

Playing it Safe?

A global white paper on risk, liability and children's play in public space

Tim Gill

Independent researcher

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Photo: Tumbling Bay Playground, Queen Elizabeth Olympic Park, London. *Courtesy of Angelina Archer.*

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About the author

Tim Gill is an independent researcher, writer and consultant whose work focuses on children's play and free time. His book *No Fear: Growing up in a risk averse society* was published in 2007. In 2017 he was awarded a travelling fellowship by the Winston Churchill Memorial Trust to study child-friendly urban planning. He is a Built Environment Expert for the UK Design Council and was director of the Children's Play Council (now Play England) from 1998 to 2004. His website is www.rethinkingchildhood.com.

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1 Summary and recommendations

This paper looks at risk and liability in relation to children's play. It brings together research, policy and practice from a number of disciplines, and is written with a global context in mind. It was commissioned by Bernard van Leer Foundation to inform its Urban95 programme.

There is growing recognition of the benefits of outdoor play experiences with a degree of risk for children of all ages and abilities. However, their opportunities for play are being limited by concerns about risk and liability in many countries. At the same time, many urban environments contain significant threats to children's safety, health and well-being.

Attitudes to play and safety vary widely in different countries and social and cultural contexts. In some countries and contexts a highly protective mindset (sometimes called helicopter parenting) has emerged. Alongside this, some countries have seen the growth of bureaucratic and risk averse public safety policies and procedures, partly driven by concerns about litigation. By contrast in some countries, regulation policy and practice may be patchy.

Playgrounds, risk and liability: some facts

- The relative risk of injury from playing rugby is around 50 times that of playing on playgrounds (UK data).
- Hockey/skating causes around ten times as many hospital visits for concussion as playground equipment (Ontario data).
- Around 50-60,000 children visit hospital for injuries from playground equipment each year. Rates remained constant over a 14-year period, despite high levels of expenditure on surfacing and equipment replacement (UK data).
- In the UK there is, on average, one equipment-related public playground fatality every three or four years. Canada has seen two equipment-related playground fatalities in the last 25 years.
- In the decade 1989 - 99, around 1,300 UK child pedestrians died as a result of traffic accidents. Over the same period, perhaps two or three children died as a result of playground equipment-related accidents.
- New York City Parks saw 577 claims for playground injuries over a nine-year period, and paid out \$20 million - estimated to be around 0.4% of the city's total liability payments. In Manchester in the UK, payouts for playground accident claims are almost unheard of.
- The economic cost of liability in the USA is around four times that of the Netherlands or Denmark.

The available data and research suggests that playgrounds are comparatively safe places, and life-changing injuries are rare. In many countries, other leisure activities – and other environmental hazards including traffic, pollution and poor housing and sanitation - are responsible for more fatalities, injuries and health problems. Despite this, playgrounds are a major focus of injury prevention initiatives. These tend to focus narrowly on risk reduction, without considering possible side effects or costs and benefits.

Playground safety is usually understood in relation to compliance with industry standards for play equipment. In most countries, compliance with playground equipment standards is not a legal requirement. However, standards compliance is the main risk management focus. While patterns of litigation vary widely in different countries, litigation concerning playground injuries generally appears to be comparatively uncommon. Nonetheless, concern about litigation and liability is widespread.

Playground equipment standards are typically drawn up and revised by specialist committees largely drawn from manufacturers and businesses. Standards have a helpful role in managing risk, but they also have weaknesses. These include inflexibility, a poor evidence base, and tensions between commercial and safety goals. Those involved in standard-setting often have relevant expertise, but they may also have a commercial interest.

Play safety in the UK offers a national case study of the evolution of a more balanced approach to risk and liability in children’s play. Key to this has been the development of risk benefit assessment (RBA), a risk management tool that brings together considerations about both risks and benefits in a single process. RBA is supported by key UK stakeholders, including regulatory agencies, and has made a real difference to policy and practice. (Appendix 1 includes a template RBA form.)

Globally, advocacy on play safety shows signs of moving towards a more balanced approach. RBA is generating interest in some other high income countries, and may also have relevance in the rather different contexts of low and middle income countries.

New thinking is needed. In many low and middle income countries, rapid urbanisation and a challenging environmental and socio-economic context mean that there is a strong argument for learning from the experiences and mistakes made in cities in high-income countries.

In conclusion, this report sets out 10 recommendations for action by agencies taking forward playground and public space initiatives.

Recommendation	Action by
<p>1 Support data collection on claims, compensation payments and related legal cases, in order to gain a sound picture of the cost and prevalence of litigation.</p>	<p>City governments (lead) NGOs Research institutions</p>
<p>2 Support pilot play facilities and playful public space interventions that test a variety of design models and approaches - especially low-cost, low-tech interventions that draw on local cultures and construction practices – and use risk benefit assessment (RBA) to inform judgements about play safety.</p>	<p>City governments (lead) NGOs Safety & public health bodies Research institutions</p>
<p>3 Engage with insurers, risk managers and the legal profession to clarify the legal context and open up debate.</p>	<p>City governments (lead) NGOs Safety & public health bodies</p>

<p>4 Explore the scope for cost-effective procurement of play spaces at scale through programmes that use RBA to support a thoughtful approach to play safety and standards.</p>	<p>City governments (lead) NGOs Safety & public health bodies Research institutions</p>
<p>5 Promote RBA as a tried-and-tested tool (in high income countries) and as a tool with the potential to support innovation and creativity in playful public space design (in low and middle income countries), using the UK RBA template as a starting point.</p>	<p>NGOs & city governments (lead) Safety & public health bodies Research institutions</p>
<p>6 Make the case for proportionate risk management that focuses on supporting sound judgements in the best interest of children's health, happiness and development, that takes into account other environmental risks facing children, and that avoids the pitfalls of excessively bureaucratic, compliance-driven approaches.</p>	<p>NGOs (lead) City governments Safety & public health bodies</p>
<p>7 Support high-level debate on play safety that brings together diverse perspectives to build consensus across leading agencies - ideally at the national level.</p>	<p>NGOs (lead) City governments Safety & public health bodies Research institutions</p>
<p>8 Consider initiatives that explore and challenge those elements of playground equipment standards that are not well-supported by evidence and argument.</p>	<p>NGOs (lead) City governments</p>
<p>9 Support fact-checking and the collection and analysis of robust, methodologically sound data on playground accidents and injuries.</p>	<p>Safety & public health bodies/ research institutions (lead) NGOs City governments</p>
<p>10 Agree on a policy position on play, risk and liability, and broadcast this via media partners.</p>	<p>NGOs City governments Safety & public health bodies</p>

2 Introduction and background

This paper gives an overview and critical analysis of the topic of risk and liability in relation to children's play. It brings together perspectives from research, policy and practice in a number of disciplines including child development, risk management, public policy and playwork. It is written with a global context in mind. It was commissioned by Bernard van Leer Foundation to inform its Urban95 programme, which aims to improve outcomes for urban children through planning and urban design interventions.

This paper includes some personal perspectives and reflections, as someone who has had a longstanding and close engagement with the topic. It is inevitably a selective account, especially in relation to low and middle income country contexts, where my personal and professional experience and expertise are more limited. However, while it is necessarily incomplete, it does aim to be impartial and objective.

Published references are included as a list in an appendix.

3 Setting the scene

3.1 Play, risk and child development

Children of all ages and abilities are naturally curious. They have an appetite for experience, and an urge to explore and understand. These natural impulses have their fullest expression in children's play. Moreover, when children play they often move from what is routine and familiar – and thus potentially boring – to what is less certain, more challenging and more engaging.

Even in their first few years, children's growing ability to explore and navigate their world while keeping themselves reasonably safe is evident, for instance in their progression from sitting and crawling to toddling and walking. As they grow up, they become ever more competent and able to get to grips with the world around them.

Hence one central feature of children's development and growth is the gradual transfer of decision-making, judgement and responsibility to them. Often it is through the experience of engaging with and overcoming everyday challenges that children learn best how to cope with them. To put it another way, childhood can be seen as, in part, a kind of journey from dependence to competence and everyday autonomy. However, this journey is very different for different children.

Children's abilities, including their ability to deal with risks of different types, are of course strongly shaped by their stage of development. Children's paths through childhood are also greatly influenced by cultural, social and economic factors, as well as by their genetic inheritance and their home and neighbourhood environments.

The homes and neighbourhoods of many children, especially those in low and middle income countries, contain environmental risks and hazards that pose a significant threat to their safety, health and well being. Poorly built housing, lack of basic sanitation, polluted areas and traffic-dominated streets are major causes of fatalities and life-changing illnesses and injuries, as well as severely constraining children's freedom to play.

There is a consensus in child development that children's learning and healthy growth and development are supported by play, exploration and exposure to a degree of uncertainty and challenge. One common feature of children's play is the active seeking out of situations where they feel slightly scared and their stress levels are elevated, such as when they are climbing high, spinning, moving fast, or having play fights. Psychologists explain this in adaptive terms, arguing that such experiences help children to become more resilient and flexible in their responses to challenging or novel situations.

