


Child Safety Good Practice Guide:

Good investments in unintentional child injury prevention and safety promotion





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Introduction

The need for knowledge of what works is growing every day among those working to reduce the burden of unintentional injuries amongst Europe's children. Recent developments calling for Member States to develop national action plans to prevent injury have increased the demand to deliver effective interventions at the national and local level.¹⁻³ Good use of evidence is central to achieving this and knowing 'what works' is at the heart of developing good policy and programmes.

The European Child Safety Alliance believes in the value of 'good practice', which to us combines the best available research evidence with the practical expertise of professionals in the 'real world'. This approach requires that professionals are aware of both best evidence and practical aspects of transferring policies and programmes from one setting to another. With so much to do to address the safety of European children and so little time and limited resources, there is a need to focus on good investments, those strategies that are most likely to reduce childhood unintentional injuries.

For the purpose of this document 'good practice' is defined as:

- 1) A prevention strategy that has been evaluated and found to be effective (either through a systematic review or at least one rigorous evaluation) OR
- 2) A prevention strategy where rigorous evaluation is difficult but expert opinion supports the practice

and data suggest it is an effective strategy (e.g., use of personal floatation devices (PFD) to prevent drowning) OR

- 3) A prevention strategy where rigorous evaluation is difficult but expert opinion supports the practice and there is a clear link between the strategy and reduced risk but a less clear link between the strategy and reduced injuries (e.g., secure storage of poisonings) AND
- 4) The strategy in question has been implemented in a real world setting so that the practicality of the intervention has also been examined.

This Child Safety Good Practice Guide builds on previous work by the Alliance and child safety researchers from around the globe and is a further step in supporting Member States in moving toward evidence-based good practice. Its purpose is to enable Member States to examine strategy options for unintentional child injury, move away from what has 'always been done' and move toward good investments – strategies that are known to work or have the greatest probability of success. It is acknowledged that knowing what worked in one setting is not enough and the transfer and implementation points and European case studies included in this Guide are there as information to guide decision making and illustrations of good practice in action. It is hoped that this information will

begin to provide initial thoughts on why a strategy worked and provide some guidance for transfer to new settings. However, more work is needed to understand all the factors that influence the success of a strategy that is transferred from one setting to another.

Finally, the synthesis of existing knowledge compiled in the development of this resource also allows the identification of situations where there is a need to evaluate existing interventions and where good practice strategies do not exist.





Contents of the Guide


This guide is divided into four sections to help injury stakeholders working in Member States to promote good practice in planning and implementing strategies to address child injury. Note that the terms child injury prevention and child safety are used interchangeably.

> **Section 1** introduces the concept of good practice and discusses general approaches for policy and programmes in the areas of child injury prevention and safety promotion.

> **Section 2** provides a series of 'at-a-glance' tables that identify effective strategies (current good practice) in the following areas of child injury prevention and safety promotion:

- passenger safety
- pedestrian safety
- cyclist safety
- water safety
- fall prevention
- burn and scald prevention
- poisoning prevention
- choking/strangulation prevention;
- general home safety (strategies not already covered in topics above)
- general community-based injury prevention (strategies not already covered in topics above)

- activities in the area of country leadership, infrastructure and capacity.

For each area, a table provides: 1) a series of evidence statements describing current good practice; 2) an indication of whether a case study for that particular strategy has been identified and included () and 3) suggestions for transferring and implementing the strategy. Each example of good practice is also colour coded to provide an indication of which of the 3 E's of injury prevention is the focus –

- **Engineering** (modification of a product/environment),
- **Enforcement** (policy/legislation and measures to ensure compliance), or
- **Education** (education/behaviour change strategies).

> **Section 3** provides information about where in the planning cycle information on good practice can be applied and about selecting and transferring good practice from one setting to another. The importance of advocating for, building and maintaining a culture of good practice is described and stressed.

The fourth and fifth sections are contained in the Appendix. >**Section 4** describes in detail the methods used for developing case studies and

>**Section 5** provides a series of case studies illustrating implementation of select 'at-a-glance' strategies in the field of child injury prevention and safety promotion and lessons learned from application of strategies in Europe.





Section 1: What do we know about good practice approaches to preventing unintentional injuries in children?

Prior to examining the actual good practice approaches to preventing unintentional injuries in children, it is important to note that preventing injury in this age group is unique for a number of reasons. To plan and implement truly effective strategies, it is essential to take these factors into account when selecting and transferring good practice. The uniqueness stems from:

- **Children as the focus of the work:** When talking about child injury prevention and safety promotion, children and their parents / caregivers are the primary target groups of interventions. Although a specific intervention might involve advocating for policy change with decision makers, the main focus for child injury prevention and safety promotion is the children themselves and the adults who are their main caregivers.^{3,9}
- **The importance of children's developmental stage:** The types of injuries that children experience are closely linked with their age and stage of development which involves physical, psychological and behavioural characteristics.¹⁰ This needs to be taken into account when examining potential strategies and transferring them to new settings.
- **The fact that injuries disproportionately affect the most vulnerable children in society:** The likelihood of a child being killed or injured is associated with a variety of factors including

single parenthood, low education among mothers, very young mothers, poor housing, large family size and parental drug or alcohol abuse.¹¹

This uniqueness of children mandates the importance of knowing your target audience well and involving your target group early on in the project.^{12,13} Failing to involve your target group is likely to reduce the success of an intervention. Particularly when transferring a good practice from one setting to another, it is important to know your target group as rigorous evaluations, such as those used to support best evidence recommendations, typically have limited generalisability because of the specificity of their participants.

When broad approaches to child injury prevention and safety promotion are examined, there are seven that offer proven or promising strategies.⁶ These seven approaches are described below but it is important to note that although they have been proposed as offering proven or promising strategies, actual strategies based on these approaches have not been evaluated in all areas of child injury prevention. Nonetheless, they provide a useful framework to consider for any type of childhood injury.

- 1) **Environmental modification** – children are particularly vulnerable to injury because they live in a world over which they have little control and which is built around the needs of adults.¹⁰ Modification of the environment to make that world more 'child- or parent- friendly' is an accepted approach to reducing risk. These strategies are most effective when used in combination with legislation and educational activities.⁶ Examples of this type of strategy in the 'at-a-glance' section include playground equipment design and installation and area-wide measures to reduce pedestrian and cyclist risk (e.g., traffic calming).
- 2) **Product modification** – similar to the issues in environmental modification, many products pose an added risk to children because they are designed around the needs of adults. Product modification is a more passive means than active adult supervision of reducing the risk around certain products.¹⁴ These strategies also become more effective when used in conjunction with legislation and educational activities. Examples of this type of strategy in the 'at-a-glance' section include child resistant closures, factory set temperatures on water heaters and child resistant lighters.





- 3) Legislation, regulation and enforcement** – legislation has proven to be the most powerful tool in the prevention of injury.⁶ Legislation is most effective when enforced and when used in combination with product or environmental modification and educational activities. Examples of this type of strategy in the 'at-a-glance' section include legislation around the use of child passenger restraints, bicycle helmets and child resistant packaging.
- 4) Promoting the use of safety devices** – safety devices are promoted to reduce the risk of injury occurrence or minimize the impact in the event of an injury event.⁶ Examples of this type of strategy in the 'at-a-glance' section include smoke detectors, bicycle helmets and child passenger restraints.
- 5) Supportive home visits to families of young children** – although more evaluation is required of supportive home visits, early studies have found generally positive results for this approach. Supportive home visits are particularly effective if the information provided is age appropriate and visits are combined with provision of free safety equipment and broader promotional campaigns.⁶²

- 6) Community-based interventions** – these interventions, which focus on changing community values and behaviours and altering the physical environment of communities to reduce the risk of injury, may have particular relevance for children as interventions often target the safety awareness, attitudes, and behaviours of children and parents.¹⁵ Community-based interventions employ a broad array of strategies that include education/behaviour change, product and environmental modification and legislation/enforcement, with the key difference that the strategy focuses on the community, not the individual. Examples of this type of strategy in the 'at-a-glance' section include community-based bicycle helmet and child passenger restraint promotional campaigns.
- 7) Education and skills development** – the effectiveness of educational and skill development programmes on their own is controversial and evidence is often lacking. However if they are well designed and take into account the target population, or if they are used in combination with other strategies, such as legislation or environmental or product modification, educational and skills development programmes can be effective.⁶ An example of this type of strategy in the 'at-a-glance' section includes pedestrian skills training.





Why should we focus on evidence-based good practice?

Transfer of knowledge can happen with both effective and ineffective practices and numerous ineffective strategies continue to be practised across Europe despite evidence that they are not the best use of resources. For example, bicycle skills fairs or “rodeos” as an educational strategy to address bicycle-related injuries have not been shown to be effective and as a solitary strategy are not considered good practice.¹⁴ Despite this evidence, the activity continues to be offered, often as a stand-alone intervention.

In the current environment of scarce resources and competing issues the injury prevention community needs to ensure that existing efforts and resources are focussed on effective evidence-based good practice. It also needs to ensure that it systematically studies and understands why strategies work in one setting/context and not in others and it needs to learn to effectively transfer the good practice to other settings/contexts. If the injury prevention community does not make adopting evidence-based good practice a priority, policy makers will continue to invest resources in strategies that do not lead to reducing the burden of injury in children.

Why do we not implement good practice?

There are several reasons why as a field the injury prevention community fails to select and implement good practice.

> Resistance to change

Resistance can come from government in the form of resistance to legislative or regulatory efforts, from the injury prevention community in terms of comfort with the way things are, personal investment in an existing unproven programme or lack of awareness of a need to change. It can also come from the programme developers and managers because producing an educational pamphlet as the sole intervention is easier, faster and more quantitative than advocating for legislation or environmental modifications. The public itself can also play a role. If an activity is perceived by the public to be of value, even if it is actually not effective, then politicians and decisions makers often hesitate to stop investing. Understanding where resistance is likely to come from and planning accordingly to address it is part of good practice in transferring strategies from one setting to another.

> Competing priorities

While the importance of keeping children alive and contributing to society seems inherently simple and essential, it also takes ongoing commitment. This usually requires more time, money or potential inconvenience for adults and as a result the ongoing commitment is not made. For example, sometimes what is good for children is not perceived to be good for others. A product modification that is viewed as important to ensuring a reduced risk for child injury may be seen as being in conflict with what is best for industry. This is because industry tends to see the desired changes resulting in increased production costs, job losses, etc. This in turn can impact elected officials who attempt to balance perceived needs and may side with industry for fear of not being re-elected and loss of corporate support. Selecting and following through with good practice requires real commitment for the long term and beyond a single election cycle. Because in injury prevention a given strategy can affect multiple sectors, ministries, industry and partners it is important to understand the many viewpoints and to build the strongest case for the child-benefiting change. It is therefore important that the injury prevention field continues to build the evidence of effective strategies, including cost effectiveness of strategies, so that data are available to support arguments for children's lives as the priority over other issues.





> **Failure to plan solutions effectively**

If too little time is spent on up front planning then the steps of looking for good practice from other settings may be missed. Furthermore, once good practice is identified, failure to assess adequately the potential for successful transfer and to plan concrete steps to increase its likelihood can result in unsuccessful transfer and implementation. And unsuccessful transfer and implementation can have a negative impact on the field as a whole if it is interpreted as a failure of the strategy rather than a failure of the transfer and implementation. The amount of time, work and practical research required to obtain the necessary information and do a good job on these planning steps can be daunting. As the injury prevention field learns more about what works and why, resources such as this guide can help by identifying good practice and providing guidance for the decision to attempt transfer and steps to increase likelihood of success.

> **Lack of capacity or expertise**

In some cases the individuals making the decisions do not have the information necessary to make the correct decision and choose good practice. There is therefore a role for injury practitioners to educate decision makers and to advocate for commitment and resources for strategies that will work. There is also a role for lead organisations in the injury prevention and safety promotion field to support the efforts of injury practitioners to advocate for good practice and to address capacity building as a priority issue in the field.

> **Lack of time or resources**

Often practices that are not evidence-based can be appealing because they are quick and easy and give the impression that something is being done (e.g., distributing a pamphlet). To truly address child safety it will be necessary to select evidence-based good practice strategies that may cost more and / or take longer to achieve but in the end will achieve greater results. In an environment of scarce resources and limited time frames for funding this will likely require collaboration between organisations and working smarter with government and industry to ensure they take up what works.

In summary, to implement good practice today the injury prevention community needs to take into account both the specific aspects of children as a target group and the seven broad approaches to child injury prevention and safety promotion that offer proven or promising strategies. It needs to keep in mind that these seven approaches are most effective when they work in combination, and to invest scarce resources into what is known to work. This will also require an understanding of the importance of using good practice and the reasons why it is not implemented more often. The next section provides more detail on the strategies based on the seven broad approaches that are considered current best investments.



Section 2: Good practice ‘at-a-glance’

Potential good practice strategies for inclusion in the ‘at-a-glance’ tables were identified through a review of existing systematic reviews, journal articles and policy documents and in consultation with child injury prevention and safety promotion experts. Strategies were then examined against the definition of good practice and resulting criteria developed for the purposes of this project. Evidence statements for strategies that met the criteria were developed and incorporated into the issue-specific good practice ‘at-a-glance’ tables. Transfer and implementation points were obtained from the same sources in addition to general textbooks dealing with injury prevention and safety promotion. The methodology for selection and write up of case studies is provided in Section 4 on page 38.





Good practice for child passenger safety

	Evidence statement	Transfer and Implementation points
Engineering	Child passenger restraints lead to decreases in death and injury. ¹⁶⁻¹⁸	<ul style="list-style-type: none"> - When used properly child passenger restraints have been shown to reduce injury by 90-95% for rear-facing systems and 60% with forward facing systems.¹⁹ - Keeping children rearward facing longer has been shown to increase protection by 3-5 times.²⁰ - Research has demonstrated that children aged four to eight years have a significantly reduced risk of injury if they are restrained in booster seats rather than adult seatbelts.²¹⁻²⁴ - Parental knowledge and availability, accessibility, cost and ease of use of child passenger restraints will impact their uptake.^{25,26}
Enforcement	Legislation of safe child passenger restraints leads to increases in observed use. ^{26,27}	<ul style="list-style-type: none"> - Level of enforcement will impact effectiveness by increasing usage.²⁹ - Legislation is most effective when supported by educational activities.²⁹
Education	<p>Community-based intervention combining information dissemination on child passenger restraint safety with enhanced enforcement campaigns leads to increased use.²⁵⁻²⁷</p> <p> Case Example: Safe Road to School in Faro, Portugal, Page 41</p>	<ul style="list-style-type: none"> - Important elements of community-based approaches are long-term strategy, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programmes.¹⁵ - Enforcement campaigns supported by school-based promotional activities have shown large increases in observed seat belt use.²⁵
Education	<p>Community-based intervention combining child passenger restraint distribution, loaner programmes or incentives with education programmes leads to increased use.²⁵⁻²⁷</p> <p> Case Example: Car Safety Seat Loan Programme, Austria, Page 44</p>	<ul style="list-style-type: none"> - Important elements of community-based approaches are long-term strategy, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programmes.¹⁵ - More intensive programmes involving multiple elements and communication mechanisms are associated with more positive results.¹⁵ - A reliable, well-informed organisation is required to run a loaner programme given the technical and maintenance checks on car seats.²⁵
Engineering	Seat belts lead to decreases in death and injury. ^{16,30-35}	<ul style="list-style-type: none"> - When used properly seat belts can reduce deaths by 40-50% and serious injury by 45-55%.³⁴ - Parental knowledge and seat belt availability and ease of use will impact their uptake.²⁵
Enforcement	Legislation requiring seat belt use in older children leads to increased use. ^{25,27,36}	<ul style="list-style-type: none"> - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹



Good practice for child pedestrian safety

	Evidence statement	Transfer and Implementation points
Engineering	Area wide engineering solutions to reduce pedestrian risk (including pedestrian facilities and/or traffic calming infrastructure) lead to reduction in injuries and are cost effective. ^{14,27}	<ul style="list-style-type: none"> - Traffic calming has shown accident savings of 60% in 30 km/hour (18.6 mph) zones.³⁸ - Area-wide urban traffic calming schemes reduced the number of injury accidents by 15% (25% on residential streets and 10 % on main roads).³⁸ - Engineering modifications can be more effective when supported by educational and enforcement activities.²⁹
	Vehicular modifications appear to reduce the risk of pedestrian fatalities. ^{14,19}	<ul style="list-style-type: none"> - Modifications to car front design that take children into account result in a reduced number of child pedestrian fatalities.¹⁹ - It is estimated that up to 2,100 deaths and 18,000 serious pedestrian and cyclist casualties of all ages could be prevented annually in the European Union with these modifications.¹⁹
Enforcement	Legislation / policy reducing vehicle speeds in residential areas leads to reduced injuries and changes in driver behaviour. ²⁷	<ul style="list-style-type: none"> - In the United Kingdom, introduction of 20 mph (32 km/hour) speed limit zones resulted in 70% reduction in fatal child pedestrian accidents.³⁹ - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹
	Enforcement of legislation / policy reducing vehicle speeds in residential areas leads to reduction in injuries and changes in driver behaviour. ⁴⁰	<ul style="list-style-type: none"> - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹
Education	Community-based education / advocacy programmes to prevent pedestrian injuries in children 0-14 years result in a reduction in injuries. ⁴¹	<ul style="list-style-type: none"> - Effective programs have show reductions ranging from 12%-54%.⁴¹ - Programs offering a comprehensive package that includes educational, social and environmental strategies are more likely to be successful.⁴¹ - Greater amounts of resources and community commitment afforded to programmes allow more complex and comprehensive strategies to be used, which in turn lead to greater success. ⁴¹
	Pedestrian skills training leads to improved child pedestrian crossing skills. ¹⁴  Case Example: Kerbcraft, Scotland, Page 43	<ul style="list-style-type: none"> - Multi-faceted programmes and those that involve parents are more likely to be successful.¹⁴ - Practical roadside experience is an essential ingredient of pedestrian skills training.¹⁴
Enforcement	The countries with the best road safety record have national implementation plans which comprise a wide range of measures: low speed limits, speed reduction measures, promotion of secondary safety and publicity aimed at both children and their parents and drivers. ^{37,38}  Case Example: Road Safety Strategy, France, Page 45	<ul style="list-style-type: none"> - Building on past policies or international agreements can lead to progress.³⁸ - Political commitment at the highest level is necessary to make road safety a priority for all in government and society.³⁸ - Media coverage is an important aspect of national safety campaigns.^{28,38} - A combination of engineering, enforcement and education is most effective.²⁸





