspace. Placing the a greater emphasis on the

protective surfacing and on an equal footing with the other play components, there might be a little greater concern for the issues related to surfacing and the actual causes of the injury.

Responsibility for playgrounds performance as stated in various standards is the owner/operator, who has very little understanding of the technical aspects of a protective surface. They are required to install and maintain a surface to just below life-threatening levels for head injury without enough information to determine the performance. Only through performance based specifications and warranties can the owner/operator shift their responsibilities to the manufacturer/installer, which does have the technical expertise related to surfacing.

There may well be a need to re-evaluate the current pass/fail values as they relate to injury severity. Some of the studies that have been performed at Monash University in Australia could be well take the lead in this resetting of the Gmax values. To look at lowering HIC values there will need to be a review of data that has been developed in automotive crash tests and actual crashes. There could be reduction of acceptable HIC based on a move from the life-threatening to suspected brain damage.

In the evaluation of playground injuries it is important to take the most active participant, the child, into consideration. The culture of play has changed over the years and children are taking more risks. Video games have had the effects of desensitising children from severity of injuries, regaining health and the recovery from death. As a result children might take risks that place them in danger.

In reviewing injury statistics, it becomes logical to assume that a discussion on acceptable injuries in playgrounds must be engaged. Most standards look at the life-threatening head injury, which is easy to determine. Public

health officials have set their focus on the long-bone injury. It is now the problem to determine what degree of long-bone injury that is acceptable and which is not. This discussion may have a long way to go to make a change in standards, but information may be used to allow owner/operators to set lower values in their contract specifications and warranties.

One approach that might bring advances in playground design and standards is to build a standard using hazard based assessment. This may place additional focus on the protective surface and change the concern from what the child falls from and rather onto what they fall. This would provide new creative play structures, while age based design criteria would still provide for guardrails and barriers and other protective devices where desired.

Ultimately standards must be complied to and there will be the need to actually inspect the play structure and protective surfacing in the location of the playground. Physical testing including the use of sophisticated electronic equipment will be required to perform the tests in the field. Only in this way can the owner/operator protect themselves from liability and their children from severe injuries.