Children's active engagement in what has been called 'risky play' raises important questions for accident prevention, which tends to emphasise the need to reduce exposure to risk. A 2015 systematic literature review led by injury prevention researchers found that overall, the health and developmental benefits of risky play outweighed any increased accident risk. This provides empirical support for the view that allowing children some opportunities for risk-taking is a sound developmental and public health position.

Our species is highly attuned to dealing with the complex risk decisions and trade-offs that are part of everyday life. People often notice safety features, and may change their behaviour by taking greater risks as a result: a phenomenon known as risk compensation. For instance, a mountain climber equipped with ropes and harnesses will tackle climbs that they would not otherwise attempt. Risk compensatory

behaviour has been shown in studies on the introduction of anti-lock brakes (ABS) in taxis; drivers with ABS adapted their behaviour by driving faster and braking later.

While the presence of risk compensation as a pattern of behaviour is widely accepted, its effects on accidents and other outcomes are often hard to measure and can be hotly contested. But it may be important to consider, particularly when the risks being addressed are statistically rare.

There are grounds for thinking that risk compensation is a factor in children's play behaviour. It has been argued that some children playing in playgrounds with safety surfacing may be less careful on equipment because they think they will be safe if they fall, while for the same reason parents and other adults supervising them may pay less attention to what they are doing. This may weaken or undermine the benefits of safety interventions.

Accepting a degree of risk in children's play does not mean surrendering responsibility for their safety. However, the tension between protecting children and allowing them to learn through play is unavoidable. One approach to thinking about this tension is to think in terms of 'good risks' and 'bad risks'. The idea is that good risks engage and challenge children, and support their growth, learning and development, whereas bad risks are difficult or impossible for children to assess for themselves, and have no obvious benefits.

3.2 Cultural and parental attitudes to play and child safety

Cultural factors have a strong influence on adult attitudes to children's play, and the importance attached to it by parents, policy makers, practitioners and society. In one 2009 survey of parents of children aged 0-12 taking in 25 countries, parents largely agreed that play is important in child development. But there were wide variations in detailed views about the nature and value of play.

When asked whether play is best when it is educational, the proportion of parents agreeing varied widely. Less than 30% of Japanese, Nordic and French parents agreed with this view, whereas it was supported by over 60% of parents in China, the Czech Republic, Italy, Poland, Portugal, Russia, Slovakia and Spain. When asked whether play should always have a purpose, fewer than 15% of parents in Nordic countries, the UK and Australia agreed – but over 40% of parents in China, the Czech Republic, Hungary, Italy, Poland, Portugal, Russia and Slovakia agreed. Urban95 project workers in India, and play activists with the Taiwanese organisation Parents for Playgrounds for Children and by Children (PPFCC) report that in their countries, free play is not highly valued and at times even restricted, due to a focus on formal education. The co-founder of Think Playgrounds, which works in Vietnam, reported shifting attitudes about play between the generations, with younger parents valuing play more than older parents and grandparents.

Parental attitudes to child safety also vary widely in different countries. The 2009 international survey of parents referred to above showed that child safety concerns were particularly high in Portugal, France and Russia and significantly above average in Belgium, Canada, China, Hungary, Slovakia and USA. Parents in Austria, Denmark, Finland, Germany, Japan, the Netherlands, Norway, Poland and Sweden were relatively less concerned.

In some cultures, countries and socio-economic groups – particularly in high income countries - a strong parental norm has emerged that emphasises high levels of adult control, protection and supervision of children. This parental norm is variously referred to as helicopter parenting, snowplough parenting or curling parenting (referring to the winter sport of curling, in which a key feature is the sweeping aside of barriers). It fuels concerns from educators, play providers, regulators and others involved in children's

public services that they will be blamed or sued in the event of an accident or injury, whether or not they are negligent.

The merits of a controlling parental approach have been questioned by experts and commentators. It was even the subject of criticism from Pope Francis, who said in 2016:

“we cannot control every situation that a child may experience... If parents are obsessed with always knowing where their children are and controlling all their movements, they will seek only to dominate space. But this is no way to educate, strengthen and prepare their children to face challenges. What is most important is the ability lovingly to help them grow in freedom, maturity, overall discipline and real autonomy.”

The pervasiveness of this parental norm is a matter of debate. Parents' own choices suggest it may not be as dominant as some have argued - as shown by the growth of outdoor early years and childcare services such as forest schools, outdoor/bush kindergartens and similar programmes in Europe, North America and Australasia.

As with views about play, views about threats and dangers are strongly shaped by social and cultural factors. For example, the Nordic countries place a high cultural value on spending time in nature and the outdoors. These values are reflected in their leisure choices, planning systems and education (one example being the influential Danish forest school model of early childhood education). By contrast, other countries (including Vietnam) appear to show less positive cultural attitudes to nature, with a greater concern for cleanliness.

To take another example, in the Netherlands public space (including space for children and families) is a priority, resulting in many towns and cities having many more public playgrounds than cities of comparable size in other countries. There is growing awareness that much of the public space in Dutch towns and cities is – or should be – available for children's play, including natural green space and residential streets (as shown by the influential woonerf or 'living yard' residential street design). Cultural factors are also evident in the Dutch approach to water safety. The emphasis is on teaching children to swim, rather than attempting to fence off bodies of water (which would be all but impossible, given Dutch flood risk management practices and the prevalence of open water in Dutch residential areas).

By contrast in the USA, child safety fears appear to be heightened, especially in relation to child abduction but also around accidents. This may in part be a consequence of policies on healthcare and employment, which provide less of a financial safety-net in the event of injury than in many other high income countries.

3.3 Playgrounds and playground safety statistics

Public playgrounds – spaces open to the public, with structures and features designed for children to play on – first emerged in Western Europe and the USA in the late 1800s and early 1900s as a result of urbanisation. They were a response to children's manifest need and wish to play. Their historical and cultural role was as urban oases for children – as places of retreat from the dangers of the city and its streets. So playgrounds have long been associated with notions of harmless fun, safety and security (even if that is not always how children themselves see or experience them).

Playgrounds are common in parks and residential areas across Europe, North America, Australasia and Japan. They are less common in some other high income Asian countries including Taiwan and Korea. In low and middle income countries the picture is less clear. Public playgrounds appear to be spreading in

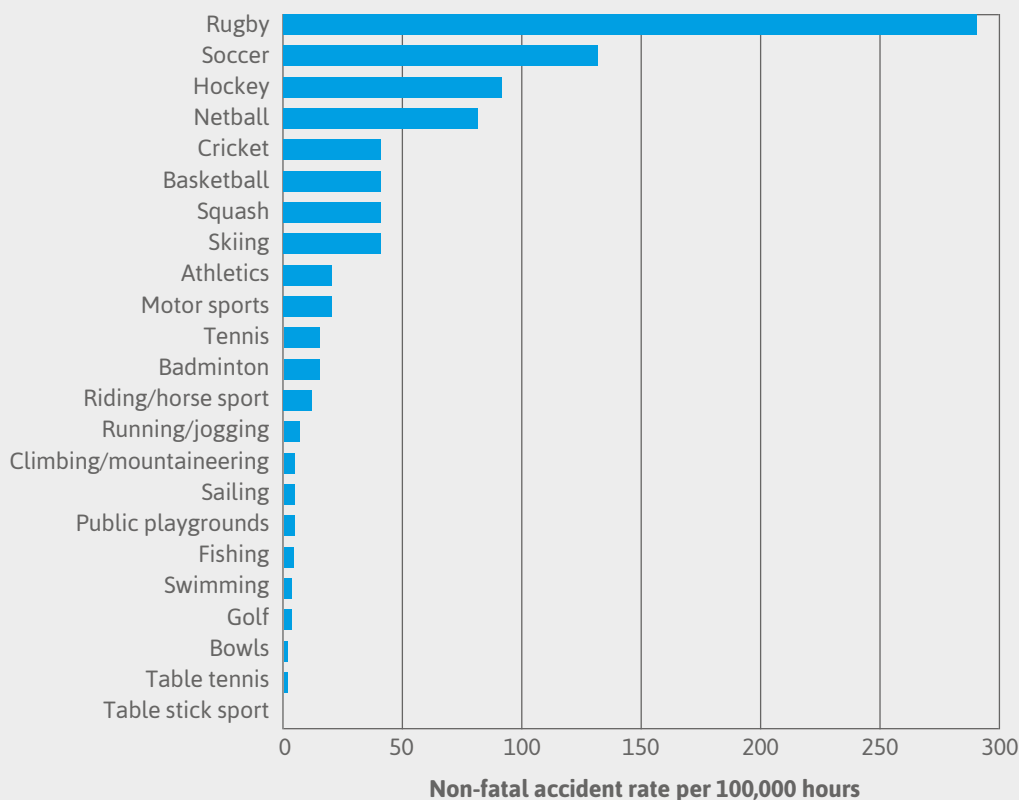
countries including Vietnam, Colombia and Brazil. In India, public open spaces in residential areas are typically areas of grass or dirt, with few other features (although they sometimes include some fixed play equipment). However, equipped playgrounds are appearing in some high income, gated communities.