Good practice for child cyclist safety

	Evidence statement	Transfer and Implementation points
Engineering	Use of bicycle helmets leads to reduction in injuries. ²⁷	<ul style="list-style-type: none"> - Correctly fitted bicycle helmets reduce the risk of head and brain injury by 63-88%.²⁷ - Parental knowledge and helmet availability, accessibility, cost and ease of use will impact both helmet use and proper use.⁴² - Reducing costs of helmet through give-away programmes and discounts facilitates uptake and use.⁴³
	Area wide engineering solutions and traffic calming measures (e.g., speed reduction zones) lead to reduction in child cyclist injuries and are cost effective. ²⁷	<ul style="list-style-type: none"> - Engineering modifications can be more effective when supported by educational and enforcement activities.²⁹
	Area wide engineering solutions to reduce cyclist risk (including cycling lanes and pathways) may lead to injury reductions. ¹⁴	<ul style="list-style-type: none"> - Engineering modifications can be more effective when supported by educational and enforcement activities.²⁹
Enforcement	Legislation of bicycle helmets leads to increased use. ^{14, 42}	<ul style="list-style-type: none"> - Evaluation of mandatory bicycle helmet laws in Canada show a 45% reduction in the rates of bicycle-related head injury in provinces with legislation and in New Zealand there was a 19% reduction in head injuries among cyclists during the first three years of legislation.³⁸ - In several countries where legislation has been enacted it has not been done until high levels of helmet wearing have been attained in the population.⁴³ - Legislation takes time to produce the desired effect following implementation⁴² and legislation is most effective when supported by educational activities.²⁹ - The effect of legislation appears smaller in areas with a higher baseline proportion of helmet use and areas with high socioeconomic status.⁴² - Level of enforcement will impact effectiveness.²⁸ - Implementers of helmet legislation may wish to address concerns regarding decreased rider-ship following introduction of legislation as those not in favour of legislation have stated this as an argument against this strategy.⁴⁴



Good practice for child cyclist safety, continued

	Evidence statement	Transfer and Implementation points
Education	<p>Community-based education / advocacy programmes around child helmet wearing lead to increased helmet wearing.^{14,15,43,45}</p> <p> Case Example: Bicycle Helmet Initiative Trust, UK, Page 53</p> <p> Case Example: Bicycle Helmet Campaign, Denmark, Page 56</p>	<ul style="list-style-type: none"> - Important elements of community-based approaches are long-term strategy, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programmes.¹⁵ - Programmes are more likely to be effective when they include provision of free helmets, are broad in scope as it relates to target audience and setting, involve parental participation and helmet wearing by riding partners (adults or other children).⁴³ - Younger children and girls show the greatest effect from campaigns.²⁷ - Successful interventions have included targeted and mass media education or children and parents, promotion and mandating of helmet wearing, seizure of bicycles of cyclists not wearing helmets and discounting the price of helmets, however it is not possible to isolate the effectiveness of each intervention.⁴⁵
	<p>Cycling skills training has shown promise in increasing knowledge and improving observed riding skills in the children who received training.¹⁴ At this time there is no study directly linking skills training and reduction in injury.</p>	<ul style="list-style-type: none"> - For children to ride safely in traffic requires that they are knowledgeable about traffic rules, can read and interpret signs, and have the necessary cognitive and motor skills.⁴⁶ - The most comprehensive programs have all incorporated helmet education, traffic rules, safety guidelines, and on-bike training into their curricula.¹⁴ - Interventions that repeat the message in different forms and contexts are also more likely to succeed. Therefore, community based education programs that allow for repetition of bicycle safety messages, several opportunities for practice, and parental involvement, may represent a more effective approach to improving bicycle safety in children.⁴⁷ - It is possible that young children (under 10 years) may not be able to master the basic cognitive and motor skills necessary for the complex task of riding a bicycle on the road.⁴⁷



Good practice for child water safety

	Evidence statement	Transfer and Implementation points
Engineering	Expert opinion states that the use of a personal floatation device (PFD) for boating and other water recreational activities is a recommended preventive strategy in the prevention of drowning. ⁴⁸	<ul style="list-style-type: none"> - It is estimated that 85% of annual boating-related drowning incidents could be prevented if the victim had been wearing a personal floatation device.⁴⁹ - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹
	Expert opinion states that signs regarding safe behaviours displayed in clear and simple signage are an important preventive strategy in the prevention of drowning. ⁵⁰	<ul style="list-style-type: none"> - Signage is most effective when supported by educational activities.⁵⁰ - International standardisation of symbols used on signs should help reduce tourist drowning incidents.⁵⁰
Enforcement	<p>Legislation requiring isolation fencing with secure, self-latching gates for all pools, public, semi-public and private including both newly constructed and existing pools leads to a reduction in drowning when enforcement provisions are included.^{14,51}</p> <p>📖 Case Example: Pool Safety, France, Page 53</p>	<ul style="list-style-type: none"> - Private pools that are fenced provide 95% more protection against a drowning event.¹⁴ - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹ - It is highly recommended that parents be strongly encouraged to continue close supervision of their children around pools; no protection system can replace parent supervision.⁵²
	<p>Safety standards for swimming pools may lead to a reduction in drowning.⁵⁰</p> <p>📖 Case Example: Drowning Prevention, Iceland, Page 55</p>	<ul style="list-style-type: none"> - Level of enforcement will impact effectiveness.²⁸ - Safety standards will be more effective when supported by educational activities.²⁹




Good practice for child water safety, continued

	Evidence statement	Transfer and Implementation points
Enforcement	<p>Lifeguards, when adequately staffed, qualified, trained and equipped, seem to be an effective strategy to prevent drowning.⁴⁸</p> <p>📄 Case Example: Drowning Prevention, Iceland, Page 60</p>	<ul style="list-style-type: none"> - The presence of lifeguards may deter behaviours that could put swimmers at risk for drowning, such as horseplay or venturing into rough or deep water.⁴⁸ - Lifeguards should have appropriate training and hold a suitable current qualification. Re-qualification should be undertaken at regular intervals, and practical rescue and resuscitation skills should be practiced frequently.⁴⁸ It has been noted that initial introduction of lifeguard certification may impact availability of qualified lifeguards.⁵³ - Lifeguard observation points must have a clear and unobstructed view of the area of supervision including both the water and surrounding area.⁴⁸ - Lifeguards on duty should be easily identifiable at a distance and in a manner that sets them apart from others at the beach or water recreational facility.⁴⁸ - Lifeguard organisations should develop written “standard operating procedures” that include supervision requirements.⁴⁸
Education	<p>Community-based education / advocacy around PFD use leads to increased use.¹⁴</p>	<ul style="list-style-type: none"> - It is estimated that 85% of annual boating-related drownings could be prevented if the victim had been wearing a personal life jacket.⁴⁹ - Important elements of community-based approaches are long-term strategy, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programmes.¹⁵
Education	<p>Water safety skills training (including swimming lessons) improve swimming performance.¹⁴</p> <p>📄 Case Example: Drowning Prevention Campaign, Greece, Page 63</p>	<ul style="list-style-type: none"> - It is highly recommended that parents be strongly encouraged to continue close supervision of their children around water; ability to swim does not replace the need for close parent supervision.⁵² - The earliest age at which swimming lessons show improvement in swimming ability is 24 months.¹⁴ - Children are highly sensitive to training, are able to retain most skills if lessons are continued, and can use acquired skills in mastering more advanced swimming skills (e.g., diving).¹⁴



Good practice for fall prevention in children

	Evidence statement	Transfer and Implementation points
Engineering	Window safety mechanisms to prevent children from opening windows, such as bars and position locking devices, are an effective strategy to prevent falls. ^{14,54}	<ul style="list-style-type: none"> - Window bars have been shown to reduce deaths from window falls by 35%.¹⁴ - Regulations requiring window safety mechanisms on rental housing appears to be most effective approach when working in areas of social deprivation.¹⁴ - Parental knowledge and availability, accessibility, cost and ease of use of window safety mechanisms will impact their uptake.^{55,56}
	Stair gates have shown to assist in the reduction of falls down stairs to young children when used at the top of stairs in households. ²⁷	<ul style="list-style-type: none"> - Parental knowledge and stair gate availability, accessibility, cost and ease of use will impact their uptake.^{27,55,56} - Pressure gates should not be used at the top of stairs.⁵⁷
	Surfacing materials such as sand or wood chips to a depth of 23-31 cm (9-12 inches) can be recommended as effective injury prevention strategies in preventing playground equipment related injuries. Optimal equipment height to reduce risk of head injury is 1.5 m (5 feet). ¹⁴	<ul style="list-style-type: none"> - Level of enforcement will impact effectiveness.²⁸ - Regular maintenance of surfacing materials is necessary to retain protective effect.^{14,58} - Standards are most effective when supported by educational activities.²⁹
Enforcement	Legislation banning baby walkers OR requiring product modification to remove the mobility issue permanently removes a larger portion of existing risk than parental supervision. ^{14,59}	<ul style="list-style-type: none"> - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹
	Enforcement of standards requiring safe depth of specified types of surfacing materials and regular maintenance of those materials is more effective than standards alone in reducing playground equipment related injuries. ¹⁴	<ul style="list-style-type: none"> - Level of enforcement impacts effectiveness.²⁸ - Standards are most effective when supported by educational activities.²⁹ - Surfacing standards address risk of head injury, not injuries to arms and legs.¹⁴
Education	Educational programmes encouraging use of fall prevention safety devices such as window safety mechanisms to prevent children from opening windows and down stairs increase use of equipment. ^{14,54,56}  Case Example: Child Safety Box, Austria, Page 66	<ul style="list-style-type: none"> - Parental knowledge and availability, accessibility, cost and ease of use of safety measures will impact their uptake.^{55,56} - Provision and instalment of free equipment is more likely to increase use, particularly in lower income settings.^{55,56}




Good practice for burn & scald prevention in children

	Evidence statement	Transfer and Implementation points
Engineering	Product modification, specifically child resistant cigarette lighters and self-extinguishing cigarettes, are primary prevention strategies where the technologies have been developed, tested and found to be effective and which would prevent many fires from starting if adopted. ^{14,60-62}	<ul style="list-style-type: none"> - In the U.S.A., fire deaths associated with cigarette lighters dropped 43% with the adoption of child resistant designs.¹⁴ - Regulations requiring product modifications and their enforcement will increase availability of safe products.⁶² - Parental knowledge and modified product availability, accessibility, cost and ease of use will impact their uptake.^{55,56}
Enforcement	Legislation requiring a safe pre-set temperature for all water heaters has proved a more effective method of reducing scalds than education to encourage parents to turn down water heaters. ¹⁴	<ul style="list-style-type: none"> - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹
	Legislation requiring installation of smoke detectors in new and existing housing when combined with multi-factorial community campaigns and reduced price coupons is an effective way to increase smoke detector use. ¹⁴	<ul style="list-style-type: none"> - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹
	Legislation regulating flammability of sleepwear is effective in reducing burn injuries when enforced. ¹⁴	<ul style="list-style-type: none"> - Legislation passed in the U.S.A. in 1972 resulted in a 75% reduction in burn unit admissions due to sleepwear related burns.¹⁴ - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹




Good practice for burn & scald prevention in children, continued

	Evidence statement	Transfer and Implementation points
Enforcement	<p>Legislation banning the manufacture and sale of fireworks combined with enforcement is the most effective way to restrict the supply.¹⁴ At this time there is no study directly linking restricted supply to injury reduction.</p>	<ul style="list-style-type: none"> - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹ - Supporting legislation is best targeted at primary and secondary school students and parents.⁶³
Education	<p>Smoke detector give away programmes have proven successful when high-risk neighbourhoods are targeted and multi-faceted community campaigns have the specific objective of installation of working smoke detectors.²⁷</p> <p> Case Example: Child Safety Box, Austria, Page 66</p> <p>Education / advocacy campaigns around fireworks are useful as supplemental efforts and can be used to build support for legislation.¹⁴</p> <p>Fire safety skills training increases knowledge and behaviour of both children and parents.^{14,64} At this time there is no study directly linking training to injury reduction.</p>	<ul style="list-style-type: none"> - Important elements of community-based approaches are long-term strategy showing commitment to the issue, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programmes.¹⁵ - Important elements of community-based approaches are long-term strategy showing commitment to the issue, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programmes.¹⁵ - Programs using active participation by children in learning fire responses are more effective than those using passive methods.⁶⁴ - When evaluating programs, actual demonstration of skills is likely a more reliable marker of children's real response in fire situations than providing correct answers on a written test.⁶⁴ - The addition of fear reduction techniques and teaching the rationale supporting the use of correct fire response behaviours may significantly improve skill retention.⁶⁴ - Periodic repetition of material is required for maintenance of knowledge and skills.⁶⁴ - The use of figures of authority in fire safety skills training (e.g., fire fighters) may increase knowledge gain.⁶⁴



Good practice for poisoning prevention in children

	Evidence statement	Transfer and Implementation points
Engineering	Secure storage for poisons removes a larger portion of poisoning risk than parental supervision and may be an effective means of preventing poisoning injury. ^{65,66}	<ul style="list-style-type: none"> - Studies of how children access poisons suggest that the most vulnerable time is when the poisons are in use and that safe packaging alone cannot compensate for unsafe storage or use. This speaks to the need for improved safety of home storage of medications and improved home dispensing practice.^{67,68} - Changes to the fixed environment need to be supported by regulation and education for industry and the community, with clear labelling (and clear administration instructions) on the package, parental education and improved supervision, ongoing paediatric counselling, and increased accessibility and affordability.⁶⁷⁻⁶⁹
Enforcement	<p>Legislation of child resistant packaging reduces the incidence of poisonings.^{14,27}</p> <p> Case Example: Child Resistant Packaging for Chemicals, Netherlands, Page 68</p>	<ul style="list-style-type: none"> - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹
Education	Poison control centres result in considerable medical savings if the public is well informed regarding the use of their local poison control centre. ¹⁴	<ul style="list-style-type: none"> - Parental knowledge and availability, accessibility and ease of use of poison control centres will impact their use. Educational activities may assist in increasing parental knowledge.¹⁴




Good practice for choking / strangulation prevention in children

	Evidence statement	Transfer and Implementation points
Enforcement	<p>Product modification through legislation permanently removes a larger portion of existing choking/strangulation risk than parental supervision and is recommended for safe crib/cot design and other entrapment hazards.¹⁴</p>	<ul style="list-style-type: none"> - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹
	<p>Product banning through legislation permanently removes a larger portion of existing choking/strangulation risk than parental supervision.^{14,70}</p>	<ul style="list-style-type: none"> - Product banning through legislation is recommended for latex balloons, inedible material in food products, pull cords on window coverings (e.g., horizontal blinds) and drawstrings on children’s clothing.¹⁴ - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹
	<p>Legislation that requires product warning labels to include an explanation of the specific hazard is more effective than non-specific labels.¹⁴</p>	<ul style="list-style-type: none"> - A label merely stating, “For children ages 3 and up,” doesn’t adequately explain the risk to the parent.¹⁴ - Level of enforcement will impact effectiveness.²⁸ - Legislation is most effective when supported by educational activities.²⁹





Good practice for general child home safety

	Evidence statement	Transfer and Implementation points
Education	<p>Home safety counselling (addressing issues such as using window bars, stair gates, other home safety equipment and not using baby walkers, bath seats and other injury hazard producing equipment) can reduce the risk of child injury.^{27,55,56,71,72}</p>	<ul style="list-style-type: none"> - Availability, accessibility, cost and ease of use of items recommended during home safety checks will impact their uptake.^{55,56,72} - Providing free safety equipment increases use but evidence is less strong for discounted equipment.⁵⁶
	<p>Home based social support, such as home visiting programmes for new mothers, has the potential to significantly reduce rates of child injury.⁷³⁻⁷⁶</p>	<ul style="list-style-type: none"> - Supportive home visiting for families with young children can provide education regarding issues such as using window bars, stair gates, other home safety equipment and not using baby walkers, bath seats and other injury hazard producing equipment.⁷³⁻⁷⁶ - Availability, accessibility, cost and ease of use of items recommended during home visits will impact their uptake.^{55,56}
	<p>There is indirect evidence that individual-level education/counselling in the clinical setting are effective measures to reduce many childhood unintentional injuries.^{55,77}</p> <p> Case Example: Paediatrician Injury Prevention Counselling Child Safety Tips, Austria, Page 70</p>	<ul style="list-style-type: none"> - Availability, accessibility, cost and ease of use of safety equipment recommended during education/counselling sessions will impact the uptake.^{55,77} - Those providing information also require initial and ongoing training to ensure content/material provided is up-to-date.^{78,79}