In countries that collect relevant statistics, the available data suggests that playgrounds are comparatively safe places for children to spend time. As already noted, in neighbourhoods in many parts of the world dangerous traffic, pollution and poor sanitation pose greater risks, and lead to many more serious injuries, illnesses and fatalities than playgrounds. For example in the UK, in a ten-year period between 1989 and 1999, around 1,300 child pedestrians were killed. Over the same period, perhaps two or three UK children died as a result of equipment-related playground accidents.

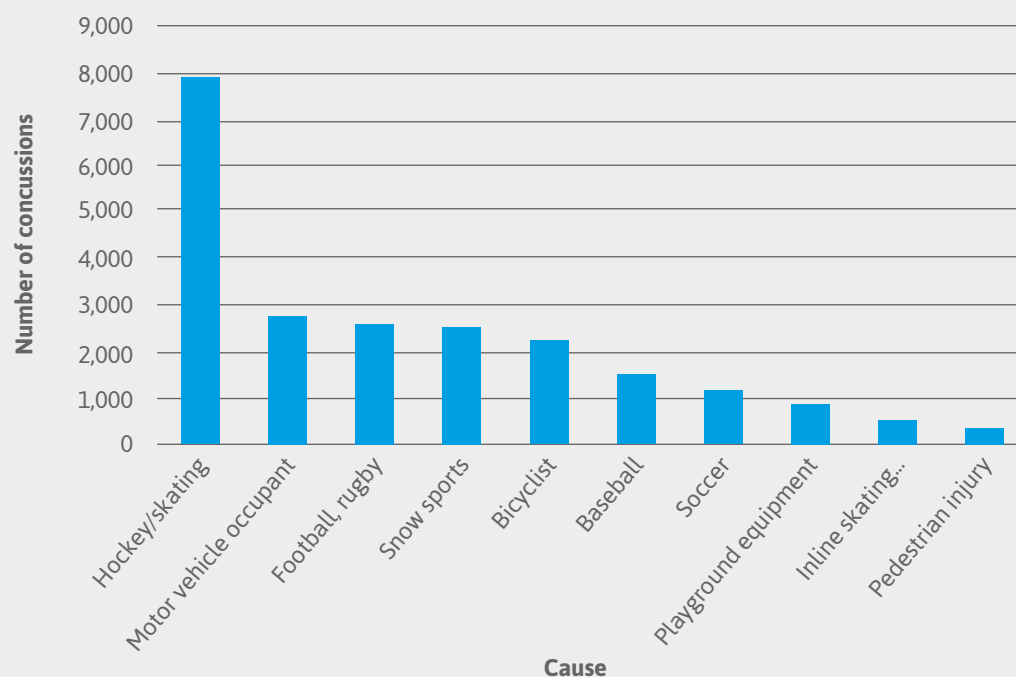
Minor injuries on playgrounds are common (many arising from children’s play behaviours, rather than from features of equipment). Life-changing playground accidents are rare. Playground fatalities are almost unheard of, and are more likely to result from strangulation (for example from toy ropes or clothing drawstrings) than from equipment failures or falls. Overall, the statistics show an ‘accident pyramid’, with large numbers of minor injuries, smaller numbers of more serious ones and an extremely small number of life-threatening injuries or fatalities.

The risk of injury from playground equipment is low compared to many other sport and leisure activities, and compared to some other causes such as motor vehicle accidents. One UK study showed that like-for-like injury rates for team ball sports like football/soccer, rugby and hockey can be orders of magnitude higher than that for playgrounds. An Ontario study of hospital visits for concussion by children aged 3 -18 showed that playground equipment accounted for about 4 per cent of such visits, and were the 8th most common cause. Hockey/skating, motor vehicle accidents, football/rugby, snow sports, cycling, baseball and soccer all caused more visits than playground equipment.

UK comparative injury rates for different leisure activities



Emergency department visits for paediatric concussion according to selective causes in Ontario, 2003 - 2010

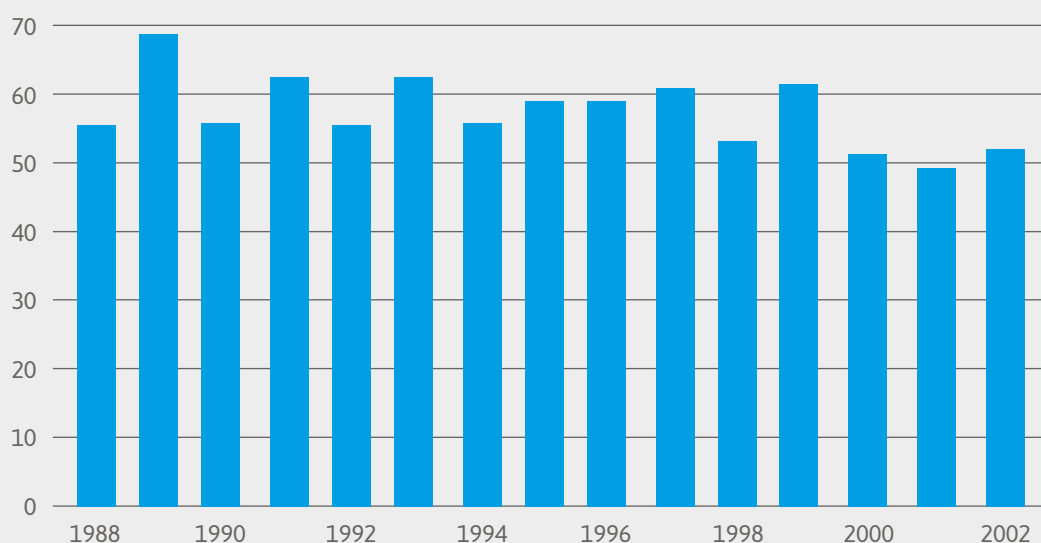


Studies of the causes of playground accidents show that design features, and conformity with playground equipment standards, can influence injury rates. A 2018 systematic literature review of playground injuries found that height, impact absorbing surfacing and guardrails and handrails are associated with injury risk. It also found evidence that modifying playground surfacing and lowering the height of equipment can reduce the risk of injury. However, the review found that the methodologies of the included studies were not of high quality. Another problem in interpreting such studies is the lack of data on playground usage levels (overall and for different design features). Moreover, the quality and detail of playground injury data varies widely in different countries, and also changes over time. For example the UK no longer collects data at the national level, after the scrapping of a government-funded scheme in 2003.

While injury prevention studies of playground injuries can suggest possible safety measures, they rarely look at cost-effectiveness, or the potential for unintended consequences. One study of playground surfacing suggests that the measure is difficult to justify on cost-benefit grounds, because the absolute level of risk is so low.

In the UK, trend data shows that playground accident rates vary little year-on-year. Over a 14-year period between 1988 and 2002, the overall number of hospital visits varied between 50,000 and 70,000 with no significant trend. The figures cast doubt on the effectiveness of playground safety measures, since this period saw significant investment in new equipment and surfacing, and the removal of structures that were not compliant with new playground equipment standards introduced at the beginning of the period.

UK playground accidents: hospital visit trend data 1998 - 2002



Turning to unintended consequences or side-effects, several scenarios are possible. Children could be at greater risk of injury in the wider environment beyond playgrounds, because they have been deprived of opportunities to learn how to keep themselves safe. This is the view of the leading Danish playground designer Helle Nebelong, who has said:

"I am convinced that standardised playgrounds are dangerous, just in another way. When the distance between all the rungs in a climbing net or a ladder is exactly the same, the child has no need to concentrate on where he puts his feet. This lesson cannot be carried over to all the knobby and asymmetrical forms, with which one is confronted throughout life."

Another possibility is that safety measures such as reducing the height of equipment could make playgrounds less attractive and engaging to children. This could in turn lead children to seek excitement in more dangerous situations – increasing the risk of injury - or to be less physically active. As noted below in Section 5, play advocates have voiced strong concerns about the potential side effects of playground safety measures. However, these would be difficult to show empirically.

Regardless of their prevalence, accidents on playgrounds – especially rare, high-profile tragedies - can have a strong influence on decision-making and public attitudes, and can lead to the oversimplification of complex issues in response to demands for action. This focus on loss is amplified by the mainstream media's appetite for stories of loss and tragedy, and by the growth of global social media that allows near-instant sharing of attention-grabbing incidents.

3.4 Risk management

For organisations, risk management is about making judgements where the outcomes are not guaranteed. Decisions and actions often involve trade-offs, and can lead to unintended consequences. As with views about children's play and child safety, views about risk management are shaped by social and cultural factors. These are not uniform within or across countries, cultures and societies, and they may change over time.

Some countries (including the UK) have seen the growth of an organisational culture of burdensome bureaucratic and regulatory demands for paper trails. This can lead to the growth of secondary risk management, where organisations become more concerned to show they have followed the correct procedures than to take effective action to address the primary risks. It has been argued that secondary risk management distorts and undermines safety efforts. This is because a focus on compliance and accountability means that resources and attention are shifted away from the primary risks (such as those to children). By contrast in some countries, regulation policy and practice may be patchy.

Organisations in some countries also seek out ways to offload liability risks to third parties such as expert advisers. But this can lead to poorer risk management decision-making if – as with play providers – those decisions lead to reduced benefits and a less valuable, enjoyable experience for users.



Equipment closure sign: the identified risk is to the provider, not the user

3.5 Legal responsibility, liability and litigation

The prime risk management challenge facing those who manage play facilities or oversee children at play is to make sound judgements in the light of children's need and wish for stimulating play opportunities. A connected challenge is to be in a position to justify judgements in the face of possible criticism.

Making these judgements is rarely easy. Alongside their appetite for play, children – especially young children - are more vulnerable and in need of protection than adults (although even in legal terms this vulnerability is rarely seen as absolute).

In many jurisdictions, play providers have a legal duty to manage the risks to users and visitors, and manufacturers have duties to ensure their products are safe. When an accident happens, the decisions of providers and manufacturers may come under scrutiny. In some countries, criminal prosecution is a

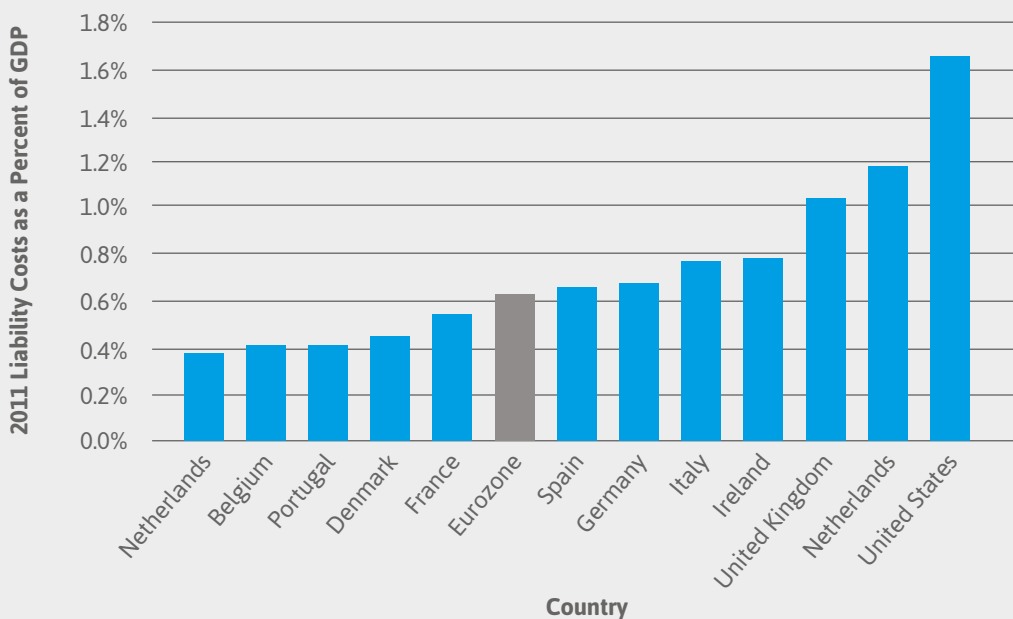
possibility, which can involve individuals and/or corporate bodies. Many jurisdictions also allow for claims in the civil courts.

The legislative context varies from country to country. In the UK and Australia, there is no primary legislation specific to play or playgrounds. The key legislation relates to – on the one hand - workplaces and the wider public realm (including play facilities), and – on the other – product safety. These set out a framework and set of principles for risk management, including the requirement to carry out risk assessments and act on their findings. This legislation is grounded in the notion of reasonableness; the primary task being to reduce the risks ‘so far as is reasonably practicable’ (to quote from one UK statute).

Some other countries (such as the Netherlands, Belgium and Germany) have specific legislation on playground safety. These legal differences may reflect more fundamental differences in the legal systems in different countries, such as the relative importance of civil law (which is codified) versus common law (with its emphasis on legal cases and precedent). However, even where there is specific legislation on playgrounds, it may be framed in broad terms (as is the case in the Netherlands and Germany) rather than specifying compliance with standards. In some countries, liability may be limited or constrained in some circumstances.

In many countries, insurance is available to protect providers against the financial losses arising from civil liability claims. The nature, scope, cost and details of these insurance products vary greatly according to context and type of facility. Insurance providers may also offer advice and guidance, and become involved in decisions about responding to liability claims. However, there may be tensions between a provider’s goals, and the legitimate need of insurers to limit claims and generate profit. Guidance and advice from insurers should be seen in this light. Some organisations in effect self-insure for claims up to a certain amount, by raising their policy excesses. This allows them to respond to many claims and cases on their merits.

International comparison of liability costs as a percentage of GDP



Studies show that in general, litigation activity varies widely across different countries. In the USA for example, litigation levels are markedly higher than in most other high income countries. Rigorous international comparisons are fraught with methodological challenges. However, one estimate suggests that liability costs in the USA (as a proportion of GDP) are over 2 ½ times the average level for Eurozone countries, and 4 times as high as Denmark and the Netherlands. There is some evidence of a growth in the cost of litigation over time, even in countries with comparatively low levels.

The low level of serious playground injuries seen in some countries might suggest that legal cases involving play safety are also uncommon. However, statistics for play safety litigation are not readily available. One analysis, from New York City Parks, showed that the city paid out \$20 million for a total of 577 playground accident claims over a nine-year period. By comparison, the city paid out a total of nearly \$500 million in a single year for personal and property claims. Assuming this latter figure is typical, it means that payouts for playground accidents represent 0.4% of the city's total liability payments.

Robust comparisons with cities in other countries are not possible. However in the UK, staff at Manchester City Council (a municipality whose population is about 10% of New York City's) have told the author that playground claims are rare, and that payouts are all but unheard of. Similarly, data on school accident claims collected by the BBC showed that playground claims were not typical of claims paid out by schools.

Anecdotally, risk managers in municipalities report that a low proportion of civil claims are for playground injuries. For example in the UK there have been both criminal and civil cases concerning playground injuries. However, these are rare. The vast majority of municipal civil liability claims arise from slips, trips and falls on roads and pavements. Legal cases have occurred in Taiwan, including one well-known case from 2001 in which state compensation was paid after a child fell from a swing, resulting in permanent brain damage. In the Netherlands, civil claims are extremely rare, while there have only been a handful of prosecutions of operators and manufacturers. Claims for accidents are also rare if not non-existent in Vietnam, according to Think Playgrounds.

Playground liability claims are comparatively uncommon even in countries with a high level of liability claims overall (as can be seen from the figures for New York). However, individual injuries can lead to high levels of concern amongst parents, and significant media interest, which can heighten fears amongst play providers.

In some countries, concerns about play safety have led to unrealistic expectations that playgrounds can be places where injuries can be eliminated. To put it another way, there can be a view amongst parents, providers, the public and the media that even minor injuries are a sign of management failure, rather than an inevitable consequence of children's natural play behaviours.

Regardless of the reality of litigation levels and the outcomes of court cases, fears and anxieties about legal action and loss of reputation in the event of an accident or injury are prevalent in many countries.

4 Playground equipment standards

Playground equipment standards are central to debates about play safety, risk and liability. In many countries, playground safety is seen solely in terms of compliance with standards. As a result, questions about acceptable levels of risk, and liability for accidents, are often reframed as questions about compliance. Hence it is important to have a sound understanding of the nature and role of playground equipment standards.

Playground equipment standards are industry-led documents that cover the design, construction and installation of fixed, manufactured playground equipment including swings, slides, dynamic equipment and climbing and platform structures. They also set criteria for the use of impact absorbent surfacing, fall heights and hazard-free fall zones for different types of equipment, and performance criteria. They may also include sections on maintenance and inspection regimes. Such standards usually apply to public equipment for use by children. Related standards may exist for equipment for private domestic use, indoor play facilities, and outdoor sports equipment.

Most high income countries have either developed detailed playground equipment standards, or have adopted standards that have been developed in other countries. These are typically revised regularly (for example the European standards have had major revisions in 1998, 2006 and 2014).

In low and middle income countries the picture is less clear. India, for example, has detailed standards on public playground equipment, and separate standards for playground equipment in schools. Most of these were written in the 1970s. By contrast in Vietnam, according to Think Playgrounds standards only exist for swings, slides and similar activity toys for indoor and outdoor family domestic use. These standards part of a set of standards for toys, and are based on American standards.

The drafting and revision of standards is overseen by overarching national or transnational industry standards bodies such as CEN (in Europe), ASTM (in the USA), CSA (in Canada), CNS (in Taiwan) and the Bureau of Indian Standards (BIS).

There are standards for many businesses, industries, services, components and products, and they do a number of jobs. One job is to draw up criteria that aim to reduce the likelihood of injuries or other adverse outcomes. However, standards rarely aim to reduce the risk to zero (in many contexts, this goal would be all but impossible). Rather, they set benchmarks for securing what are deemed by their authors to be acceptable levels of risk in a given situation, taking into account factors such as cost and the requirements of the product or service. To put it another way, standards set out one view of where the balance lies between safety and other goals.