Good practice for general community-based child injury prevention

	Evidence statement	Transfer and Implementation points
Education	<p>School based injury prevention education has the potential to increase safety-related knowledge and behaviour.^{80,81}</p> <p> Case Example: Risk Watch, Scotland, Page 72</p>	<ul style="list-style-type: none"> - Large-scale educational programmes can require considerable ongoing funding.⁸² - These types of programmes have been successfully implemented with the support of community-wide coalitions.⁸² - Large-scale system wide educational programmes have great potential, particularly if endorsed by government, in that they can lead to longer-term sustainability than one-off programs.⁸³ - It takes time to obtain buy-in and support from school administration and teachers.⁸² - School-based programs are more effective if supported by policy change and environmental modification to support behaviour change.^{80,83}
	<p>Interactive education and training approaches have a significant impact on children's safety related knowledge, attitudes and behaviours.⁸⁴</p> <p> Case Example: Lifeskills – Learning for Living, UK, Page 75</p>	<p>Large-scale educational programmes can require considerable ongoing funding.^{82,84}</p>



Good practice for country leadership, infrastructure and capacity to support child injury prevention

Evidence statement	Transfer and Implementation points
<p>Where capacity building activities, such as conferences, workshops and continuing education programmes, have taken place significant benefits for injury prevention work have been found.^{2,85}</p>	<ul style="list-style-type: none"> - Training and other support mechanisms can be essential to facilitating the uptake and implementation of national level policies at the local level.⁸⁸
<p>National leadership is needed to establish direction and develop a vision of the future, develop change strategies, align people, inspire, energise.^{38,86-88}</p>	<ul style="list-style-type: none"> - Managing change requires good leadership – in order to draw together and coordinate the component parts of effective injury prevention infrastructure and the resulting prevention strategies and to integrate outputs to ensure goals are met.⁸⁸
<p>The collection and dissemination of data is vitally important in the monitoring and evaluation of injury prevention programmes and the development of policy and practice.^{2,28,29,38,70,86,89,90}</p> <p> Case Example: All Wales Injury Surveillance System (AWISS), Wales, Page 78</p>	<ul style="list-style-type: none"> - The use of local surveillance systems is essential to target interventions, motivate participants and evaluate interventions.^{89,90} - Data assists with the targeting of resources and activity to those identified with the greatest need.^{28,29} - Collecting data for all age groups may make more sense than a single age group as it may help ensure data are always seen as relevant.⁹⁰ - Building a data system on existing systems reduces workload.⁸⁹ - In settings where vital statistics and hospital-based data are non-existent or unreliable, community surveys may be the only source of information.⁹⁰ - Common barriers include lack of commitment by involved individuals and agencies, privacy issues, lack of resources, lack of documented definitions, problems with data collection and recording mechanisms.²⁸





Knowing ‘what works’ is at the heart of developing good policy and programmes.





Section 3: What do we know about good practice approaches to preventing unintentional injuries in children?

As noted previously in the section on why good practice is not implemented, failure to plan effectively is one reason why there is not more good practice in place. Knowledge of existing evidence-based good practice is essential to effective planning and is useful at more than one point in the planning process. As illustrated in the figure below, knowledge of good practice is useful at several points during the planning process.⁹¹ In fact to ensure a plan has real impact, knowledge of good practice is essential.

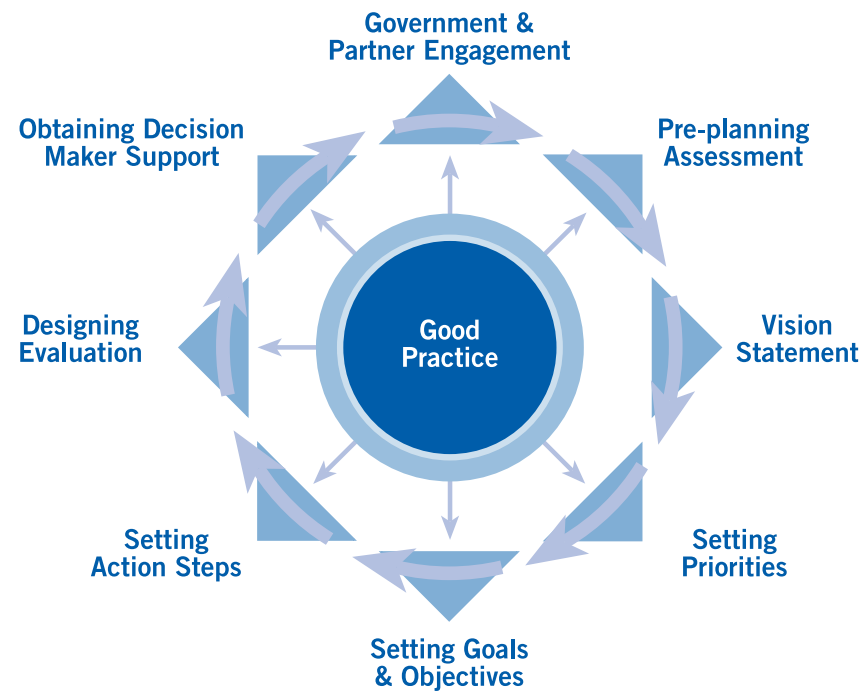


Figure 3.1 Role of good practice in planning effective action to prevent injury and promote safety⁹¹





- **Pre-planning Assessment:** A review of existing evidence-based good practice is needed as part of the initial assessment prior to planning. This assists in identifying areas where improvements in current policy and programming can be made.
- **Setting Priorities:** Efforts can be focused by using the existence of an evidence-based good practice as one criterion for selection of priorities for planning and action.
- **Setting Goals and Objectives:** Reflecting on the existing evidence-based good practice while writing objective statements ensures you are keeping to current standards for good practice. More guidance is provided on how to select those strategies in the next few pages.
- **Setting Action Steps:** The identification of essential elements and specific tasks critical to transfer and implementation of good practice can be enhanced by reviewing the evidence and examining case studies of good practice in action.
- **Develop Evaluation Plan:** Even if a strategy selected is considered good practice, it is essential to evaluate implementation to ensure it is achieving objectives. As with setting action steps, developing an evaluation plan can be enhanced by reviewing the evidence and examining case studies of good practice in action.

- **Government & Partner Engagement and Obtaining Decision Maker Support:** A good practice approach to child injury prevention requires support from decision makers, partners and colleagues. This often requires using existing evidence of good practice to advocate for change with those individuals/ organisations and then actively working to ensure that the existing resources are put towards strategies that have been shown to be effective.

Other general things to keep in mind to ensure successful planning and implementation of evidence-based good practice strategies include:

- Accurate and reliable information must provide the basis for planning, monitoring and evaluation of policies and programmes. Taking the time to obtain this information will increase the likelihood of success, support improvements along the way and facilitate sharing of transfer and implementation issues with others who may be interested in a similar approach.
- Development of policy or programmes without implementation and evaluation is meaningless. The capacity and resources to deliver, monitor and evaluate must be considered when policy or programmes are developed.
- Children, as the target audience, should be involved in designing policies and programmes.
- Policy and programme objectives must be clear, unambiguous and measurable.

- Educational approaches alone are likely to be of limited effectiveness. They need to form part of a broader set of initiatives that use the full set of policy instruments available to decision-makers such as environmental modification, standards, legislation, etc. Similarly, environmental modification, standards and legislation are less likely to be effective if they do not include supporting educational approaches.
- Although the health sector is important, it is only one partner in the search for injury reduction. Multi-sectoral action is essential and work needs to be coordinated across sectors and government ministries.

In the end successful interventions:

- are created as part of comprehensive planning and are based on evidence effective good practice;
- address both the broad determinants of injury (e.g., socio-economic status) and particular risk factors for child injury (e.g., exposure to a hazard);
- involve multi-sectoral, multifaceted and multi-level action by government and other stakeholders, using a variety of policy instruments;
- target the populations in greatest need and are adapted to local needs, resources and circumstances.





What issues should be considered when selecting strategies?

There are three areas of information to be considered when selecting strategies during strategic and action planning.

#1 – Is there evidence that the approach has been effective elsewhere?

Is the injury prevention strategy accepted as evidence-based good practice? If it is one can move on to examine the other areas of information that should be considered when selecting a strategy. If it is not, and a decision is made to proceed with using it, then from the perspective of responsible use of resources, it should be considered whether the necessary expertise, capacity, resources and methods to set up an evaluation of the strategy that will answer the effectiveness question, or at least add to the existing evidence are available or can be obtained.

#2 – Is the current political and social environment ready and able to take on the injury prevention strategy?

This involves an assessment of the transferability of a strategy to a new setting. Transferability relates to the conditions that should be present to increase the likelihood of success of a strategy in a new setting. It includes things like adequate political support, strong leadership, stable infrastructure,

adequate resources and capacity, social climate in favour of the strategy and time to take on and complete the strategy from planning to evaluation. These are higher level issues than the specifics for planning implementation of a strategy and are often overlooked and rarely, if ever, included in scientific papers reporting on strategy effectiveness.

#3 – Is there a realistic and clear understanding of the process required to undertake the injury prevention strategy?

Actual transfer and implementation of any strategy will only be successful when a well thought-out process has been developed and acted upon. The process should realistically examine the specifics of who, what, where, when and how the strategy will be put into place. This information should be considered during strategic and action planning, although it is likely that all decisions may not be made until more detailed implementation and evaluation plans are developed. Like transferability, implementation issues are practical issues that are often overlooked and rarely included in scientific papers reporting on strategy effectiveness.

While the information required for the first question around effectiveness is reported in scientific journal articles and summary reviews, the information to assist planners in selecting potential strategies and answering questions #2 and #3 noted above can only be obtained by doing oneself or learning from the experience of others. This is why sharing

of real life experience of transferring and putting strategies into practice is an essential addition to scientific studies looking at effectiveness when evaluating good practice. It also emphasises the importance to the injury prevention field of documenting and sharing the processes of selection, transfer and implementation of strategies in addition to evaluation. This documentation is something that to date has either not been consistently done, or has been done only to end up in dusty filing cabinets never to be shared. This practice must change.

The examination of issues around transferability and implementation is a relatively new area of enquiry that will require additional research before these issues are truly understood. However as these issues are vital to success, a list of questions to work through during strategic and action planning is included (Table 3.1). These questions address issues around transferability and implementation and begin to get at the need for a more systematic approach to these issues. They should assist in identifying key factors that will increase the likelihood of successful transfer and uptake.

Obtaining the answers to these questions will be time consuming but their careful consideration during the planning process should increase the likelihood of successful transfer and implementation of evidence-based good practice.





Table 3.1 Questions to support good practice strategy selection⁹²

Does the strategy address one or more priority areas?
Will the anticipated outcome of the strategy move you toward one or more of your injury prevention goals? For example, improved injury surveillance data might address multiple goals and priority areas, whereas a specific piece of legislation might only address one. Regardless, the important focus here is to ensure that action is in line with priorities and goals.
Does the strategy involve a combination of the three E's (education, engineering and enforcement)?
If not, is there an opportunity to build on the strategy so that it does? For example, ensuring that there is an educational component (e.g., an awareness campaign) to back-up new legislation.
Is transfer of the strategy / intervention practical and realistic?
<p>1. Can it be reasonably implemented in the new setting proposed?</p> <ul style="list-style-type: none"> • Do you have the necessary organisational structure and processes? For example, do you have access to the target audience? If not, can the necessary structure and processes be established? Do you have a means of collecting the information necessary to evaluate your efforts? Is there a logical lead agency to make it all happen? • Do you have the necessary support from decision makers? If not, can this be obtained? Do you have champions who can assist you in doing this? • Does the strategy / intervention fit with or into any existing policy initiatives? For example, can you tie it to work being done to decrease obesity, social deprivation or environmental gas emissions? This is the case for the Child Safety Action Plan project where child injury is being tied into the Child Environment and Health Action Plans (CEHAPE) and Child and Adolescent Health Plans at the national level. • Do you have the necessary resources to both establish and sustain the effort? If not, do you have promising ideas for how these might be obtained? • Do you have the necessary knowledge and skills? Are the right people at the planning table? If not, can this expertise be obtained? Is there a dedicated group of people to champion the issue and provide a critical mass. Is there an internal contact to the government or a professional group with the necessary technical expertise and key contacts?





Is transfer of the strategy / intervention practical and realistic?

2. What are the barriers to transferring the strategy / intervention?

- Do you understand the characteristics of the people and community, including knowledge of their culture, religion, history, etc.?
- Is the community ready to accept the strategy / intervention? For example, is the community in the Netherlands ready to accept bicycle helmet legislation?
- Who are the opponents of the introduction of the intervention? Are people willing or unwilling to work outside their organisation's mandate or immediate scope?
- Is the strategy / intervention focussed enough? Be clear on the job to be done and keep it doable.
- How big is the fight? Is it worth investing resources now or are there other strategies that provide an increased likelihood of success? How much do I invest versus what I am going to get out of it?
- Do you have enough time as it relates to political, policy or funding cycles or to demonstrate successful implementation? Can you obtain financial support for a long enough period to implement the strategy and follow it up to assess impact? For example, is there likely to be a change in government that might impact what you are trying to achieve?

3. Can barriers be overcome?

- Are there champions for injury prevention or children (e.g., individuals, celebrities, or NGOs)?
- Is there a bigger political / policy process you can link into (e.g., international declarations, charters or resolutions, national alcohol reduction policies or transportation strategies)?
- If the community is not ready to accept the strategy / intervention is there an earlier step that would increase community readiness (e.g., an awareness campaign)?
- Are there opportunities to involve the community and specific target audience in planning and implementing the strategy / intervention?
- Can you obtain political endorsement of the strategy to ensure life beyond a particular government?
- Can you obtain commitment to funding for a period long enough to demonstrate effectiveness in your setting?

Is the strategy appropriate to the target audience? If not, what adaptations need to be made to take the specific target group into consideration?

Do you have evidence of the strategy being used for your target audience in another setting or being used in your setting but on a different issue? What are the specific characteristics of your target audience that might have to be taken into account? For example, if looking at legislation requiring bicycle helmets you might need to examine issues of access to information, helmets or hazard reducing modifications for socially deprived neighbourhoods.





What else can be done to support a culture of good practice in child injury prevention and safety promotion?

The challenge with moving toward a culture of good practice in child injury prevention and safety promotion in Europe is that there is no systematic approach to the issue. It is hoped that this guide will be a starting point of such an approach. The guide focuses on evidence-based good practice and best investments for having a real impact and is a tool to raise awareness and communicate those strategies/interventions that have an evidence-base. Furthermore, where available guidance on transfer and implementation and examples of 'real world' success in at least one setting in Europe have been described to provide a learning opportunity for those considering the strategy/intervention to keep in mind prior to selection, transfer and implementation.

The guide also tries to provide practical advice on how to use good practice in strategic and action planning for unintentional injury prevention and safety promotion and on the points in the process where knowledge of good practice is most useful. It also stresses the importance of taking the time to address transferability issues prior to final selection of strategies.

It is hoped that by ensuring awareness of effective strategies the injury prevention community can better encourage policy makers to adopt evidence-based good practice into their setting and begin work to implement those changes. However, if the injury prevention community is to make the best use of limited resources and have the greatest impact on the lives of European children, action and commitment is required on many levels. Thus in closing the action and commitment needed by international organisations, the European Commission and national governments, injury researchers and injury practitioners themselves is summarised.

> International organisations can:

- Encourage and facilitate national governments and organizations to systematically exchange information on good practice and transferability issues for child injury prevention programmes.
- Assist countries and regions in building capacity to address child injury using good practice.
- Work cooperatively with other international agencies to promote good practice in child injury prevention and safety promotion.
- Encourage evaluation of all child injury prevention initiatives in order to identify new examples of good practice and facilitate exchange of information on good practice between stakeholders.

> National governments and the European Commission can:

- Support and fund good practice injury prevention measures that reduce child injury deaths and serious injury in a combined approach of education, engineering and enforcement of standards and regulations, specifically through:
 - the exchange of information on good practice and transferability issues regarding child injury prevention programmes.
 - enhanced development and increased enforcement of child safety standards and other safety legislation.
 - supporting a culture of good practice and ensuring evaluation of all child injury prevention initiatives.
 - making and following through on commitments to adopt good practices.
- Integrate good practice strategies for child injury prevention into European and national public health programmes and in partnership with injury experts, prepare and implement European and national level strategies on child injury prevention with appropriate good practice-based action plans and dedicated resources.