As well as setting benchmarks for acceptable risk, standards in most industries have one other key function: the promotion of international trade. Their content is shaped at least as much by the goal of harmonization as safety. There can be tensions between these two goals.

Standards are typically drawn up and revised by specialist committees, which operate under the auspices of overarching standards bodies. These are commercial organisations, and the membership of their committees is also largely drawn from companies and businesses. While members may have relevant industry expertise, they also often have a commercial interest in the products or services that the standards relate to. In the case of playgrounds, committee compositions are heavily weighted towards manufacturers and playground safety businesses such as inspection agencies.

There is a widespread view that compliance with playground equipment standards is a legal requirement. In most countries, this view is mistaken; there is no primary legislation that requires compliance. What is more, in some countries, including the UK, even full compliance does not provide a watertight defence against claims. In legal terms, playground equipment standards (like many other industry standards) have the status of good practice guidance.

Even though playground equipment standards are rarely enshrined in primary national legislation, they may be mandated in other ways. For example in Taiwan, the Ministry of Health and Welfare has endorsed playground safety guidelines that require playgrounds to follow CNS standards. While there are no automatic penalties for non-compliance, the question of compliance would clearly arise in the event of any major injuries. In practice, standards are seen in many countries as the main if not the only benchmark of good practice. Hence they have a central role in considerations about risk and liability.

Playground equipment standards have a number of key features:

- **A risk reduction rationale:** standards are typically framed in terms of injury prevention. Historically, there has been little or no explicit consideration of benefits, though some standards (such as EN 1176/7 in Europe) do include statements about the value of risk-taking.
- **An engineering focus:** standards typically focus on physical and material features. Much of their content addresses highly technical topics such as structural engineering. However, they also include elements that address behavioural factors such as falling spaces and barriers between equipment.
- **Inflexibility:** standards are applied in similar ways across a wide range of settings and contexts. For instance, they are applied in the same way in both school playgrounds (where an adult supervisory presence is typical or constant) and in public play areas (where no adults may be present). Similarly, elements are not sensitive to what may be large differences in usage patterns by children of different ages or abilities.
- **Objectivity:** standards are designed to give objective answers that can be independently verified. Questions about acceptable levels of risk are framed as a matter of strict compliance, rather than as discussions where there may be diverse perspectives or room for debate.

The inflexibility of standards means that they struggle to cope with variations in children's play preferences and behaviours. For example, older children often look for more challenging play opportunities than younger ones (indeed some child psychologists argue that this is a developmental need). This may relate to factors such as height, speed/complexity of movement, or difficulty in climbing/descending. Standards for these factors typically need to apply to a wide age range. Hence equipment that has to be designed to allow for use by younger children may be too 'tame' for older young people.

As already noted, the technical nature of much of the content of playground equipment standards creates the impression of scientific objectivity. However, they are in fact shaped by value judgements and assumptions about the behaviour of children and adults that are open to question. And in many cases these assumptions are a matter of opinion rather than fact. As already noted in Section 3.3, there is limited data on the detailed causes of playground injuries, such as their links with specific pieces of equipment or design features.

Few of the norms and recommendations included in playground equipment standards have been empirically tested in real-life situations. For example, one part of the European Standard (EN 1176) specifies that, in effect, sets of steps between different elements of a climbing structure should be regular and level. The assumption is that children will have more accidents if the steps are uneven. But that assumption is not supported by any referenced observations or studies, and it has been questioned.

Playground equipment standards strongly influence public spending. For example, the introduction of standards for playground surfacing led to significant cost increases in schemes, and as a result, a shift in expenditure away from equipment. Hence they raise important questions about the public good. Yet the process of standard formation and revision is typically highly technical and taken forward through tightly-specified procedures, with little scope for considering wider questions about optimal use of public resources. Moreover, many of those responsible for the content of standards have a commercial interest, which further complicates consideration of wider public policy issues.

Table 1: Strengths and weaknesses of playground equipment standards

Strengths	Weaknesses
Set clear benchmarks and give clear answers in many circumstances	<p>Push providers away from designs where there are not clear answers (eg natural play, loose parts play)</p> <p>Inflexible: not sensitive to variations in user groups, supervision, and other local factors.</p> <p>Can lead to disproportionate responses to minor issues of non-compliance</p> <p>Focus on compliance can lead providers to downplay or ignore other ways to monitor, evaluate and manage risk</p>
Draw on relevant scientific knowledge	<p>Are dominated by engineering/technical perspectives</p> <p>Blur the boundary between objective and value-based judgement</p> <p>May make questionable assumptions about user behaviour</p>
Provide reassurance about design, construction and installation	<p>Can inhibit design creativity, and hence limit the scope for innovative, attractive, engaging schemes – possibly leading to lower levels of use.</p> <p>Set high barriers for entry for new suppliers and approaches</p>
Draw on industry expertise	Can be influenced by commercial interests
Facilitate international trade	Decisions based on trade considerations may not be optimal for users, providers or the public good

5 Play safety in the UK: a case study

As with other industrialised nations in Europe and North America, playgrounds in the UK first appeared in the late 1800s and early 1900s. Alongside conventional public play areas, post-war Britain also saw the emergence of the staffed adventure playground: a fenced facility with fixed opening hours, indoor and outdoor space and playworkers employed to facilitate children's play. While hard figures are not readily available, the number of UK adventure playgrounds may have peaked at several hundred, often based in deprived urban areas where space for play was otherwise lacking. High, overtly challenging timber play structures were prominent design features.

Adventure playgrounds and the UK playwork profession have had a key role in exploring and understanding the significance of risk in play, and in making the case for a balanced, thoughtful approach grounded in children's right to play freely. Playwork theory and practice have long recognised children's appetite for adventure and challenge. The best adventure playgrounds have inspired child care workers, educators and other professions to revisit their values and thinking, and also engaged parents in the topic. Playworkers have been leading advocates for play and a balanced approach to risk.

The staffed adventure playground has had a distinctive role in the UK story of play safety. But for the vast majority of British children, their local play facility took the more familiar form of the unsupervised public playground. And for much of the post-war period, play safety in unsupervised contexts was seen largely in terms of compliance with playground equipment standards (staffed adventure playgrounds are explicitly excluded from the provisions of these standards). The first comprehensive UK playground equipment standards were published at the end of the 1970s. The UK now uses Europe-wide standards developed under the auspices of CEN.



Glamis Adventure Playground, London



*St James Park playground, East London:
a typical 1980s design*

In the 1970s and 1980s playgrounds became the focus of prominent safety campaigns by consumer and media organisations, in the wake of some highly publicised tragedies. Campaigners called for better maintenance, more stringent standards and increased regulation, especially around the use of impact absorbing surfacing. These campaigns used highly emotive stories and images to make their case. One 1989 campaign by the influential BBC consumer affairs television programme 'That's Life' suggested that any playground injury, no matter how serious or slight, was a sign of failure on the part of providers. In a

studio demonstration of the merits of impact absorbent surfacing, china plates were dropped first onto the studio floor, then onto rubber tiles. It was a scenario that exemplified (no doubt unintentionally) a characterisation of children as fragile and unable to learn from their mistakes.



Still from the BBC TV programme *That's Life*, broadcast in 1989

However, around the same time, concerns began to emerge amongst play industry insiders about the side-effects of orthodox approaches to play safety (as discussed above in Section 3.3). These concerns were in part informed by the values and practice of playwork. In 1995 Peter Heseltine, a leading UK play advocate and experienced play inspector with the Royal Society for the Prevention of Accidents - and former playworker - wrote:

"We have made playgrounds so monumentally boring that any self-respecting child will go somewhere else to play – somewhere more interesting and usually more dangerous."

By the turn of the millennium there was growing support for a fresh approach. One key milestone was a position statement published in 2002 by the UK Play Safety Forum (PSF) – a government-established advisory body made up of representatives from the leading agencies with an interest in the topic. Significantly, the PSF includes the Health and Safety Executive: the Government's overarching safety regulator. It also includes organisations with links to playwork, facilitating PSF's engagement with arguments and insights about risk drawn from the adventure playground movement.

UK Play Safety Forum members

- Play England
- PlayBoard Northern Ireland
- Play Scotland
- Play Wales
- Association of Play Industries
- Chartered Institute for the Management of Sport and Physical Activity
- Child Accident Prevention Trust
- Fields in Trust
- Health and Safety Executive
- Kids
- Learning Through Landscapes
- Parkour UK
- Register of Play Inspectors International
- Royal Society for the Prevention of Accidents
- Plus representatives from the municipality and insurance sectors

Entitled *Managing Risk in Play Provision*, the statement set out the basic principles of a thoughtful, balanced approach to risk in children's play. It also had clear messages about the role of risk in children's well-being and development. And it drew on robust statistical research on playground accidents.

"Children need and want to take risks when they play. Play provision aims to respond to these needs and wishes by offering children stimulating, challenging environments for exploring and developing their abilities. In doing this, play provision aims to manage the level of risk so that children are not exposed to unacceptable risks of death or serious injury."

Managing Risk in Play Provision summary statement

The 2000s saw substantial government and National Lottery investment in playgrounds and other forms of play facility, especially in England where the sums involved totalled over £300 million. This investment led to innovation and evolution in a range of models of play services, including staffed programmes and playground design and management.

Because of this growth in interest and investment in play facilities, services and facilities emerged that raised difficult risk management issues. For example, some staffed mobile play services running in parks were using equipment such as portable swingsets. These prompted questions about surfacing and stability that were not easily answered by reference to playground equipment standards (since these were written with permanent, fixed equipment in mind, and also for unstaffed contexts). Likewise, naturalistic design approaches incorporating fallen trees, hillocks, ditches and boulders (where again, the application of equipment standards was difficult and their relevance was open to question) left designers and providers searching for useful tools to assess risk.

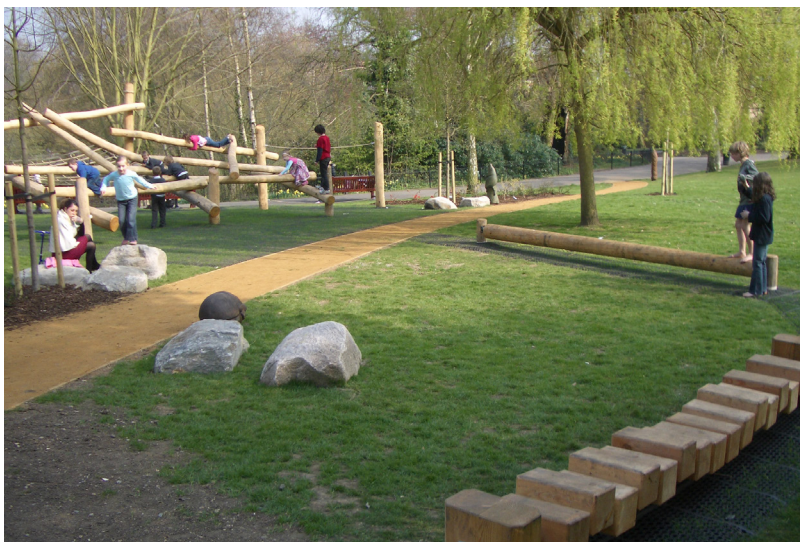


Wakefield play rangers session – note the portable swing

The biggest initiative, the £235 million national play strategy for England launched in 2007 by the then Department for Children, Schools and Families, required each top-tier municipality to invest in the creation or improvement of at least 28 public playgrounds. Guidance placed a strong emphasis on more naturalistic designs (inspired by good practice from Denmark and Germany) and on adventurous features that would appeal to older children and young people.

This demand for guidance led to a government-funded practice guide on play safety – first published in 2008 and revised in 2013 - that built on the PSF position statement. This guidance, *Managing Risk in Play Provision: Implementation Guide*, set out in detail how risks and benefits can be considered in a single judgement: namely a risk benefit assessment (RBA).

RBA is a generic process that, like a conventional risk assessment (RA) brings together a set of considerations that shape decisions about risk management. However, unlike a conventional RA, which focuses solely on the downside of risk, an RBA also considers benefits – including the benefits that arise as a direct result of the risks.



Waterlow Park play area, London, built in 2008. Design: LUC

At the heart of RBA is the addition to the decision-making process of questions about the benefits of the activity, structure or facility that is under consideration. This move is a paradigm shift. Conventional risk assessment can be seen as a push in one direction only – towards risk reduction. RBA, in contrast, sees risks and benefits as being in tension, and in need of a balancing process. A template RBA form, as piloted and published by leading UK play agencies, is included as Appendix 1 to this paper.

RBA is an approach that weighs up a range of considerations on both sides of the risk-benefit balance. Compliance with standards is one of those considerations. But it is not the only one. Standards are relevant to RBA, and are typically taken into account in the process. However, one of the advantages of RBA is that facts about compliance are placed in a context. Compliance (or non-compliance) is one piece of information that feeds into the risk management process, rather than definitive proof of (un) acceptability.

Case study

The Natural Play Trail at Box Hill is a low-cost, naturalistic set of play features dotted along a 2-mile circular path through woodland owned and managed by the National Trust. It was designed and built using RBA at all stages. Risk management is carried out by National Trust staff, who take the view that they are competent to make judgements themselves, drawing on their experience, observations and comments and feedback from users (though in some locations, the advice of an arboriculturist has been sought). The trail has led to a significant increase in family visits to the site, and has activated areas that were previously underused. Self-built dens are a common sight in the woods (and RBA is used to justify the approach to managing these features).



Feature at Box Hill Natural Play Trail

The evolution of policy and practice in play safety resonated with wider debates about public safety in the UK. Growing concerns about litigation, over-regulation and a so-called compensation culture were said to be distorting decision-making and leading to unintended and undesired consequences. Legislative and regulatory reforms were enacted in England and Wales in 2006, in a new law that made explicit the power of the courts to take into account the potential side effects of risk management measures, and that regulated companies that manage litigation claims.

A review of health and safety in 2010 recommended the promotion of RBA in children's play and leisure contexts, leading to UK-wide regulatory support for RBA in the form of a 2012 high level statement from the HSE. In Wales, a 2012 government policy document gave support for RBA. In Scotland the curriculum agency Education Scotland has published a template RBA form, while in 2016 the Care Inspectorate (the statutory regulator for childcare) published a statement in support of RBA.

Case study

The Identified Flying Object is a popular and prominent art installation in the high-profile Kings Cross Central development in London that features a swing inside a large metal bird-cage structure. It is clearly non-compliant with relevant playground equipment standards, because of the presence of metal bars within the fall zone of the swing. The developer (Argent plc) and designer/manufacturer carried out a written RBA to assess the risks and provide evidence of sound risk management.



Identified Flying Object, Kings Cross Central

RBA is also supported by leading UK non-profit agencies, including Learning through Landscapes and the Royal Society for the Prevention of Accidents.

RBA is now accepted as a legitimate tool in play safety and outdoor learning, and has shown its value. While arguably not yet the norm, it is reasonably well-known and understood. Its profile is strongest in the public playground, playwork and outdoor learning sectors (especially Forest School, a fast-growing approach to outdoor learning inspired by models from Denmark). It has had a more modest impact on school playgrounds (probably a reflection of a relative lack of interest in play within mainstream UK schools).

Play safety in the UK: key milestones

- 1993** Formation of Play Safety Forum
- 2002** PSF *Managing Risk in Play Provision* statement
- 2007** Launch of Play Strategy for England
- 2008** *Managing Risk in Play Provision: Implementation Guide* published
- 2010** Government Health and Safety review endorses RBA
- 2012** Health and Safety Executive high-level statement supports RBA

6 International developments

6.1 Global advocacy

The shift to a more balanced approach to play safety can be seen at the global level. The pre-eminent global body for children's rights and well-being is the United Nations Committee on the Rights of the Child. In 2013 this body published a general comment or review of the implementation of Article 31 of the UN Convention on the Rights of the Child (the Article that sets out the child's right to play). This review stated:

"A balance is needed between, on the one hand, taking action to reduce the unacceptable hazards in the children's environment... and on the other hand, informing, equipping and empowering children to take the necessary precautions to enhance their own safety."

Two other international advocacy developments are worthy of note. One is the formation of the International School Grounds Alliance (ISGA), a global network of practitioners and advocates. In 2017 the ISGA published a declaration on risk in play and learning, supported by all 54 of ISGA's Leadership Council members, representing 38 organizations from 16 countries and six continents. This declaration – available online in 13 languages – begins with the statement:

"Risk-taking opportunities are an essential component of a well-functioning school ground. Adults and institutions have a responsibility to use common sense in providing and allowing risk-taking activities for children and young people."

The second is Outdoor Classroom Day, a global campaign supported by the Anglo-Dutch corporation Unilever that promotes outdoor learning and play in schools. Risk benefit assessment is the focus of one of its good practice guides (which has been translated into 11 languages). As at Feb 2018 Outdoor Classroom Day 2018 is being supported by over 2,000 schools in 70 countries across six continents.

6.2 Europe

Despite the variation in legal systems noted earlier, in mainland Europe play safety has followed a broadly similar historical path to the UK, with growing regulation and a strong focus on compliance through the 1970s, 1980s and 1990s, followed by the emergence of a more permissive approach (though in some countries, there has been more scope for flexibility throughout this period).

This path can be seen in changes in European playground equipment standards (which apply to all EU member states and several others). The introduction to the 2008 version of the playground equipment standard EN1176/7 included the following statement:

"Risk-taking is an essential feature of play provision and of all environments in which children legitimately spend time playing. Play provision aims to offer children the chance to encounter acceptable risks as part of a stimulating, challenging and controlled learning environment. Play provision should aim at managing the balance between the need to offer risk and the need to keep children safe from serious harm... In play provision exposure to some degree of risk may be of benefit because it satisfies a basic human need and gives children the chance to learn about risk and

consequences in a controlled environment. Respecting the characteristics of children’s play and the way children benefit from playing on the playground with regard to development, children need to learn to cope with risk and this may lead to bumps and bruises and even occasionally a broken limb.”