> Injury researchers can:

- Conduct research to better understand the processes by which strategies/interventions are identified, adopted, implemented and maintained; and to understand the facilitators and barriers of transferring good practice between settings.
 - Evaluate the childhood injury prevention strategies that have not been proven effective or ineffective in order to build our knowledge of what is good practice.
 - Conduct cost effectiveness studies to provide decision makers with more information to assist in making decisions between good practices.
 - Help translate research results into key evidence statements that are easy to understand.
 - Disseminate these evidence statements and take a more active role in advocating for policy choices that result in the transfer and implementation of good practice.
- Provide expertise in the field of child injury prevention on what works and on the implementation of effective good practice, standards and regulations in various settings and cultures.
 - Act as advocates with government and industry for the implementation and evaluation of good practice in child injury prevention across all sectors.
 - Evaluate all NGO led child injury prevention initiatives in order to identify new good practice and facilitate exchange of information on good practice between stakeholders.

> Injury practitioners can:

- Communicate the evidence/facts of what really works and show the examples of this success.
- Build and extend networks of collaboration with other NGO's with an interest in safety and with major stakeholders in business, government and academia in order to promote and facilitate the adoption of a culture of good practice in child injury prevention.





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Appendix I:

Section 4: Methodology for case studies

The case study examples that are included in this document are considered a 'first round'. We set out to provide case studies to illustrate implementation examples of good practice and a more detailed analysis of lessons learned to assist those considering implementing the strategy in their own setting. However the reality is that many programmes have not been examined with respect to their effectiveness and it is even less likely that they will have been evaluated using a rigorous research design that includes a comparison group and a look at behavioural and injury outcomes. As a result many programmes could not be included as case studies in this version, but it is anticipated that as more programmes receive adequate evaluation additional examples can be added.

Case studies were sought and selected based on the following criteria:

- Example programme addresses issues of priority within Europe (based on injury burden).
- Example programme met our definition of good practice.
- Example programme corresponds with one of the good practices identified.

- Example programme has been implemented and evaluated (both process and outcome evaluations completed) in a European setting and found to be effective.

In addition to the selection criteria, where possible we also attempted to select case study examples that reflected a range of resource intensities (e.g., a range of costs to implement) and implementation levels (e.g., national, regional or local). Case studies were also selected to try and reflect the efforts from as many areas of Europe as possible. Case study examples were sought in a snowball approach through various sources including members of the European Child Safety Alliance and other child injury prevention and safety promotion experts. In addition, internet searches and selective reviews of the recent literature were used to identify additional potential case studies.

For each potential case study selected, a contact person was identified and a research associate contacted him or her to ascertain that the potential case study met the inclusion criteria. Once this was established, available documentation was examined and a standardised interview was conducted that sought and summarised the following information:

- Implementation level (at what level was the strategy focussed – national, regional or local?)

- Strategy approach (which of the 3 E's was used – education, engineering, enforcement or a combination?)
- Setting of intervention (where did the intervention take place?)
- Target audience for the intervention (at who was the intervention aimed?)
- Resource intensity – an indication of the resource intensity required [€ = up to €20.000/year, €€ = €20-90.000/year, €€€ = €100-299.000/year, €€€€ = €300-999.000/year, €€€€€ = €1.000.000 plus/year]*
- Background for the initiative (including rationale, driving force, timeframe and major partners)
- Aim & objectives of intervention
- Key steps / actions in intervention
- Evaluation of intervention
- Lessons learned (including barriers and facilitators, advice to countries and issues around transferability)

*The resource implications provided should be interpreted carefully. First they do not include in-kind support which in many cases far outweighs the actual budget spent on the implementation of a strategy. Second although the resource intensity estimates provided come from the project personnel themselves, it is important to remember that costs vary by country for many things such as people's time, printing of resources, etc. As a result the resources required when looking at transferring a strategy from one setting to another may vary from what is reported here.





- References
- Contact information for intervention

Following each interview, the case study was written up in a consistent format, which included the addition of the evidence statement supporting the strategy. Case studies were then returned to the contact for confirmation and clarification before being added to the guide. Of note, three of the cases studies - Safe Road to School in Faro, Portugal; Bicycle Helmet Campaign, Denmark and Child Resistant Packaging for Chemicals, Netherlands - are enhanced expansions of case studies originally collected for the WHO for the Children's health and environment case studies summary book⁹³

Finally it is important to note that the cases studies included in the following section are an initial attempt to illustrate examples of existing good practice. The European Child Safety Alliance invites submission of additional case study ideas that meet the criteria described above for inclusion in future editions. Please forward case study ideas to secretariat@childsafetyeurope.org





Section 5: Good Practice Case Studies from Europe

> Child Passenger Safety

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Safe Road to School in Faro Portugal

IMPLEMENTATION LEVEL	Regional
APPROACH	Education, Enforcement
SETTING	Schools, community
TARGET AUDIENCE	Community, children 6 to 16 years old, parents, police
RESOURCE IMPLICATIONS	€€€
EVIDENCE BASE:	Community-based intervention combining information dissemination on child passenger restraint safety with enhanced enforcement campaigns leads to increased use. ^{1,2,3}

Background

Safe Road to School is a road safety programme with several features:

1. Educational programme held by APSI (Portuguese Association for Child Safety Promotion) and police officers, where rules related to safety of pedestrians and passengers were taught to children at school. General Directorate for Environment also provided educational programme on other environmental threats aside from injuries, such as exposure to air pollution and noise.
2. A school-based interactive workshop with primary school children, to highlight the importance of restraint system use. The session includes debates, games and videos of crash tests.
3. Simulations of action after the accident with rescue and treatment teams at secondary school.
4. Secondary school students walk with police to the hospital in order to visit and talk with road accident victims. Along the route, police have the opportunity to highlight safety hazards.
5. Representatives from Rehabilitation Centre for Handicapped and Disabled visited students at secondary schools illustrating life after injury.
6. Evening information session with parents in which the

programme is explained and the crash videos are shown. Parents are informed of legislation around safety seats and seat belts, the UN Convention on the Rights of the Child, and that enforcement activities will begin in a week. Parent attendance is encouraged by including a student concert or another event in conjunction with the information session.

7. A one-day enforcement campaign by police officers and students as they supervise the school gates before and after school. Fines are €120. Police officers continue spot enforcement after the one-day event.
8. A road safety weekend exhibition in a public space (shopping centre). The exhibition includes prevention, rescue and treatment team exhibits such as:
 - Restraint system use exhibition
 - Simulation crashes with and without seat belts.
 - Crashed cars with the stories behind the crash.
 - Simulations of post-crash rescue and treatment.
 - Pictures, stories, etc. prepared by children admitted to hospital after a crash.
 - Representatives from the Rehabilitation Centre for Handicapped and Disabled illustrating life after injury.

Local press covered all activities thereby improving contact with the general public and decision makers. The programme was extended to other cities with the aim of national coverage.

The campaign originally took place in seven primary schools (children from 6 to 10 years old) during the 2001-2002 school

year. In 2002 it was extended to secondary schools (children from 10 to 16 years old), one school every year reaching a total of 11 schools and 6 000 students. A total of 1,800 children visited the road safety exhibition in the first day and 100,000 people during the weekend.

Policy Background/Driving Force

Road crashes are the largest cause of child injury death in Portugal. Although passengers account for 50% of deaths, 80% of children in cars travel without using seatbelts on their way to primary school in Faro. Despite existing legislation, enforcement is poor.

Partners

- Portuguese Association for Child Safety Promotion (APSI)
- Local police
- Rescue teams and paramedics
- General Directorate for Transport
- Rehabilitation Centre for Handicapped and Disabled (Existir)
- General Directorate for Environment
- Local Government of Faro



- Faro Hospital (Paediatric and Orthopaedic Departments)
- Shopping Centre (Forum Algarve).

Aims & Objectives

To promote road safety awareness and raise the use of restraint system among primary and secondary school children

Evaluation

Seat belt and safety seat use was monitored in 2001 at the seven primary schools involved in the original campaign. An observer at the school during the morning commute collected data one week prior to the beginning of the programme and one week after the one-day enforcement. Restraint system use increased from 20% to 89% in the participating school population. One-day police and student enforcement at seven primary schools resulted in 243 reports of inadequate protection of children in cars.

Spot enforcement of seat belt use continued and one year after the campaign, restraint system at the participating schools remained high at 90%.

In 2002, data collection in secondary schools indicated a pre-programme seatbelt use of 91% in front seat and 15% in the rear seat. This time, additional data collection was added one week after the information session, but before enforcement. Seatbelt use in the rear seat went from 15% to 16%. One week after the enforcement this rear seat use of seat belt jumped from 16% to 85% and in the front seat to 100%. This showed the importance of a combined approach of education and enforcement to obtain behaviour change.

In 2003, 2004 and 2005 the programme was implemented in other secondary schools. Pre-programme data showed 90% use in front seat and 70% at the rear seat, raising the latter to 89% after the information sessions. Spot enforcement of seat belt use continued in the city.

Key Steps

- Before beginning the programme, police officer training on child safety is crucial. This training is provided by APSI and consists of two main components:
 - o Raising awareness on the importance of enforcement of safety legislation in supporting the UN Convention on the Rights of the Child's, which specifies safety as a fundamental human right.
 - o Information on child restraint systems and road security.
- Training occurs informally with police officers individually or in small groups.
- The support of teachers in participating schools is essential. A meeting is planned with teachers in order to describe the campaign and their role. Teachers also agree to build road safety into the curriculum as much as possible.

Lessons Learned

Barriers

- Encouraging parents to become involved. The first parent session included only 10 parents in a school with 400 students. Subsequent sessions had improved attendance since efforts were made to combine the information session with other activities, such as concerts or plays.
- People were not accustomed to receiving tickets for not using seat belts or safety seats, therefore, they resisted and argued with police. Police had to be trained to counter these arguments.
- Difficulties were encountered in engaging other people already working in road safety in the city

Facilitators

- The development of a close and trusting relationship between APSI, the local hospital and the police.
- A committed police team. Police officers already had a relationship of trust and friendship with school children.
- Supportive schools and teachers.
- Involvement of parents in information sessions
- There was no specific funding for this campaign. It was made possible by partners' generous donations of time and in-kind resources.
- The UN Convention on the Rights of the Child provided justification for enforcement to angry parents receiving fines.

Advice to Countries/Transferability

- Attempts have been made to expand the campaign to other cities in Portugal. In some cases, this has been successful and seems to be related to the commitment of the school police team.
- The campaign had considerable in-kind support and donated time from different groups, including the police and APSI, thus resource implications in different contexts are difficult to estimate.



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Car Safety Seat Loan Program Austria

IMPLEMENTATION LEVEL	Regional
APPROACH	Education, Safety Equipment
SETTING	Hospital
TARGET AUDIENCE	Parents, babies and young children.
RESOURCE IMPLICATIONS	€€€
EVIDENCE BASE:	Community-based intervention combining child passenger restraint distribution, loaner programmes or incentives with education programmes leads to increased use. ^{1,2,3}

Background

In 1992, a hospital based car seat loan programme was launched by Grosse schuetzen Kleine / Safe Kids Austria, in order to improve car safety seat usage in children. Every delivery department in the federal province of Styria was targeted for the establishment of a child safety seat loan programme.

A private company organises the hospital-based loan programme. Nurses at delivery departments inform parents about the programme. Parents fill in a document to order a car seat, while in the hospital (the average mother stays in hospital for five days after giving birth), and pay loan costs for the next 12 months. Before they leave the hospital they receive a car safety seat for their newborn so that the first ride in the car is already a safe one. If the parents bring back the seat before the baby is one year old (some babies are bigger, some are smaller, and the average usage time is about nine months), parents get a refund for the remaining months. The company makes obligatory technical checks and cleans seats to prepare for re-loan.

In the first two years, the programme was supported by the local traffic safety fund and parents received the car safety seat for free. In 1994, a law was passed enforcing the usage of car safety seats for children, and since then parents pay €3.60 per month.

Policy Background/Driving Force

Despite laws making usage of car safety seats mandatory for children since 1994, injuries through motor vehicle crashes are a leading cause of mortality for children in Austria. In 1991, one year before the start of this programme, 557 children were seriously injured in motor vehicle crashes in the province of Styria. Of these, 44% were unrestrained car passengers.

Partners

- Grosse schuetzen Kleine / Safe Kids Austria
- Local government traffic department
- Achtung Kind und Sicherheit – a private company that organised the loan programme.

Aims & Objectives

- To increase the use of car safety seats for babies by increasing their accessibility.
- To decrease injuries to children in motor vehicle crashes

Evaluation

A survey in 1996 determined parents' safety awareness and availability of safety seats to families. A total of 332 mothers in 16 hospitals with and without the programme were asked

to respond to a questionnaire on the availability of safety seats for short-term loan, their knowledge regarding correct installation of car safety seats, and to give recommendations for improvement of the loan programme.⁴

Results showed that 87% of the mothers in the intervention area transported their babies safely restrained in child safety seats. A total of 58% of mothers acquired their child safety seat through the hospital loan programme. This low number can be explained by an alternative source of car safety seats. A few months after Grosse schuetzen Kleine / Safe Kids Austria started its programme, the Austrian Automobile and Touring Club started a car safety seat loan programme for members' babies, modelled on the hospital loan programme.

The 1996 survey showed that in the non-intervention area, the federal province of Carinthia, reported usage of car safety seats was only 65%. In Carinthia, no safety seat loan programme was available, making car safety seat costs a major obstacle for some young parents. In this area, 62% of the mothers considered a hospital based loan programme to be an effective response to the recognised problem. In both federal provinces, more than 70% of mothers asked for detailed information on proper usage of child passenger restraint systems.

In 1999, the Carinthian Automobile and Touring Club and Grosse schuetzen Kleine / Safe Kids Austria started a hospital based car safety seat loan programme in the province of Carinthia. Vorarlberg, the most western province of Austria adopted the hospital based programme in 1996, also



organised by the local Automobile and Touring Club. In the rest of Austria, the Austrian Automobile and Touring Clubs offer a loan programme for members only.

At the moment, the usage rate of car safety seats for babies is 90% in Austria.⁵ Unfortunately, this number decreases with the age of the child. At age six, when children enter school, the usage rate is 10% despite legislation.

Key Steps

- If no car safety seat law is in place, it is important to gain political and local government support for a programme.
- Contract a private company to handle the logistics of the loan process.
- Identify hospitals for implementation of the programme.
- Encourage hospital staff to advertise the programme among mothers, to distribute the seats and to handle storage.
- Increase programme profile through the media.

Lessons Learned

Barriers

- The programme requires considerable effort from hospital staff because they must advertise it to new mothers and help with storage of car seats.
- Some hospitals do not have storage facilities. In these cases, the company organising the programme visits the hospitals twice per week to deliver car seats.

Facilitators

- The car safety seat loan programme can prove a high profile project for hospitals. Hospitals running the programme

received an award from the WHO Collaborating Centre on Health Promoting Hospitals.

- A law was passed in 1994 making the use of car seats mandatory until age 14 years (or height of 1.50m).
- For three years, the local government ran a campaign prior to Christmas called the “Guardian Angel” campaign in which they took over the rental fees for car seats for all children born in December.

Advice to Countries/Transferability

- The Austrian car safety seat loan programme is based on the UK project First ride – Safe Ride.⁶
- Hospital staff are crucial to the success of the programme. It is important to have regular contact with them to ensure their needs are being met. In this case, staff were visited twice per year.
- A reliable, well-informed organisation is required to run the programme and carry out technical and maintenance checks on car seats.
- By having the opportunity to hire a seat directly in the hospital, parents learned that safety for car passengers is a must right from the start.

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IMPLEMENTATION LEVEL	Regional
APPROACH	Education, Training
SETTING	Schools, community
TARGET AUDIENCE	Children aged 5 to 7 years old
RESOURCE IMPLICATIONS	€€
EVIDENCE BASE:	Pedestrian skills training leads to improved child pedestrian crossing skills. ^{1,2}

Background

Kerbcraft is a nationally run pedestrian training scheme that is designed to teach children three skills that will help them for future independent travel: recognising safe versus dangerous roadside locations, crossing safely between parked cars, and crossing safely near junctions.³

Children are taken out into the local area and are guided by volunteer parents/ trainers to find “safer” places. Training is progressive, with each phase building on the foundation laid from previous phases. All training takes place in designated streets near the children’s schools and lasts 25-30 minutes per session. Children are taught in groups of two or three and receive training sessions once a week for four to six weeks for each skill. Complete Kerbcraft training can be condensed into 12 to 16 weeks or extended over 12 to 18 months.

Parent training lasts approximately 2 hours. The Kerbcraft co-ordinator shows volunteers how Kerbcraft works and what they are expected to do. Site visits to the training areas are done during this session, to show volunteers how to use the locations. Finally, children are taken out with the co-ordinator, and helpers. Volunteers do not train their own children.

Policy Background/Driving Force

Every year, around 3,500 people are killed on Britain’s roads and 40,000 are seriously injured. In total, there are over 300,000 casualties. These cause inestimable human suffering and represent a serious economic burden - the direct cost of

road accidents involving deaths or injuries is thought to be in the region of €4.3bn a year in the UK.

The white paper, Tomorrow’s Roads: Safer for Everyone, specifies target reduction in road casualties by 2010. Kerbcraft is specifically mentioned as a strategy for improving child pedestrian safety in the white paper, The Future of Transport, published in 2004. In addition, higher than average child pedestrian injury rates in specific local authorities have driven the move for interventions such as Kerbcraft at a local level

Partners

- Department for Transport
- Local authority road safety departments
- Local education authorities
- Schools

Aims & Objectives

- To teach three pedestrian skills to 5-7 year old children, using practical training methods.
- To arrange for training to be undertaken by local volunteers, recruited and trained by project staff.
- To ensure that all children in the target classes receive training.

Evaluation

A sample of children undertook roadside tests before and after training.⁴ They were compared with a matched sample of control children who did not undergo training. In the three targeted skills, the judgements and road safety behaviours of trained children improved substantially and were sustained two months post training ($F(2,154)=31.49, p<.001$). Differences between the trained and control children were statistically significant ($F(1,77)=5.95, p<.01$). Importantly, these differences were present only if trained children received at least four training sessions for each skill. While control children also improved over time, gains were much more modest. The evaluation concluded that control children would not attain the level of trained children for several years.

Community volunteers achieved the same results in children’s behaviours as highly qualified staff. Therefore, they provide a less resource-intensive way of undertaking the programme. In addition, use of local residents can have a benefit on community morale and promote social capital.

Key Steps

- Secure funding and discuss the scope of Kerbcraft with the local authority and local education department. Decisions include how many schools will be involved and where will training be targeted (e.g., most vulnerable schools first).
- Decide on the home agency for the Kerbcraft coordinator and the structure of their role. For example, they could be



based within the local authority, schools or community.

- Employ Kerbcraft coordinator, considering that generally one coordinator can manage 10 to 12 schools (300 to 400 children) per year.
- Obtain support from head teachers and school staff. Also discuss possible ways of accessing volunteers.
- Time-table the training across the school year.
- Publicise Kerbcraft and recruit volunteers. Generally the ratio is one adult trainer for two to three children. There may be legal issues for each of the organizations involved, relating to how many children an adult can be responsible for.
- Explore the streets near the school to select sites for training for each of the skills. Complete risk assessments on each of the sites.
- Run a volunteer training session in which they are provided with background information on Kerbcraft, the local injury picture, and practical practice with children. This also provides an opportunity for volunteers to express their concerns and highlight interests they may have.
- Select start dates and send out letters to volunteers. Use class list and teacher information to decide which children to pair up together. Consider special needs or medical requirements of children.
- Start training. Ideally stagger start dates for the schools, beginning with those who have volunteers in place sooner.
- Volunteers monitor the progress of training sessions and children's understanding. This information is submitted to Kerbcraft coordinator who compiles feedback for the volunteers.
- Run volunteer motivation events to thank volunteers and

minimise attrition. Continue to recruit new volunteers as needed.

- Consider employing a part-time coordinator for schools with well-established training programmes to keep Kerbcraft running at this level.

Lessons Learned

Barriers

- Funding and budget will determine the scope of the project and how many schools can be reached.
- Lack of support from schools.
- Difficulties in recruiting and retaining volunteers.
- Lack of support within the local authority at both the strategic and functional levels: at the strategic level, not supporting Kerbcraft financially and philosophically; at the functional level, not providing the coordinator protected time to focus on Kerbcraft.
- Lack of availability of appropriate training sites near the school, as may occur in rural or industrial areas.

Facilitators

- Adequate funding.
- Adequate capacity of those involved.
- Adequate formative development of programme and materials.
- Work to shift risk perception within whole population (new "norms").
- Schools with a health promotion ethos. All school staff

understand and support Kerbcraft. This makes it easier to access classrooms, recruit volunteers, and develop a sustainable programme.

- Support from elected members of local authority to champion Kerbcraft and provide resources.
- Support from line managers in allowing the coordinator the flexibility to explore creative and alternative solutions.
- Kerbcraft coordinator with an understanding of the education system and working within schools, a background of volunteer recruitment, and an understanding of community development.

Advice to Countries/Transferability

- Pedestrian training must be practical and occur at the roadside.
- Kerbcraft is a community-centred programme. The ethos and culture of the target community must be considered before implementation.
- Pedestrian skills should be taught in the order outlined in the Kerbcraft manual, since each skill builds on lessons learned in previous sessions.
- Kerbcraft can be taught in various settings, and requires only very basic road layouts. In some cases, it may be necessary to transport children further than the streets immediately surrounding the school. Appropriate safety messages can be added to suit different environments.
- Volunteers are the basis of the programme, therefore volunteer recruitment and retention is very important.



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See also:

<http://www.kerbcraft.org.uk>

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Road Safety Strategy France

IMPLEMENTATION LEVEL	National
APPROACH	Enforcement, Engineering, Education
SETTING	National
TARGET AUDIENCE	Drivers, government officials, businesses, medical professionals, higher education schools and students, head injured patients and their families
RESOURCE IMPLICATIONS	€€€€€€
EVIDENCE BASE:	Countries with the best road safety record have national implementation plans which comprise a wide range of measures: low speed limits, speed reduction measures, promotion of secondary safety and publicity aimed at both children and their parents and drivers. ¹

Background

A multi-year road safety strategy was launched on 18 December 2002 by the Interministerial Road Safety Committee (CISR).² This strategy includes the following themes:

Increase controls and sanctions in order to change behaviour and ensure compliance with legislation. This includes implementing an automated system of control and penalties.

Promote a road safety culture, and involve all relevant parties. This includes better surveillance of drivers, and mobilising partners and developing new approaches.

The strategy has multiple components reflecting themes, including:

- **Photo radar cameras.** From 2003-2006, the first phase of the programme involves placing 1000 photo radar cameras throughout France. This also involves creating a structure to process tickets. It is expected that revenue from the tickets will finance other road safety initiatives.

Data from the photo radar system are expected to help targeted enforcement of driving under the influence of drugs or alcohol, seat belt wearing, and identification of times and places where infractions are most common.

Owners of vehicles who commit infractions are liable for fines unless they can prove their cars have been stolen, or provide

contact information for the driver of the car. Penalties include driving suspensions for particularly serious infractions.

- **Greater police presence and reliable equipment on roads.** Additional unmarked police vehicles will circulate through traffic to enable random enforcement. Helicopters and police vehicles will be equipped with cameras to detect infractions and dangerous driving. Electronic blood alcohol detectors will be provided for more reliable results. These will also be placed within police cruisers to allow testing at the scene.
- **Increase penalties for manslaughter and causing serious injury.** Greater penalties for involuntary manslaughter and serious injuries committed while driving will be added to the penal code. These laws are intended to allow for more severe penalties for deaths caused by circumstances such as driving without permission, driving under the influence of alcohol or drugs, or driving at speeds in excess of 50 km/h over the speed limit.
- **Increased penalties for basic infractions.** There will be greater sanctions for driving under the influence of alcohol, not wearing seat belts (both in the front and back seats), not wearing motorcycle helmets, and use of mobile phones while driving. Penalties will consist of increased demerit points on drivers' licences.
- **Increased penalties for repeat offenders.** In addition, new penalties will be implemented for makers, importers and distributors of radar detectors, or kits for modification of motorcycles that allow for inappropriate speeds.
- **Closing loopholes.** Not allowing motorists who receive a licence suspension to apply for early reinstatement for any reason, including professional reasons.
- **Protection of new drivers.** New drivers will drive on a probationary licence for three years. New drivers can receive up to 6 demerit points before their licence is suspended (compared with 12 points for experienced drivers).
- **Protection of older drivers.** All drivers older than 75 years will be required to have medical examinations every two years. Depending on physical capabilities, some limitations on older drivers could include time of day or location.
- **More rigorous driving tests.** Additional driving inspectors will be recruited to improve the quality of driving lessons and to extend the practical driving test to 35 minutes (from 22 minutes).
- **Increased coordination between state and territorial governments.** Departments and local councils will include road safety as a priority. A programme of removal of dangerous obstacles (trees, posts, etc.) will occur regularly throughout the year.





- **Refined road safety educational material for universities and colleges.** Content to be taught in civil education, math, life sciences, etc. will be standardised and inspected by National Education.
- **Improved road safety in work situations.** Protect workers by implementing prevention measures and ensuring all work vehicles are safe and fully equipped with safety equipment.
- **Road safety treated as a public health issue.** Improve information and dissemination regarding the effects of alcohol, prescription and illicit drugs on driving ability. Launch a national information campaign and improve visibility and readability of warning notices on medications that indicate effects on vigilance and other factors that could impact driving performance. Improve the detection of alcohol and drugs among road casualties in hospitals.
- **Research on road casualty prevention developed through a partnership between the Research and Transport Ministries.**
- **Improve conditions for patients with head injuries and their families.** Better organisation of transport, treatment and rehabilitation of patients, and improved support for their families.

Policy Background/Driving Force

In 2001, there were 116,745 road traffic crashes involving injury, with 7,720 people killed and 153,945 people seriously injured. An estimated 60% of automobiles and 70% of motorcycles exceed the speed limit.² In 2001, more than 31% of deadly road traffic crashes involved drunk drivers. Research also showed that half of all mobile phone calls were placed while in a vehicle.

Because of weak enforcement of road legislation in France, many drivers felt they could commit infractions with impunity.²

Partners

- Interministerial Road Safety Committee (CISR) which includes multiple ministries, such as Transport and Research Ministries
- Local councils, including town and county councils
- National Education inspection bodies
- Insurance companies
- National Health Board (Sécurité Sociale)
- National Institute for Prevention and Health Education (INPES)
- French Health Product Safety Agency (AFSSAPS)
- Hospital and Care Directorate (DHOS)
- National Health Accreditation and Evaluation Agency (ANAES)
- Businesses
- Non-governmental organisations, including road victims associations and road users associations
- National Council for Road Safety (CNSR)

Aims & Objectives

- To reduce road crash fatalities.
- To increase and improve control of traffic.
- To increase enforcement of legislation.
- To universalise penalties for all drivers, regardless of circumstances.

- To allow courts to deal with the most severe cases rapidly and efficiently.
- To simplify and speed-up procedures for enforcing penalties, to ensure motorists learn from their mistakes.
- To establish a culture of safer driving.
- To make road safety a priority for local and national governments and to increase coordination between governments.
- To alter infrastructure to improve safety.
- To modernise road safety education and increase the role of schools/universities.
- To involve businesses in the protection of their workers.
- To inform doctors and users about the effects of alcohol, prescription drugs and illicit drugs on driving.
- To improve surveillance of drug- and alcohol-related road casualties.
- To develop a programme of research to investigate mechanisms, epidemiology and prevention of road traffic injuries.
- To improve conditions for head injured patients and their families.

Evaluation

Evaluating a large-scale initiative such as this one is difficult in its own right. However, it has been made more difficult by a lack of targets and timelines for different components of the strategy. What limited evaluation data exist look promising, but considerably more work needs to be done to get a better sense of the impact.

Statistics published in September 2004 indicate significant decreases in both the number of road crashes and casualties.³

In 2002, the number of people killed on the roads was 7,400 per year. This decreased by 22% to 5,750 in 2003, and by an additional 14% to 4,900 by 2004. Reasons proposed for the decrease in casualties include:

- a 40% decrease in average speeds;
- a 17% improvement in behaviours related to alcohol;
- an 11% improvement in seat-belt use;
- a 10% reduction in traffic congestion.

Significant decreases in speeding occurred before the installation of the first speed cameras in October 2003. This implies that publicising increased enforcement and general “fear of police” may have had a more significant effect than enforcement itself.⁴

It is important to note that some of the proposed strategies as outlined above have not yet been implemented and are unlikely to be realised in the short- or perhaps even long-term. For example, medical examinations for older drivers have not been mandated because of lobbying pressure from older voters, and the technical difficulties of selecting and training medical boards that would be in charge of examinations.

To date, most activities related to the road safety strategy have focused on increased enforcement – particularly of speed limits.⁴ In order to ensure continued improvements in accident reduction, other measures must be implemented. For example, approximately 40% of road fatalities occur in rural areas. Prevention must include engineering and other solutions.

Key Steps

To implement an automated enforcement system:

- Using photo radar cameras to detect and record infractions related to speed, tail gating and running red lights.
- Automatic transmission of data to a central database that is capable of cross-checking with national matriculation records.

- Automatic ticket writing.
- Automatic transmission of the ticket to a payment centre.
- Automatic recording of demerit points on drivers’ licences and flagging of repeat offenders.
- Key steps in the implementation of other strategies have not been provided in available documentation.

Lessons Learned

Barriers

- CISR has not set up quantitative targets or programme milestones, making commitments vague and open to interpretation, and evaluation of the initiative more difficult.⁴
- Police enforcement levels have decreased since speed cameras were introduced and penalties for “minor” speed violations have lessened, giving the impression that speed limits are negotiable.⁴
- Recent changes in government have meant a decrease in road safety as a priority.
- Lobby groups have resisted certain measures.⁴ For example, older voters oppose mandatory medical examinations.

Facilitators

- Past policies paved the way for this road safety strategy.⁴
- In 2002, the Road Safety and Traffic Directorate of the Ministry of Transport (DSCR) began publishing a monthly “road safety barometer” of road fatality figures. This increased awareness and influenced public opinion on road safety.⁴
- The World Health Organization’s (WHO) World Health Day on 7 April 2004 on the prevention of road violence was hosted

in Paris. This put road safety in the headlines and suggested that it remained a government priority.⁴

- Policies and actions initiated at the local level contribute to overall safety gains.

Advice to Countries/Transferability

- Political commitment at the highest level is necessary to make road safety a priority for all in government and society. It is also important to encourage media coverage.⁴
- Political commitment must be followed by implementation and effective action (e.g., institutional organisation, coordination of actors, funding, training, etc.).⁴
- A close and long-term relationship must be established between research, decision-making and operational work to ensure that road safety measures and programmes based on the best evidence are implemented.⁴
- Achieving sustainable progress in road safety requires constant feedback between policy-making, and public opinions and attitudes.⁴
- Building a general “road safety culture” requires high quality information to be disseminated to the public and professionals and sharing of successful interventions to show what can be achieved.⁴
- Short and long term strategies should be planned holistically, linking to each other and a long term vision.⁴
- Implementation of road safety policies needs planning to ensure effectiveness and sustainability, and process evaluation should be included to feedback into the system.⁴
- Adequate resources are required in terms of quantity, quality (trained staff, tools, etc.) and distribution over time.⁴



- Good intersectoral organisation and institutional flexibility is required for effective cooperation.⁴
- Coordination with local decision-makers is required to ensure that national policies are implemented at the local level.

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Bicycle Helmet Initiative Trust

United Kingdom

IMPLEMENTATION LEVEL	Local
APPROACH	Education
SETTING	Schools, youth groups
TARGET AUDIENCE	Children aged 9 to 15 years old
RESOURCE IMPLICATIONS	€€
EVIDENCE BASE:	Community-based education/advocacy programmes around child cycle helmet wearing lead to increased helmet wearing. ^{1,2,3,4}

Background

Since 1992, a community-based programme to promote helmet use among children has been run in certain UK schools. The Bicycle Helmet Initiative Trust selects schools for intervention based on local knowledge of high risk, disadvantaged areas.

Prior to implementing the programme, all students are given a baseline self-completion questionnaire to assess their attitudes towards helmets and helmet use and determine how the programme needs to be tailored to address key issues.

School-based talks, with age-specific information, are given to students by trainers. Students 10 to 12 years old are initially targeted to promote messages early enough to have an impact. Presentations to older students are designed to reinforce cycle safety messages that they should have been exposed to at younger ages.

Presentations include:

- True case scenarios and videos of head injured children;
- A demonstration using an egg and a small helmet to illustrate the effect of a head injury with and without a helmet;
- An interactive discussion to include children's thoughts and experiences;

- Information on how to wear a helmet properly;
- Information on general cycle safety.

These presentations are supplemented by a low cost helmet purchase scheme. In deprived areas, helmets are provided free. Children are asked to pledge to wear cycle helmets.

Policy Background/Driving Force

Cycling injuries in the UK are estimated to number 90,000 on the roads and over 100,000 off-road.⁵ Each year, 37 to 50 young cyclists are killed, with 70-80% of all deaths caused by traumatic brain injury. One study estimates that 18% of serious casualties would have had only minor injuries, and 11% would have avoided injury altogether.²

In 2000, the Department for Transport set a target to reduce the number of children killed or seriously injured by 50% by 2010, particularly tackling the significantly higher incidence in disadvantaged communities. This target has driven local Road Safety departments.

Partners

- Bicycle Helmet Initiative Trust
- Local hospital
- Local schools

- Royal College of Nursing
- Royal College of Paediatrics and Child Health
- Headway
- Child Brain Injury Trust
- Brake
- Child Accident Prevention Trust
- Local media
- Local businesses.

Aims & Objectives

- To increase safe cycling and helmet wearing.
- To decrease head injury amongst cyclists aged less than 16 years.

Evaluation

A controlled evaluation study compared one UK city that had the campaign with a neighbouring city that did not.⁵ Samples of children from state schools and youth groups were recruited from each city. Independent samples of 500 children aged 11 to 15 years completed a questionnaire prior to the start of



⁵ See Lee et al. (2000) for references for statistics.

the campaign and at the end of each year of the three-year campaign. Response rates were 91% for the intervention group and 93% for the control group.