Moreover, some key elements of the 2008 EN standards were less stringent than in previous versions; for instance, one revision allowed the use of grass for higher fall heights in some circumstances (up to 1m or even 1.5m in some countries). These progressive changes, which have been retained in subsequent revisions, happened in part as a direct result of UK work, for example through representation on relevant committees of UK delegates.

Another Europe-wide development is a proposal from CEN to recognise child development as a key part of the knowledge base of playground inspectors. At the time of writing this proposal is in draft, but is likely to be supported. Further proposals from CEN include a new protocol that will evaluate all proposals for new equipment standards in terms of their rationale, evidence base, cost and possible unintended consequences.

Alongside this Europe-wide move towards deregulation (or at least more thoughtful regulation), play advocates in some European countries, including the Netherlands and Sweden, have taken steps to promote risk-benefit approaches. These initiatives have yet to result in significant changes in public policy or established practice (although at least one municipality in Sweden, Örebro, supports risk benefit assessment in playgrounds). However, they show an appetite for learning from the UK experience.

6.3 Other high income countries

International concern about an overemphasis on safety in playgrounds goes back at least as far as the mid-1990s. A 1995 international conference on the topic saw speakers from several countries in Europe and beyond voice their worries on this theme. Since then, further moves towards a more permissive and balanced approach to play safety have been seen in several high income countries outside Europe.

In Australia, the standards agency Standards Australia in 2017 adopted a new set of playground equipment standards that follow the 2014 European standards closely, resulting in a significant relaxation of key elements. These standards also for the first time support RBA as a decision-making tool. In 2015 Play Australia published a play safety guide called *Getting the Balance Right: Risk Management for Play*, in which RBA is central. It acknowledges and quotes from UK publications and initiatives. While this is not published by government or Standards Australia, it is authoritative guidance. Moreover, at least one Australian municipality (Campbelltown in South Australia) has incorporated risk benefit assessment into its playground safety policy.

In Canada, public policy debate about risk in play has been growing. In 2015 12 leading national institutions published a *Position Statement on Active Outdoor Play* with the central message that “access to active play in nature and outdoors—with its risks—is essential for healthy child development.” This consensus statement, published by public health agency ParticipACTION alongside its annual report card on physical activity, was prompted by health concerns about the decline in children’s opportunities for outdoor play. It received widespread media coverage.

Work is underway at the national level to move this debate on. One initiative is the development of a risk benefit framework for outdoor learning. Another, under the auspices of the Canadian Standards Agency, is looking at the risk management of natural play features in playgrounds.

Kids need scraped knees and risky play, study says



ANDREW SEYMOUR, OTTAWA CITIZEN

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Canadian coverage of 2015 ParticipACTION report

Also noteworthy is a 2015 legal case in British Columbia involving a compensation claim against a municipality, on behalf of a child injured during a chase game after a fall from equipment at a staffed holiday programme. In rejecting the claim, the Supreme Court judgement set out arguments about the benefits of managed exposure to risk, and referenced the ParticipACTION initiative.

In the USA, evidence of a significant shift is modest at best (although several prominent American press and media articles have highlighted the country's risk averse approach). Some comparatively adventurous playground designs have been taken forward, typically as part of flagship park refurbishment programmes. And in 2015 a proposal to tighten a key element of one American standard – on the impact absorbency properties of surfacing – was rejected after public and international debate. Had that proposal (which went in the opposite direction to the changes introduced in Europe in 2008) succeeded, it could have had significant implications for playground budgets and designs.

In Israel, as in the USA, playground safety (and indeed playground quality, at least as judged by play providers) is largely if not entirely seen in terms of standards compliance (although the standards in question are based on those from Europe). As a result, playground designs tend to lack variety or distinctiveness. However, there is some evidence of growing interest in innovation and creativity in playground design from both parents and providers.



Playgrounds in Tel Aviv, Israel

In Taiwan, officials tend to take a risk averse line. Several distinctive play spaces and structures have been removed, on the basis of safety concerns. In the view of Taiwanese play advocates, these concerns are overstated. New play spaces are, in their view, almost always off-the-shelf, unimaginative structures, devoid of nature and made of inferior quality materials, catering only for younger children.



Old playgrounds in Taipei, Taiwan (now demolished)



New playground in Taipei, Taiwan



New play space in Taipei, Taiwan designed and built by Eyes on Place and PPFC with community participation

6.4 Low and middle income countries

It is beyond the scope of this paper to offer a comprehensive overview of play safety in low and middle income countries. This is partly to do with the challenges in gathering comprehensive, authoritative information and data, and partly a reflection of the author's expertise and knowledge of the topic, which centres on high income countries.

Some tentative observations can be made. First, while there is huge variation in the lives and play experiences of children both within and between low/middle income countries, globalisation will make urban life the norm for ever more children and families. In many countries, urban growth is rapid and poorly planned. Traffic growth, poorly designed housing and a lack of public and green space are common in many neighbourhoods, although the emergence of a comparatively affluent middle-class is leading to some areas that are insulated from the worst effects of poor urban planning.

In many low and middle income countries, poor children have comparatively poor quality healthcare and access to services. Significant income inequalities and a lack of welfare and public service support exacerbate the effects of poor urban conditions for many children and families. Hence the same injuries may have more serious life-changing consequences than in high income contexts, where they may be more easily and successfully treated. This may shift the balance in any notional consideration of risks and benefits in relation to playground injuries.

These demographic and physical changes in urban areas are likely to lead to more limited freedom of movement for children and greater institutionalisation as more time is spent in schools and childcare. Hence it may lead to a loss in play opportunities, especially in countries where play is not highly valued compared to formal education.

In some countries, including Vietnam and India, demand for public space and play space appears to be growing (although conventional playgrounds are rare outside of large public parks). In some countries there may be a view that Western-style, mass-manufactured playgrounds are the most modern and desirable forms of play space, especially if there is little scope to consider alternative approaches. The expansion in urban education and childcare facilities may also lead to a growth in interest in the availability and quality of outdoor play space in schools and childcare settings (as appears to be the case in some Brazilian cities). The work of agencies like Think Playgrounds in Vietnam and the Urban95 initiative in Bhubaneswar, India, shows there is an appetite for new approaches to playful public space in these countries.



Playgrounds in Ho Chi Minh City, Vietnam



New playground, Hanoi, Vietnam designed by Think Playgrounds

There is likely to be wide variation in legal systems and access to legal redress, leading to variation in litigation and liability cultures and practices. There also may be a comparative lack of regulations and industry standards relevant to playgrounds and their application may be inconsistent or patchy. Hence there may be a greater risk of injury from play equipment that is poorly designed, built and maintained.



Playgrounds in Bhubaneswar, India

Municipal budgets for the construction and maintenance of play facilities may be comparatively limited due to lower tax bases and competing priorities for public spending and urban infrastructure. At the same time, in rapidly expanding cities, a growing urban middle class may make demands on municipalities for parks and outdoor play facilities. In these circumstances, it would be reasonable for municipalities, developers and built environment agencies to explore different cost-effective ways to create engaging and attractive play spaces that take a balanced, proportionate approach to risk.

7 Conclusions

Play safety is complex, emotive territory. Finding a good path through it involves embracing this complexity, and balancing emotion with reason. The journey starts by placing children's health and well-being at the centre.

It was an excessive focus on reputation and blame, coupled with questionable assumptions about children's competences and vulnerabilities, that led play facilities in the UK and some other high income countries to become too focused on risk reduction at the expense of children's engagement, enjoyment and learning.

The risk reduction approach to play safety has fuelled a highly commercialised playground model that has been widely criticised. Long a concern amongst play advocates, this model has in recent years been challenged by a growing body of robust evidence on the importance of risk, challenge and uncertainty in children's learning, healthy development and growth.

Playground equipment standards are a key component of this model. Standards are influenced by commercial agendas that may have as much to do with markets and global trade as safety. There may be scope for improving their content and application (though depending on the context, this could mean further development, or it could mean judicial editing).

Standards have an important role in securing quality in design, construction and maintenance. However, they fail to cope with the complexity of the judgements that go along with a creative, innovative, child-centred approach to play. While standardisation and commercialisation may have led to fewer accidents and injuries, they have arguably also led to too many uninspiring spaces, disproportionate spending on safety features (especially high-tech surfacing) and poor use of public funds.

The time is right for a more thoughtful, balanced, holistic approach, with playground equipment standards seen as just one tool in the risk management toolkit. Play safety initiatives need to take proper account of the benefits of risky, challenging play experiences. They need to be alive to potential side-effects. And they need a sound, cost-effective policy rationale, grounded in the public good, in the light of the range of environmental hazards that pose a risk to children.

The UK model of risk benefit assessment (RBA) is a tried-and-tested tool that has been proven to have improved practice, and that has led to international interest. In high income countries and contexts, the case for supporting it is strong. In low and middle income countries, the picture is less clear. The UNCRC general comment (quoted above in Section 6.1) offers support for a global move to build a balanced approach to safety in children's play. However, given the significant legal, cultural, administrative, and socioeconomic differences between high and low/middle income countries – and also the lack of information already noted - it would be premature if not presumptuous to make a definitive argument in favour of risk-benefit approaches.