Children were asked to rate the question “If you cycle, do you wear a helmet?” on a three-point scale (always, sometimes, never). Results from the self-completion questionnaire indicated that “always” wearing a helmet among children in the intervention area increased significantly from 11% in 1992 to 31% in 1997 ($U=49155$, $p < 0.001$). Reported use increased non-significantly from 9% to 15% in the control area. At the end of the study, self-reported helmet use among children in the intervention area was significantly higher than among children in the control area (16% difference; $U=68654.5$, $p < 0.001$).⁵

Injury data from the Accident and Emergency department in the intervention city were monitored for pedal cycle injuries among children under 16 years old from June 1988 to May 1998. Cycle-related head injuries remained relatively stable in the years before the start of the programme, at approximately 112.5/100,000 population (<16 years). In the first year of the campaign injuries declined significantly to 62.5/100,000, remaining at 60.8/100,000 in 1997-98 ($Q=10.68$, $p < 0.005$). This represents a fall in head injuries as a percentage of total bicycle-related injuries from 21.6% to 11.6%.⁵

Key Steps

- Identify target area, based on need and commitment.
- Secure funding.
- Set up a local steering group.
- Provide training on helmet programme to include all aspects of helmet promotion and effectiveness to all identified trainers.
- Sample the target group on helmet attitude and use.

- Implement programme plan into schools.
- Provide affordable or free helmets.
- Provide age appropriate educational material, including a video and cycle safety game.
- Re-sample the target group on helmet attitude and use after the programme.
- Evaluate the outcomes and amend the programme as needed.

Lessons Learned

Barriers

- Limited availability, quality and completeness of injury data from hospitals and police sources.
- Limited availability of funding, especially lack of continuity of funding.
- Absence of national helmet promotion campaigns.
- Ambivalence of cycle industry towards helmets.
- Absence of relevant public health targets.
- Peer pressure against the use of helmets, especially when children move from primary to secondary schools and wish to emulate older students.
- Lack of legislation requiring the use of cycle helmets.
- Adult cycling organisations with civil liberties agendas that do not recognise needs of children.

Facilitators

- A champion determined to address cycling-related head injuries.
- A sound basis in research.
- Accessible timely data.
- Strong support from local Road Safety Officers, schools, teachers and parents.
- Consistent publicity from local media.
- Support from local businesses for expansion of the scheme.
- Establishment of a charity to run it nationally.
- Department for Transport target to reduce road-related deaths.

Advice to Countries/Transferability

- Tailoring of messages to local needs is crucial.
- It is important to understand the needs of the group being targeted. For example, barriers to helmet use may change depending on the population. Children in disadvantaged areas may be concerned about helmet cost, whereas those in other areas may be more concerned about helmet appearance. Initial consultation with the target population can help determine some of these issues in order to tailor messages.
- Local requirements and needs may vary depending on context. For example, urban areas may have more traffic and present different risks to rural areas. Messages should be tailored accordingly.
- Local data can provide information on the incidence and types of cycle-related injuries among children. This information can help with targeting of messages.



- Stable local leadership is essential.
- Children should be the focus of the programme.
- The programme can be linked with government targets around the need to increase children's levels of physical activity.
- A solid link with the health sector is needed.
- The cost of head injury to the health service can be a powerful argument in favour of a local programme.
- Partnerships are important to the success and sustainability of the programme, and can provide support in the face of anti-helmet criticism. Useful partners include a mix of non-governmental organisations and private groups. For example, head injury groups can provide personal experience; medical colleges can provide lobbying power; insurance companies can provide financial investment, particularly as they benefit financially from prevention activities.
- The need to become well versed in the arguments for and against helmet use is essential. Knowledge of the evidence base that supports helmet use can help rebut arguments against use. Facts need to be sound and based on strong scientific evidence.
- Cost of the programme varies depending on the number of schools targeted. In the UK, a basic programme with free helmets in 10 schools costs approximately €23,000. This does not include the cost of a management team.

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See also:

<http://www.bhit.org/>

<http://www.whohelmets.org/bhit.htm>

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Bicycle Helmet Campaign Denmark

IMPLEMENTATION LEVEL	Local
APPROACH	Education
SETTING	Schools, community
TARGET AUDIENCE	Children aged 10 to 12 years old (fifth grade students)
RESOURCE IMPLICATIONS	€€
EVIDENCE BASE:	Community-based education/advocacy programs around child helmet wearing lead to increased helmet wearing. ^{1,2,3,4}

Background

Bicycle helmets can reduce the risk of head injuries among children by at least 50%. Head injuries account for 40% of all injuries among cyclists and can be serious. Developmentally, fifth graders (ages 10-12 years) can cycle alone, concentrate on traffic, and indicate intentions of turning or stopping with their arms. However, children in this age group often resist wearing helmets because they are “not cool.”

The bicycle helmet campaign aimed to give children reasons to use bike helmets, know the dangers of not using them, and feel that they are “cool” when they use them. The helmet was portrayed as something attractive so that everybody felt like using it.

All the children participating in the campaign used helmets during the campaign period. Children with unfashionable or no helmets were able to borrow a new model of their choice from the county, and at the end of the campaign, could purchase the helmet for a reduced price.

Activities with students inside and outside the classroom took place from March through April and the campaign ended in May of each school year. Enrolled schools received free educational materials, bicycle helmets, questionnaires and materials for competitions between classes. The campaign encouraged children and teachers to have class discussions and sought to involve parents in supporting its goals. Educational material consisted of four booklets that explained danger in traffic and taught some simple rules on how to handle dangerous situations while cycling.

A separate package containing the teaching material explained the campaign process, provided ideas and proposals for class-based activities, as well as letters to parents that children were asked to take home. It also included contact information, questionnaires for the evaluation, and pre-stamped envelopes for submitting the evaluations to the county. Parents of fifth graders received information about the campaign that encouraged them to support the children in using the bicycle helmet.

Another part of the project was a helmet-exchange program where children and adults received new helmets after a crash if they submitted the damaged helmet and described the circumstances that led to the crash. These were used for a display of damaged helmets and narratives of children’s accidents. Schools and institutions were able to borrow the exhibition on request.

The program had recently been delivered by a practical course where the children practice cycling skills on a field area. The practical skill exercises include visibility from a truck, how to behave safely in an intersection (particularly when there is a truck in the intersection), braking exercises on a bike in wet and dry surface conditions, with and without carrying a load.

Policy Background/Driving Force

The most common type of injury events on bicycles in Denmark is the single bicycle accident, especially with children. Cycling related accidents are underestimated in the official police statistics but are captured through the healthcare system.

Partners

- Parents
- Teachers
- Traffic safety teachers
- Campaign secretariat
- Police
- Municipalities
- Truck driver education centre

Aims & Objectives

- To reduce the number of seriously injured children from bicycle accidents.
- To teach children to use bicycle helmets and to perform safely when biking in traffic.



Evaluation

A survey of helmet use was carried out at three points in time: before, during and after the campaign. In order to measure the effectiveness of the campaign, a questionnaire was distributed to children and teachers in all participating classes. The teacher distributed the questionnaires to students and carried out the survey of helmet use on days unknown to the children. In 2003, 55% of teachers said the campaign had increased students' use of bicycle helmets and 83% of teachers claimed students had safer traffic behaviour after the campaign. Among the students, 30% reported using helmets more after the campaign, 37% said their cycling skills had improved, and 68% were very or somewhat satisfied with their helmet.

Teachers were also asked how much time the class had spent on discussions about helmets and traffic safety as well as an estimation by parents of how much time they had spent discussing the campaign with their child.

The accident data indicates that the number of young cyclists wearing helmets has increased and the number of injuries has decreased by about 50% during the 10 year campaign period.

Key Steps

- Contacting schools to solicit participation
- Obtaining information from schools regarding number of classes and students
- Distributing campaign material and helmets to the schools
- Choosing winning classes and celebrating the winners
- Distributing press releases with accident data, winner class information and information on helmet effectiveness, etc.

Lessons Learned

The program should be designed as a long term intervention because changing traffic culture and bicycle helmet attitudes and behaviours takes a long time.

Barriers

- Traffic safety is only one of many topics teachers have to teach in their classes and sometimes they prioritise other topics over traffic safety.
- The program is dependent on funding from the technical administration in the county. The program received funding for 10 years, but due to reorganisation in the Danish public sector, the program is in danger of being closed.

Facilitators

- Strong political support to accident and injury prevention in Frederiksborg county.
- Teachers with experience in the campaign said parents were important partners for the campaign's success. As a result, the campaign secretariat prepared a brochure to inform parents of the goals of the campaign and how they could contribute by being good role-models for their children.
- Consistency of activities was important. Teachers knew that the campaign would be repeated yearly, so some planned the curricula to include the campaign as part of their classes.

Advice to Countries/Transferability

- This type of programme should be designed as a long-term intervention because changing attitudes and behaviours takes a long time.

- Mix theory and practice.
- Make it fun for the children to participate.
- Long term data collection and evaluation is necessary to establish whether there is an impact on deaths and serious injuries among cycling schoolchildren in the county.

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Pool Safety France

IMPLEMENTATION LEVEL	National
APPROACH	Enforcement
SETTING	Pools
TARGET AUDIENCE	Pool owners, children under 5 years
RESOURCE IMPLICATIONS	€€€
EVIDENCE BASE:	Legislation requiring isolation fencing with secure, self-latching gates for all pools, public, semi-public and private, including both newly constructed and existing pools, leads to a reduction in drowning when enforcement provisions are included. ^{1, 2, 3}

Background

A law was introduced in January 2003 aimed at reducing pool drowning among children. The legislation states that in-ground pools on holiday rental property must have a safety system installed by May 2004. All other private pools have until January 2006 to comply with legislation, except new pools, which must include safety systems before building is authorised. The law does not apply to above ground or indoor pools.

Safety systems can consist of either:

- a fence that is at least 1.10 metres high with a child-proof opening and closing system;
- a reinforced pool cover that must have supporting bars along the sides, strong enough to hold the weight of a child;
- a shelter that covers the pool and can resist snow and wind;
- an alarm set to go off when an object weighing more than 5 kg goes into the water.

All pool owners must ensure that installation of security devices come with a certificate of compliance. Pool owners who do not comply with legislation could face a €45,000 fine and criminal charges of death by negligence if a child drowns in their pool.

Policy Background/Driving Force

France has the largest private swimming pool market in Europe, with over one million pools. It also has the highest rates of infant death by drowning in pools in the world. Approximately 15 to 20 children aged 5 years and under drown in pools every year.

Partners

- Consumer Safety Commission (CSC)
- Former Senator Jean-Pierre Raffarin
- Direction générale de l'urbanisme, de l'habitat et de la construction
- Direction générale de la concurrence, de la consommation et de la répression des fraudes (DGCCRF)

Aims & Objectives

To reduce the incidence of drowning among children 5 years and younger.

Evaluation

Evaluation of the effectiveness of the legislation is difficult at this early stage, particularly since it is not yet mandatory for all indoors pools. Nevertheless, an evaluation is expected, and the

law requires that the government present a report to parliament before January 2007.

It is known that childhood deaths due to drowning have so far decreased from 25 in 2003 to 17 in 2004.

Key Steps

The Consumer Safety Commission issued a recommendation in October 1999 asking for a law making safety protection for indoor pools mandatory. This recommendation received strong support from Senator (and subsequent Prime Minister) Jean-Pierre Raffarin. The legislation was passed in the senate and parliament without opposition.

Lessons Learned

Barriers

- Pool professionals were not in favour of the law because they thought it would have a negative impact on the number of pools constructed. This did not occur – the number of pools built is still increasing.

Facilitators

- Several associations, including “Sauve qui Veut” (a drowning prevention and victim’s aid association), were active in lobbying.
- Senator Raffarin lobbied strongly for legislation.



- All consumer groups agreed on the importance of the law.
- Tourism boards will not rent properties with improperly protected pools. Some public authorities, including DGCCRF, regulate these groups and ensure they comply with legislation.
- The four different protection system options mean that pool owners have a choice regarding costs associated with complying with the legislation.*

Advice to Countries/Transferability

- Legislation of mandatory pool fencing in Australia met fierce opposition from pool owners, who framed the debate as intrusion into private space.⁴
- The French legislation is different from that seen in Australia, New Zealand or Canada, because pool owners can choose between four different types of protection systems.
- It is recommended that parents be strongly encouraged to continue close supervision of their children around pools: no protection system can replace parental supervision.

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See also:

<http://riviera.angloinfo.com/information/1/poollaw.asp> (in English)

<http://www.logement.equipement.gouv.fr/actu/piscinespriv/default.htm> (in French)

<http://www.sauvequiveut.asso.fr/> (in French)

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¹ Fences cost approximately €5,000 for a pool of 12 m x 8 m with a gate. An alarm set costs around €700. A pool cover costs between €56/m² – €64/m², so an automatic cover can cost €6,500. Shelters are the most expensive option at between €12,000 – €18,000 euros, depending on pool dimensions.

Drowning Prevention Iceland

IMPLEMENTATION LEVEL	National
APPROACH	Education, Engineering, Enforcement
SETTING	Community, pools
TARGET AUDIENCE	Parents, children, nurses, pool operators, general public
RESOURCE IMPLICATIONS	€€
EVIDENCE BASE:	Measures such as water and pool safety instruction, adult supervision, improved pool design have value as preventive actions. ¹

Background

In 1994, in reaction to high rates of drowning in Iceland, a drowning prevention programme was implemented in various pool settings. It consisted of the following aspects.

Public Swimming Pools:

- Voluntary regulation for public swimming pools (made mandatory in 1996)
- Intensive first aid training for staff
- Layout of pools (e.g., lifeguard watch towers with minimal blind spots, accessibility for emergency response)
- Better lighting (e.g., underwater lights)
- Security cameras
- On-going training of staff initially consisting of a 1-week training course and yearly 1-day refresher courses that include testing of fitness and life-saving abilities.

Spa Pools:

Enforcement:

- Regulations on:
 - o Drains

- o Covers
- o Building permission for pools

- Yearly checks to ensure that pools comply with all regulations.

Education:

- For nurses at health stations³, regarding the importance of drowning prevention and safety measures.
- For parents, regarding safety in public swimming pools and supervision of children – in the form of brochures provided at local health stations when parents access medical care for their children.
- For parents of young children, regarding shallow water drowning.
- On not using unsafe products (e.g., blow-up toys as swimming aids).

Mass media campaign:

- Three-day coverage of drowning research, with extended discussion of inadequacy of Icelandic laws and efforts by government departments to prevent drownings.
- Most drowning or near-drowning incidents covered in national newspaper, with comments how they could have been prevented.

- Coverage of unsafe products and toys, and safe swimming aids.

Policy Background/Driving Force

Swimming is a very popular activity in Iceland with over 200 swimming pools for a population of 286,000. In addition, fishing is a main industry, making up 70% of all exports.

The importance of drowning prevention gained early support in Iceland with a law passed in 1940 requiring that all Icelandic children must learn to swim and to save another person from drowning.⁴

Despite these measures, drowning incidents involving children appear to be more common in Iceland than neighbouring countries. Drowning data from 1984 to 1993 among children aged 0 to 14 years indicated 2 drowning incidents per 100,000 children per year. Boys represented 64.6% of these incidents and children aged 2 to 3 years and 6 to 8 years appeared to be most at risk, with swimming pools being a common setting (42%).

These data, combined with persistent lobbying and media coverage encouraged government to tighten regulations and enforcement

³Health stations represent the primary access points to the health system. Parents take their children to these stations for regular check-ups, immunisation, and any other health concerns. Parents also receive age-appropriate educational material regarding injury prevention.



Partners

- The Public Health Institute of Iceland
- Ministry of Education
- Reykjavik Children's Hospital
- Icelandic Red Cross

Aims & Objectives

To reduce the incidence of drownings among children 14 years and younger.

Evaluation

Counties around Iceland were surveyed in 2000 to determine whether swimming pool regulations were being followed. Results suggested that 28 of 98 (29%) counties were complying with regulations.

Data from 1994 to 2003 indicate a reduction in drowning from the previous ten-year period. From 1984 to 1993, there were 32 near-drownings, 3 children with brain damage and 13 deaths. From 1994 to 2003, there were 13 near drownings and 8 deaths. Six of the 8 deaths occurred in 1994 at the time that regulations were still being implemented. Only two deaths have occurred since then. One of these deaths resulted from non-compliance with 15 regulations.

Results of a more extensive evaluation will be available early in 2006.

Key Steps

- Collection of local data to act as driver for government policy makers, inform on types of interventions required, and provide on-going evaluation data.
- Investigation of international best practices around drowning prevention and the specific issues encountered in Iceland.
- Translation and implementation of rigorously evaluated lifeguard training course from American Red Cross for use in the local context.
- Inspecting pools to determine the changes required to upgrade them to building and safety standards. Negotiation with the local community to ensure minimal expense.
- Training of nurses at health stations and developing age-appropriate resources for parents and children regarding drowning prevention.
- Yearly pool inspections.
- Yearly lifeguard testing.
- On-going monitoring of every drowning and near-drowning incident to determine where prevention efforts failed, or new dangerous trends.

Lessons Learned

Barriers

- Lifeguard testing meant that many long-standing lifeguards were no longer qualified to remain in the position.
- Communities were required to fund the necessary changes to their local swimming pools.

Facilitators

- The national newspaper was very supportive and willing to provide prominent space to the issue.
- A high-profile couple whom had lost a child to drowning became active campaigners.
- The relatively small population size of Iceland makes implementing regulations and on-going surveillance relatively straightforward.
- Funding for a job position dedicated to implementing regulations and monitoring drowning-related injuries.
- Swimming pool operators originally resistant to regulations, but eventually took ownership of the issue and formed an association for self-monitoring.

Advice to Countries/Transferability

- Icelandic regulations were developed based on examination of best practice and effective legislations in other countries, adapted to the local context.
- On-going monitoring of drowning incidents is key to identifying trends that can be addressed immediately.

References, Additional Information

1. World Health Organization. Guidelines for safe recreational water environments. Volume 2: Swimming pools, spas, and similar recreational-water environments. Geneva: WHO. Available at http://www.who.int/water_sanitation_health/bathing/bathing2/en/



⁴Children are tested at 12 years to ensure they meet the requirements.

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Drowning Prevention Campaign Greece

IMPLEMENTATION LEVEL	Regional
APPROACH	Education
SETTING	Schools, community, universities
TARGET AUDIENCE	Community, children, adolescents, adults, educators, tourists
RESOURCE IMPLICATIONS	€€€€€
EVIDENCE BASE:	Water safety skills improve swimming performance. ^{1,2}

Background

The Centre for Research and Prevention of Injuries (CEREPRI) developed a comprehensive multi-phase drowning prevention campaign tailored to the specific patterns evident in Greece. Phase I has been completed and consisted of:

- Assessment of the burden of unintentional drowning injuries among children in Greece;
- Comparison of unintentional drowning mortality data and the profile of these injuries in Greek children and adolescents with correspondent figures from other European countries;
- Systematic review of drowning prevention strategies;
- The development of a network of injury and drowning prevention experts and coalition with different organisations;
- Creation and distribution of educational materials, including DVDs for teachers, and brochures and a puppet show for children;
- Participation in radio interviews and promotion of safety messages of the campaign;
- Evaluation of children's water safety knowledge through distribution of a questionnaire to kindergarten, primary and middle schools;

- Dissemination of results via presentations in national conferences and press conferences.

The campaign in schools has been designed to reach 30,000 to 40,000 students, approximately 2-3% of the Greek student population.

Phase II is currently underway. The following tasks have been successfully achieved:

- Creation of the Greek Coalition for Drowning Prevention;
- Development of Water Safety Pedagogic Kit which includes brochures, stickers, a DVD with music and water safety messages;
- Filming of a video on water safety and drowning prevention with informative sketches by popular Greek actors;
- TV spots with messages regarding alcohol and swimming, and the importance of swimming with others were broadcast nationally;
- Development and production of 10 radio messages;
- Development of a website (<http://www.watersafety.gr>) with age-appropriate messages, and material for educators;
- Distribution of educational and informative water safety materials;

- A press conference prior to the Prevention Day Campaign;
- Drowning Prevention Day on 27 May 2003;
- Television, radio and newspaper interviews;
- A drawing competition on "How to be Water Wise" in schools;
- Distribution of 250,000 public telephone cards with water safety slogans and CEREPRI contact information;
- Distribution of a special post stamp;
- Production of a puppet play.

Phase II outreach activities include:

- One day seminars organised by CEREPRI in collaboration with several hospitals, in different areas of Greece;
- Junior Life Guard – a series of seminars organised by CEREPRI in collaboration with the Hellenic National Academy of Lifeguards and local municipalities aimed at educating children attending summer camps about water safety behaviour and the hazards of water environment;
- Water safety lessons in public swimming pools and beaches.



Long-term goals include:

- Collaboration with shipping companies;
- Development of a teaching module for school age children;
- Strict preventive measures for beaches and pools;
- Parental education and information;
- Educational and informative material (in Greek and English) available for distribution.

While Johnson & Johnson provided funding for Phase I, ongoing distribution and work is being funded by small grants from businesses and organisations.

Policy Background/Driving Force

The European Child Safety Alliance task group on unintentional injuries emphasised drowning injuries in children. Funding was provided by Johnson & Johnson for each of the countries implementing initiatives.

Partners

- Centre for Research and Prevention of Injuries among the Young (CEREPRI)
- European Child Safety Alliance
- Johnson & Johnson International
- Ministry of Education
- Schools and teachers
- Hellenic Academy of Lifeguards and other lifeguard associations

- Drowning network

Aims & Objectives

To decrease childhood injuries and deaths in Greece related to drowning.

Evaluation

A questionnaire was developed for overall evaluation of the campaign and is being distributed to the workers of Titan Factory, Hellenic Public Power Corporations (DEI), public schools, hospitals, and 500 houses in Athens, Halkida and Kalymnos.

The initial questionnaire that evaluated the water safety knowledge of children in schools in Phase I will be distributed to the same classes. It will be completed after the children participate in water safety seminars in order to evaluate the difference in their knowledge and the effectiveness of the seminars.

To date, process evaluation has indicated that the campaign:

- Is running according to stated aims;
- Has enabled participants to collaborate;
- Is important for public health;
- Has become a forum for exchanging experiences;
- Has enabled many people to learn about Cardio-Pulmonary Resuscitation (CPR);
- Has links with related projects and activities of European Child Safety Alliance;
- Has strengthened coordination of efforts;

- Has increased public awareness about childhood drowning at the national level;

- Is expected to improve water safety knowledge.

Key Steps

- Establish drowning prevention working group;
- Obtain funding;
- Develop action plan, key messages and strategies;
- Develop Coalition for Drowning Prevention, which includes lifeguards, port and sea police forces, and other relevant organisations;
- Develop and distribute material,
- Select schools to target using percentage sampling to reflect general population of students,
- Connect with schools to establish campaign sites;
- Contact politicians and relevant authorities (particularly Ministry of Health) to introduce the work and invite their participation, and increase visibility of campaign;
- Evaluate intervention.

Lessons Learned

Barriers

- Politicians and the media were difficult to persuade to participate.
- Collaboration with Johnson & Johnson became difficult since the campaign did not suit their ideas.



- It proved difficult to find the balance between unbiased university work and commercial needs of sponsors

Facilitators

- Schools and non-governmental organisations were very positive and eager to participate in the campaign.
- Multiple conferences were run by CEREPRI, thereby increasing their profile and becoming a recognised source for injury prevention information.
- The materials are now developed so only relatively small amounts of funding are needed to continue the campaign.

Advice to Countries/Transferability

- Johnson & Johnson International provided funding to 4 countries to develop a drowning campaign – Holland, Portugal, the Netherlands and Greece. Each country developed its own strategy.

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2. World Health Organization. Guidelines for safe recreational water environments. Volume 1: Coastal and fresh waters. Geneva: WHO. Available at http://www.who.int/water_sanitation_health/bathing/srwe1/en/

See also:

<http://www.euroipn.org/cerepri>
<http://www.childsafetyeurope.org>
 (click on “Campaigns” button)

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Child Safety Box

Austria

IMPLEMENTATION LEVEL	Regional
APPROACH	Education, Safety Equipment
SETTING	Community
TARGET AUDIENCE	Parents, children under 6 years old
RESOURCE IMPLICATIONS	€€€€€€
EVIDENCE BASE:	Window bars appear to be effective for preventing falls. ^{1,2} Smoke detector give away programmes have proven successful when high risk areas are targeted and multi-faceted community campaigns have the specific objective of installation of working smoke detectors. ³

Background

The Child Safety Box programme provides a complete package of safety devices free of charge to families in order to make their homes safer. Families were able to order the box, paying only postage charges for its delivery. The Child Safety Box included the following items:

- Smoke alarm
- Cooker guard*
- Oven guard
- Safety lock
- Window guards
- Safety plugs
- Drawer stop
- Corner and edge bumpers
- Door stopper
- Refrigerator bar

These items were chosen based on the burden of home injuries treated in the main children's hospital in the southern region of Austria, and on a study by Grosse schuetzen Kleine / Safe Kids Austria with 500 families in the city of Graz. This study analysed how families made their homes child safe, what their attitude were towards safety equipment in the home, and which safety devices they used or would be willing to use. Data were collected by a paediatrician during medical home visits.

The campaign was promoted through a brochure, which was distributed by partners such as Penaten (Johnson & Johnson Consumer in Austria), the health insurance company, and

hotels equipped for children & babies. In addition, media coverage was extensive. It was advertised in nearly every regional and local daily, weekly and monthly newspaper, in all community newspapers, in extra materials produced for families with newborn children and in several housing magazines. Local radio and TV station announced it several times. It was also advertised in a booklet families receive in order to have their children vaccinated and in the Styrian Family passport (a book of discount vouchers). With every new production (six in total) a press conference was organised. A total of 25,000 brochures were distributed.

This programme was completely funded by the local authority health and housing departments.

Policy Background/Driving Force

In Austria, half of all childhood injuries occur in and around the home. The most vulnerable age group are children under six years old.

Partners

- Grosse schuetzen Kleine / Safe Kids Austria
- Styrian local health and housing government departments
- Private industry (Helly and Johnson & Johnson Medical Products Austria)

Aims & Objectives

- To make homes safe.
- To inform parents regarding child safety at home and the usage of safety devices.

Evaluation

A total of 16,000 boxes were distributed over 5 years, beginning in 1996.

In 2001, Grosse schuetzen Kleine / Safe Kids Austria conducted a survey on the Child Safety Box and its usefulness/usage for families.³ Those families who received a box were asked to fill out a questionnaire and return it to Grosse schuetzen Kleine / Safe Kids Austria. The results of this survey indicated that of the respondents:

- 77% used the smoke alarm;
- 83% used the cooker guard;
- 49% used the oven guard;
- 66% used the safety lock;
- 51% used the window guards;
- 99% used the safety plugs for electric sockets;

*While experts recognise the seriousness of burns and scalds associated with cookers and the need to prevent them, there are ways of protecting children from these injuries other than through the use of cooker guards alone. Cooker guards are not a complete solution to the prevention of these injuries and still require a behaviour change by the adult using the cooker, who may believe that simply by fitting a guard the child is completely protected. The Child Accident Protection Trust (CAPT) in the UK advocates that the rear hot plates and burners should be used in preference to those at the front of the hob, and that pan handles should always be turned away from the reach of a child. Ideally, a child should not be free to move around the kitchen when cooking is being carried out (Hayes, M. Personal communication, May 22, 2006).



- 55% used the drawer stop;
- 78% used the corner and edge bumpers;
- 75% used the door stopper;
- 28% used the refrigerator bar.

These results should be treated with caution as the response rate for the survey was 10%.

The Child Safety Box programme was successful in terms of acceptance and creating safety awareness. Despite the fact that the last child safety box was distributed in 2000, parents still request it from Grosse schuetzen Kleine / Safe Kids Austria

Key Steps

- Determine the burden of home injuries and parents' attitude to safety and equipment.
- Design the project and communications plan.
- Obtain funding.
- Develop and implement organisational aspects of the programme.

Lessons Learned

Barriers

- Bringing stakeholders together.
- Handling storage and postage of safety boxes.
- The safety boxes are expensive to provide, therefore the sustainability of the project is in question.
- Data management is challenging due to the great demand for and popularity of the boxes.

Facilitators

- A new local government was voted in. The head of the health department was a father with three young children and saw the value in injury prevention.
- The local government health and housing departments pooled resources to fund the project.
- An organisation for the handicapped packaged the boxes, keeping costs down and enabling the development of a fruitful relationship between the departments of health and social affairs.

Advice to Countries/Transferability

- The Child Safety Box programme is an expensive project making sustainability difficult. A more sustainable, long term solution would be to integrate elements contained in the box into housing standards so that safety elements are already in place when families rent or build their own house.

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Child Resistant Packaging for Chemicals Netherlands

IMPLEMENTATION LEVEL	National
APPROACH	Enforcement
SETTING	National
TARGET AUDIENCE	Children under 5 years
RESOURCE IMPLICATIONS	UNKNOWN
EVIDENCE BASE:	Legislation of child resistant packaging reduces the incidence of poisonings. ^{1,2}

Background

In January 1986, legislation came into effect in the Netherlands requiring that most corrosive products and liquid petroleum products sold to the general public be packed in child resistant packaging. The decree refers to household chemicals with identification marks 'very poisonous', 'poisonous', or 'corrosive'. Also products with identification marks 'harm causing: may result in lung damage after choking.' The decree for household chemicals was extended in 1994 to preparations containing 3% or more of methanol, or 1% or more of dichloromethane.

In 1989, a decree for child resistant packaging for pharmaceuticals was implemented. The decree refers to pharmaceutical products in small packages, containing the following substances:

- acidum acetylsalicylicum
- acidum salicylicum
- paracetamol.

Policy Background/Driving Force

Hospitalisations in the Netherlands for accidental poisonings due to household chemicals and pharmaceuticals were high among children under 5 years: in 1982/83, there were about 1,300 cases due to pharmaceuticals and about 1,600 cases due to other substances. This is a rate of over 320 poisonings per year per 100,000 children under 5 years. In addition, the

rate of emergency treatments per year was about 230 per 100,000. Discussion about the Decrees led to a gradual introduction of child resistant caps before 1986.

Partners

- Dutch Ministry of Health
- Welfare and Sports
- Consumer Safety Institute
- National Poison Information Centre
- Inspectorate for Commodities

Aims & Objectives

- To reduce the problem of accidental poisonings.
- To make child-resistant packaging compulsory for household chemicals and pharmaceuticals.

Evaluation

Pharmaceuticals are increasingly distributed in small (blister) packages.³

Increased consumer enquiries by parents indicate that the introduction of child resistant packaging has alerted parents to the risk of poisoning.³ One study published in 1991 showed

a decrease in the number of hospital treated accidental poisonings in children over a ten-year period.⁴ Specifically, hospitalisations due to poisonings from ingestion of drugs, cleaning products, disinfectants, petroleum products and corrosive products decreased. The authors conclude that decreases likely resulted from child-resistant packaging, but that further decreases could be achieved through educating parents of young children regarding safe use and storage, as well as general practitioners regarding treatment of poisoning victims.

An evaluation report published in 2000 by the Consumer Safety Institute and the National Poison Information Centre also showed a reduction in the number of hospitalisations of children under 5 years due to poisoning.³

Key Steps

- In 1980, the former state secretary of the ministry of Health and Environment decided to promote rules on child resistant packaging. At the time, there was no Dutch norm on this issue, thus initial work involved developing this. An international ISO norm was also being developed at the time, but work went ahead on the Dutch norm.



Lessons Learned

Barriers

- Drafting legislation is time consuming.
- Demonstrating effectiveness requires prolonged collection of standardised data with sufficiently detailed classifications.
- Resources are required for lobbying politicians for the regulation, as well as staff capacity and testing facilities for enforcing it once it is in place.

Facilitators

- Objective data clearly indicating the extent of the problem and the need for legislation.
- The European and international standards for child resistant packaging were drafted by a large number of international experts.

Advice to Countries/Transferability

- National regulations may trigger discussions about barriers to trade. It is important that international standards for testing the performance of child resistant packaging are produced and that several countries adopt regulations.

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See also:

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Paediatrician Injury Prevention Counselling Child Safety Tips Austria

IMPLEMENTATION LEVEL	National
APPROACH	Education
SETTING	Doctors' offices
TARGET AUDIENCE	Parents, children under 6 years old
RESOURCE IMPLICATIONS	€
EVIDENCE BASE:	There is indirect evidence that individual-level interventions in the clinical setting are effective measures to reduce many childhood unintentional injuries. ^{1,2}

Background

Since 2003, the Austrian Mother-Child Passport (used for regular medical check-ups) requires doctors to counsel parents on childhood injury prevention.

Doctors do not receive training in injury prevention as part of their medical schooling. Therefore, in order to support doctors in their counselling work and provide the best information available, Grosse schuetzen Kleine / Safe Kids Austria developed a Child Safety Manual and pads similar to medical prescription pads. Each page of the pad includes the most important information on childhood injury prevention and safety tips. Doctors are provided with the pads for free and can tear off pages to give to parents.

Three different prescription pads were produced for different ages – 0-2 years, 2-4 years and 4-6 years, each one with a different colour marking the different age group.

The programme was presented to the public around Mothers Day 2003 with a nationwide press release.

Policy Background/Driving Force

In Austria, half of all childhood injuries occur in and around the home. The most vulnerable age group are children under six years old.

Lobbying of the Austrian Supreme Health Council over ten years regarding the importance of children's injuries lead to regulations requiring doctors to counsel parents on injury prevention.

Partners

- Grosse schuetzen Kleine / Safe Kids Austria
- Penaten / Johnson & Johnson Consumer Austria
- Sandoz Pharmaceuticals
- Austrian Federation of Social Security
- Austrian Ministry of Health and Women

Aims & Objectives

- To support pediatricians in their child safety counselling of parents.
- To reduce the number of severe childhood injuries in the home environment.

Evaluation

Prior to production, paediatricians were asked what format for the material would suit them best. They suggested the prescription pad format.

Grosse schuetzen Kleine / Safe Kids Austria sent all paediatricians in Austria a questionnaire in May 2005 to examine doctors' use of pads, perceived usefulness of tips for doctors and parents, and degree to which child safety is discussed with parents.³ The response rate was 25%. Results indicated that:

- 94% were very satisfied with the design of the pads, perceiving them as easy to handle in their daily routine.
- nearly 70% of doctors are handing out the tips during children's regular check-ups;
- doctors perceived that over 90% of parents reacted very positively to the counselling;
- 91% of doctors think that the information included in the pads is sufficient;
- 76% of doctors confirm that parents are interested in child safety;
- parents mostly ask doctors about prevention of burns/scalds, poisonings and sport accidents.*



Key Steps

- Examine research and similar programmes to develop safety guidelines and tips.
- Consult paediatricians to determine the sort of material is most useful in undertaking safety counselling.
- Test material (pads) with focus groups of parents.
- Obtain funding to produce and distribute the pads and scientific manual to doctors.
- Launch the programme with a press release.