That said, RBA has features that are of value in low and middle-income contexts. Play facilities are set to spread. It is tempting to assume that globalisation will lead these countries to follow the path of high income areas, with factory-built equipment, commercially-driven play area designs, and standards compliance the default approach to risk management. But this is neither inevitable nor desirable.

Low and middle income areas have the opportunity to learn from the experiences and mistakes of other parts of the world. There is potential for alternative models of playful public space to emerge, drawing on local cultures, construction practices and customs in the appropriation and use of public space. The budgetary and public policy pressures on municipalities provide a strong rationale for the development of low-cost, low-tech models. And RBA offers a flexible risk management tool – not premised on manufactured playground equipment – to support such models.

A final point: low-cost does not mean low quality. Western ideas about progress and design quality can be pervasive, with playgrounds as with other aspects of modern urban life. In some low/middle income contexts there may be a perception that a good playground is one that fits the commercialised, industrialised model, and that moving away from this model is somehow short-changing users. But this perception does not fit the reality of recent experience in high income countries, and should be challenged. Interestingly, one Urban95 project in Hanoi – including natural elements in a playground design - met with precisely this response from parents. The subsequent success of the project led to a more positive perception.

8 Recommendations

Table 2 below sets out 10 recommendations for action by NGOs, city governments, safety & public health bodies and research institutions who are taking forward playground and public space initiatives, in order to support a thoughtful, balanced approach to risk and liability in play. Where appropriate, lead agencies are identified.

Table 2: Recommendations for action

Recommendation	Action by
1 Support data collection on claims, compensation payments and related legal cases, in order to gain a sound picture of the cost and prevalence of litigation.	City governments (lead) NGOs Research institutions
2 Support pilot play facilities and playful public space interventions that test a variety of design models and approaches - especially low-cost, low-tech interventions that draw on local cultures and construction practices – and use risk benefit assessment (RBA) to inform judgements about play safety.	City governments (lead) NGOs Safety & public health bodies Research institutions
3 Engage with insurers, risk managers and the legal profession to clarify the legal context and open up debate.	City governments (lead) NGOs Safety & public health bodies
4 Explore the scope for cost-effective procurement of play spaces at scale through programmes that use RBA to support a thoughtful approach to play safety and standards.	City governments (lead) NGOs Safety & public health bodies Research institutions
5 Promote RBA as a tried-and-tested tool (in high income countries) and as a tool with the potential to support innovation and creativity in playful public space design (in low and middle income countries), using the UK RBA template as a starting point.	NGOs & city governments (lead) Safety & public health bodies Research institutions
6 Make the case for proportionate risk management that focuses on supporting sound judgements in the best interest of children’s health, happiness and development, that takes into account other environmental risks facing children, and that avoids the pitfalls of excessively bureaucratic, compliance-driven approaches.	NGOs (lead) City governments Safety & public health bodies
7 Support high-level debate on play safety that brings together diverse perspectives to build consensus across leading agencies - ideally at the national level.	NGOs (lead) City governments Safety & public health bodies Research institutions

<p>8 Consider initiatives that explore and challenge those elements of playground equipment standards that are not well-supported by evidence and argument.</p>	<p>NGOs (lead) City governments</p>
<p>9 Support fact-checking and the collection and analysis of robust, methodologically sound data on playground accidents and injuries.</p>	<p>Safety & public health bodies/ research institutions (lead) NGOs City governments</p>
<p>10 Agree on a policy position on play, risk and liability, and broadcast this via media partners.</p>	<p>NGOs City governments Safety & public health bodies</p>

Appendix 1: Risk Benefit Assessment template

[Adapted from Risk Benefit Assessment form published by Play Scotland]

Introduction to risk benefit assessment

This form is designed to support a balanced approach to risk management using the process of risk benefit assessment (RBA). It is aimed at those involved in providing play opportunities in a range of contexts, including play areas, public parks, green spaces, out-of-school childcare settings, playwork settings, schools and early years services. It builds on the guidance document *Managing Risk in Play Provision: Implementation Guide* (2nd edition), published in 2013 by the Play Safety Forum with Play England, Play Wales, Play Scotland and PlayBoard Northern Ireland. See this publication for a fuller discussion of the principles and approach set out here.

Those using this form should focus on the significant risks that the play provision gives rise to.

Incorporating RBA into your risk management system is a significant step. It may involve changes in principles, procedures and practice at many levels, including thinking and understanding about children and their play and development, overall values and direction, service management, staff and site supervision, and ongoing maintenance and inspection procedures. Some kind of organisational review or training may be helpful in ensuring that considerations of the benefits of risk in children's play are properly understood and implemented. When first introducing the form, some piloting and group/team discussion is likely to be useful.

The form is split into two parts, to reflect the different levels of expertise that may be involved. The **main form** sets out the factors to be addressed in any overall RBA. The **supplementary form** asks about the knowledge and/or specialist expertise that may – or may not - be needed when carrying out a particular RBA. A glossary at the end of this paper gives brief definitions of some of the key terms.

A worked example of this form, based on the hypothetical example of a tree swing, is available online. See References.

Main form: Risk benefit assessment

Benefits	
Risks (taking into account relevant technical information)	
Local factors	
Precedents &/or comparisons	
Decision	
Actions taken	
Ongoing management & monitoring	

Supplementary Form: Knowledge and/or specialist expertise needed (if any)

Use this table to give information about any additional specialist or technical expertise that is felt to be necessary. In some circumstances, no such input will be needed. If this is the case, a suitable note such as 'none applicable' or 'N/A' should be made in the table (which should otherwise be left blank). In other circumstances, such as those involving bespoke structures or unusual sites, specialist input may be appropriate. Such expertise might, for example, cover the following topics: trees, structural engineering, rope specialisms, water, soil, playground equipment standards and maintenance. In rare cases, other areas of expertise may also be needed. Ensure that relevant information is noted above in the main form.

Knowledge or specialism	Person providing the knowledge/ carrying out the assessment	Any checks carried out and actions proposed

Appendix 2: Definitions and glossary

This section offers definitions of the risk management terms used in the paper. It also expands on the prompts included in the template RBA form at Appendix 1. The text is adapted from the above risk benefit assessment form published by Play Scotland.

Definitions

Hazards

Hazards are potential sources of harm. The UK Health and Safety Executive (HSE) defines a hazard as “anything that may cause harm, such as chemicals, electricity, working from ladders, an open drawer, etc.” There is no action and no object that may not be hazardous in certain circumstances. It is impractical to treat all potential hazards with the same degree of seriousness. In managing risk, judgements need to be made about:

- Which risks and hazards need to be modified or removed
- Which risks and hazards might be acceptable or desirable, because of their benefits to children and young people
- What, if anything, is to be done about risks and hazards that have been identified.

Risk

In general use, the word ‘risk’ refers to the probability, likelihood or chance of an adverse outcome. In risk management contexts, the word tends to include a measure of the seriousness of the outcome, as well as its probability. HSE defines risk as the chance that “somebody could be harmed by [a hazard] together with an indication of how serious the harm could be.”

Risk benefit assessment (RBA)

A tool to aid risk management that explicitly brings together considerations of risks and benefits in a single judgement.

Safe

‘Safe’ or ‘safety’ is perhaps the most commonly encountered term in debates about children and risk, such as: “Is this playground/park/tree/public square safe?” There is no simple answer to questions like this, because the word ‘safe’ means different things to different people

Prompts from template RBA form

Benefits

The specific, positive things that children and young people gain through the play opportunities that are under assessment (social, physical, emotional, educational, psychological, etc.).

Risks

As above

Local factors

Any relevant issues that are specific to the setting being assessed (for example, proximity to housing, characteristics of local residents and typical users, nature of supervision, access to the site, size of the site, proximity to busy roads or other hazards, etc.). Any relevant supporting policies and strategies should also be mentioned here.

Precedents and/or comparisons

Similar equipment, environments, loose parts or potential situations where play is taking place either locally or elsewhere. This section is particularly helpful in relation to unusual, innovative, unconventional or novel initiatives, to help to justify departures from standard approaches. It may be left blank in the case of straightforward projects.

Decision

This is the assessor's conclusion following a risk benefit assessment. The choices could include:

- Proceed/continue with no adjustments to the play environment or working practices and continue to monitor
- Proceed/continue with some specific adjustments to the play environment or working practices while continuing to monitor
- Cease use of the play environment until work can be carried out/further assessments can be made

Actions taken

This should state the actions taken as a result of the decision reached. The choices could include:

- None
- Introduce or increase monitoring of benefits and/or risks
- Introduce or increase supervision
- Book technical inspection
- Contact manufacturer to make modifications
- Introduce other measures to reduce risks
- Introduce additional features or activities that increase the level of risk and challenge or other benefits
- Meet with parents/users to raise awareness of approach to risk & benefit
- Remove facility/structure, or suspend activity

Ongoing monitoring and management

State here any future actions that may need to be taken. These could include:

- Maintenance schedules and inspection regimes
- Reviews of accident records, injuries or other outcomes
- User feedback exercises

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