Lessons Learned

Barriers

- Finding a sponsor for the programme took time. Johnson & Johnson were first approached in 2001, but it was not until 2003 that they decided paediatricians were a target group for them.
- The Austrian Ministry of Health and Women were not interested in sponsoring the Child Safety Manual. Funding was eventually found from the Austrian Federation of Social Security.

Facilitators

- A paediatrician at the Department of Paediatrics of the University of Graz was a board member of both Grosse schuetzen Kleine / Safe Kids Austria and the Austrian Supreme Health Council.[†] He was able to lobby heavily for injury prevention and this programme.
- Doctors were very cooperative and supportive of the programme. The Austrian Association of Paediatricians posted the Child Safety Manual on their website.⁴

- This programme reaches 80% of all families with children aged 0 to 6 each year because it is part of the health system.

Advice to Countries/Transferability

- The American Association of Pediatrics has developed a similar programme (TIPP) with material to support paediatricians in injury prevention counselling.⁵
- Testing materials with the target groups was key to ensure their acceptance and use. The Child Safety Manual has proven useful to doctors because of the indepth information to enable preparation for counselling. The pads are very easy and comfortable to handle, and require little space in paediatricians' private practice.

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4. <http://www.docs4you.at>
5. <http://www.aap.org/family/tippintr.htm>

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⁴Parents' perceptions of priorities are not in line with data, which show drownings as the leading cause of death for young children.

[†]The Austrian Supreme Health Council includes all major institutions that make health and health promoting decisions.



IMPLEMENTATION LEVEL	National, local
APPROACH	Education
SETTING	Schools, community
TARGET AUDIENCE	Schools, parents, children 3 to 14 years old
RESOURCE IMPLICATIONS	€€
EVIDENCE BASE:	School-based injury prevention education has the potential to increase safety-related knowledge and behaviour. ^{1,2}

Background

Risk Watch is a school-based safety education programme to develop the risk assessment skills of children aged 3 to 14 years. The programme provides a multi-agency approach to delivering risk awareness, as opposed to risk avoidance with the overall objective of improving the Health, Safety and Wellbeing of young people.

Risk Watch is intended to be flexible so that injury prevention and risk awareness can be taught as a stand-alone unit or integrated into core curriculum subjects such as numeracy, literacy, writing skills, science or health promotion. The programme is based on children's developmental stage and the risks they face. It provides an experiential learning process with a chance to practice prevention behaviours, following guided decision-making.

Risk Watch links between the classroom and the home environment to enable parents and carers to be involved. This involvement may lead to the home environment being improved by the provision of safety equipment or in a change of carers' behaviours and attitudes. It is designed to provide an enjoyable experience for the child and the teacher based on evidence that fun events are more likely to be repeated and remembered.

The eight areas of teaching are as follows:

- Motor Vehicle Safety

- Fire and Burn Prevention
- Choking, Suffocation and Strangulation Prevention
- Poisoning Prevention
- Falls Prevention
- Weapons Injury Prevention
- Bike and Pedestrian Safety
- Water Safety

Risk Watch can be delivered in a number of ways:

- A nine-hour Intensive Programme. Teachers spend one hour per week to present information for one risk area, followed by one activity from Risk Watch in Action.*
- A 20-hour Comprehensive Programme. Run throughout the school year, it covers one risk area for one to two hours per month, followed by activities from the Risk Watch in Action section and visits by safety experts from the community.
- A Variable Programme. This is a student-centred approach, combining student learning from Risk Watch in Action with teacher input from Risk Watch content information.

Teachers are provided with resource boxes containing extra material for each topic. For example, the fire and burns box may contain a smoke alarm, telephone, oven gloves, flammable materials, match boxes, a range of safety booklets and posters, and information on the local Ambulance Service.

The teacher is supported in the programme by a local community coalition comprising of professionals who link into the teaching objectives. The core group usually includes representatives from Health, Police, Fire and Education Departments. As they form a working group and start to formulate a strategic and local implementation plan, additional co-opted members from other appropriate community groups and businesses are encouraged to assist. The vision is that the coalition is the driving force in a community, providing support and direction to teachers, soliciting help from the public and business sector, and effecting change in surrounding environment to make it safer for children in local communities.

Policy Background/Driving Force

Accidental injury is the leading cause of death for children aged 0 to 14 years in the UK. Children from poorer families are five times more likely to die as a result of injuries as those from a wealthier background. Road crashes are the leading cause of unintentional injury among children and young people. (Almost 5,000 children (under 15 years) were killed or seriously injured on British roads in 2001). An average of 50 children under 11 years old are killed in fires every year and

* Risk Watch in Action is a series of complementary extension activities.



over 1,600 are injured. The cost of home accidents in the UK has been estimated at £25 million per year.

The Highland Council, in partnership with Highland and Islands Fire Brigade and Nottinghamshire Fire and Rescue Service decided to take action and become involved in the first phase of the UK pilot of Risk Watch because of the alarming injury statistics among children.

Risk Watch meets a number of national priorities, including those in relation to Community Planning; Community Safety; Youth/Social Justice and Health and Safety Commission's strategy of early education in risk assessment skills.

Risk Watch is intended to impact upon the high incidence of anti-social behaviour in and around schools, helping to meet the objectives of the Scottish Executive's Social and Youth Justice agendas and its commitment to improve community safety at the neighbourhood level.

In addition to meeting many of the current educational priorities, it helps address Health and Safety Executive targets to ensure a reduction in accidents and injuries for school leavers going into industry by equipping young people to identify and reduce risk.

The UK Government Fire and Rescue Services Act 2004 places an obligation on local Fire Services to play an active role in community fire safety and provides funding for such activities. The Fire Service thematic review of 'Working With Young People' highlighted that Fire Service personnel would gain in terms of staff development, from working on projects such as Risk Watch by providing a positive role model to children and, ultimately, children are a powerful way of spreading the fire and safety prevention message to family, friends and other people.

Partners

- Highland and Islands Fire Brigade and Nottinghamshire Fire and Rescue Service
- Scottish Executive
- Office of the Deputy Prime Minister (ODPM),
- Highland Council

In Scotland, Steering Group membership includes:

- Chief Fire Officers' Association (Scotland)
- Scottish Executive Fire Division (Scotland)
- Association of Chief Police Officers (Scotland)
- Health and Safety Executive
- Royal Society for the Prevention of Accidents
- Maritime & Coastguard Agency
- Scottish Community Safety Network
- Scottish Road Safety Campaign
- HMI Education in Scotland
- Health Promoting Schools Unit
- Learning and Teaching Scotland

Aims & Objectives

- To teach children and their families the skills and knowledge they need to reduce the risk from unintentional injuries;
- To change the attitude and behaviour of young people towards personal safety;
- To improve the health, safety and wellbeing of young people

Evaluation

Over 1,000 children in seven primary schools participated in the Phase 1 pilot for the evaluation during 2003/04.2 Teachers followed the nine-hour Intensive Programme described above, with support provided by Safety Agency and/or Coalition members. In addition, a Schools' Coordinator was appointed to liaise with schools and safety agency members, and support teachers.

The evaluation included twelve focus groups with a total of 87 students. In addition, each student participating in Risk Watch was pre- and post-tested. Parents were invited to school meetings to present their views on the programme. Interviews were completed with 21 Coalition members. Feedback was also obtained from teachers and other representatives of the education system.

Students provided very positive feedback, indicating great enjoyment and learning from the Risk Watch programme. Many pupils reported feeling empowered by the programme, and felt able to help should an emergency arise. Where pre- and post-testing was rigorously carried out, statistical findings were indicative of a promising effect on children's performance on the test.

At the end of the Phase 1 pilot, pupils and teaching staff attended one of two one-day conference to feedback their experiences of using the programme. Following a very positive response at both evaluation days, the Scottish Executive and



Nottinghamshire Fire and Rescue Service agreed to extend the programme to a broader range of schools.

In Scotland, the programme expansion meant that it was offered to schools in every region, giving a much more robust sample to gauge its success.

The Phase 2 pilot will be evaluated using a range of methods in each of the pilot areas, including:

- In-depth study into behavioural change;
- Measuring knowledge at an experiential safety centre;
- Teacher/pupil feedback forms.

Key Steps

- Set up a multi-agency Safety Coalition.
- Examine local accident/injury statistics.
- Select schools.
- Provide training for schools and Community Coalitions.
- Monitor and support delivery of programme.
- Examine feedback
- Share results

Lessons Learned

The programme needs to be targeted at schools in areas where risk is highest. Teachers are under great pressure to deliver core curriculum subjects and preparation and teaching time is limited. Risk Watch has been developed by teachers to fit in with core curriculum subjects and relevant teaching materials are already provided.

The key to its success is continued co-ordination and cooperation of coalition members and continuity of funding.

Barriers

- Teachers require ample lead-in time (several months) to incorporate the material into their development plans.

Facilitators

- All Scottish local authorities must have a Community Safety Partnership consisting of multiple agencies concerned with safety. Because this group was already in place, implementation of the Risk Watch curriculum was more straightforward.
- The Fire Service has been in a position to act as a champion for Risk Watch for two main reasons:
- The Fire and Rescue Services Act 2004 gives Fire Services a remit for community fire safety.
- Risk Watch was developed by the National Fire Protection Association (NFPA) in the USA, so was naturally marketed to the Fire and Rescue Service Directorate at the ODPM.
- The flexibility of the Risk Watch programme means that teachers can deliver material in a variety of ways varying in resource requirements. Also, they can present all material themselves, or bring in safety personnel for special sessions.

Advice to Countries/Transferability

- The Risk Watch concept was originally developed by the NFPA in the USA and adapted by primary teachers for use in the UK.
- Flexibility was allowed by NFPA in adapting the content of the programme to suit localised safety advice and safety needs.

- Close liaison with NFPA Europe representative is highly recommended.

References, Additional Information

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See also:

<http://www.nfpa.org/riskwatch/>

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Lifeskills – Learning for Living

United Kingdom

IMPLEMENTATION LEVEL	Regional
APPROACH	Education, Training
SETTING	Community, schools
TARGET AUDIENCE	Children aged 10 - 11 years, adults with learning disabilities, older people (60 and over)
RESOURCE IMPLICATIONS	€€€
EVIDENCE BASE:	Interactive education and training approaches have a significant impact on children's safety-related knowledge, attitudes and behaviours. ¹

Background

Lifeskills - Learning for Living is a permanent, regional safety education and training centre built as a realistic 'village' on 10,000 sq. ft of floor space. It includes a supermarket, houses, a garage (used for drug education), road and vehicles, a garden, an electrical substation, a dark alleyway, a building site, a playground, a stream, a railway, a farm and countryside.² Matching sound effects increase the realism of the village. It is designed to provide an interactive, fun approach to learning about safety in the home, on the road or during leisure time.

The scenarios relevant to safety are as follows:

- The road scenario covers general road safety and road crossing including the need for safety barriers, road markings, speed limits, cycle safety and in-car safety.
- The house scenarios include a kitchen, living room, bathroom, hallway, and bedrooms. Children identify hazards (e.g., slips and trips, burns and scalds, poisons, electrical and fire) and make them safe as appropriate.
- The garden scenario also involves potential hazards such as a paddling pool, fireworks, bonfire, barbecue, lawnmower, garden shed and sun safety.
- At the sub-station scenario, children are faced with high voltage cables, a transformer and other hazards.

- The building site includes hazards associated with mechanical equipment, dangerous scaffolding, chemicals and trip hazards.
- The river scenario includes action to take in case of drowning and personal safety.
- The railway line has a train approaching with objects on the track. Possible courses of action are discussed.
- Farm and countryside hazards are also included.

The teachers do not accompany the children on their activity. They remain as emergency telephone control operators receiving and discussing the appropriate emergency action to take with the children who are unaware that they are not the "real control operators".

Policy Background/Driving Force

Road and home accidents account for about 20 deaths per day in the UK. Every year, 30,000 children in the local region require hospital treatment for injury.

The Health of the Nation and Saving Lives: Our Healthier Nation white papers establish injury prevention as a priority and specify targets for reduction of deaths by one-fifth and serious injuries by one-tenth by 2010. The Health Schools Blueprint aims to help schools support children in leading a healthy

lifestyle. It includes a National Healthy Schools Standard with targets for all schools.

Partners

- Local councils
- Local health professionals
- Local emergency services
- Local organisations and businesses
- National rail
- Utilities (gas, electricity, water)
- Construction industry

Aims & Objectives

- Children will take responsibility for their own safety, assess risks, and learn how to deal when faced with dangerous or difficult situations.
- Children will translate learned skills to real life situations.



Evaluation

A longitudinal (three months) matched sample design was adopted for the evaluation using 5 of the Lifeskills scenarios.¹ Lifeskills children completed a paper-and-pencil test immediately before and after visiting the centre. Control children, who had not visited the centre, completed the same test at their schools. Children in both groups were re-tested three months after the intervention. A sub-sample of children in both groups was re-tested 12 months after the visit in order to assess retention of knowledge.

In addition, children in the Control and Lifeskills group were tested at three months post visit performing a range of safety skills at the Lifeskills Centre. One year later, children were tested in safety skills at an alternative location, in order to assess the extent to which the performance of Lifeskills children had been aided by contextual cues of the Lifeskills centre. Children in both groups who took part in observation testing also participated in focus groups on safety and risk.

% of tests on which Lifeskills children did significantly better than Control children		
	Measured by % of children with perfect achievement	Measured by children's scores
Performance, 3 months later	50%	83%
Knowledge, 3 months later	80%	100%
Knowledge, 12 months later	30%	67%

One year post-visit, Lifeskills children were more knowledgeable than control children in home, fire, and road safety. Lifeskills children also displayed more confidence in dealing with an emergency, through quicker reaction times and better performance.

Key Steps

- Collect injury data to substantiate need.
- Develop business plan and undertake feasibility study.
- Develop organisational structure for management of the programme.
- Conduct extensive consultation with key partners, community groups, professional organisations, target audience as to what to include in the village.
- Construct the Centre.
- Recruit and train paid and voluntary staff
- Develop supporting educational materials including a web site.
- Incorporate an evaluation process into the development of the operation programmes.
- Develop annual fundraising to maintain programme.

Lessons Learned

Barriers

- Limited injury data were available, which limited the case that could be made for the village and subsequent evaluation of it.
- No national injury strategy or policy in the UK would provide national-level support and funding.
- No stable, long-term source of funding.
- Time constraints of the staff developing the programme.

Facilitators

- Strong local support from multiple sectors that provided funding, in-kind support and expertise.
- A history of extensive partnership working with key partners on a temporary version of the village. As a result, relationships were in-place and expertise on the different subject areas covered by the village was easily accessible.
- Donation of large centrally located space for the village by Bristol City Council rent/service charge free.
- Five key senior-level personnel who each developed an area of work with the help of a working group (e.g., recruitment and training, fundraising)
- Management Board that includes those running the programme, as well as senior-level people that have the potential to influence and access funds.
- Member Organisation Board providing advice and financial support
- Board of Patrons with influence to help raise profile.

Advice to Countries/Transferability

- Develop a finance strategy for a sound financial base complying with all legal and financial law.
- If the Centre is to be run as a Registered Charity, ensure compliance with Charity Law.
- Consideration should be given to producing a financial forecast showing income and expenditure for a period covering a minimum of 3 years. The financial forecast should allocate funds to cover the operating costs and make contingency provision/reserves.

⁵Critical Path Analysis identifies tasks which must be completed on time for the whole project to be completed on time, and identifies tasks that can be delayed for a while if resources need to be reallocated.



- Produce a finance policy defining Finance Management Systems;
- Produce an audited Annual Report and Accounts.
- Comply with legal financial obligations (e.g., Tax returns, systems for paying salaries.)
- Develop a strategy for fundraising, particularly if there is no central source of long-term funding. This ensures the sustainability of the village through planning ahead for future resource needs.
- Develop milestones to work towards. Drawing up a critical path analysis⁵ will clarify the steps required to make the concept happen, and help decide if it is feasible to continue.
- Build in evaluation from the beginning. The findings are a powerful leverage of extra funds and provide credibility. If possible, establish a comparison group as this will strengthen results.
- Develop quality standards and an accreditation process for the Centre. This means that when multiple centres are set up, there is some control to ensure they cover the same material, to the same level of quality. Consider the development of a national centralised organisation to oversee the centres within one country.

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See also:

The LASER Project – Good Practice Guidelines: <http://www.rosipa.com/safetyeducation/laser>

Approximately twice yearly, the Lifeskills group runs a Fact-Finding Day in order to provide those interested with more information. For further information, please contact Maggie Sims. <http://www.lifeskills-bristol.org.uk/>

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All Wales Injury Surveillance System (AWISS) Wales

IMPLEMENTATION LEVEL	National
APPROACH	Surveillance
SETTING	Hospitals
TARGET AUDIENCE	Public health policy makers, practitioners, researchers
RESOURCE IMPLICATIONS	€€€
EVIDENCE BASE:	The collection and dissemination of data is vitally important in the monitoring and evaluation of injury prevention programmes, the development of policy and practice. ^{1,2}

Background

The All Wales Injury Surveillance System (AWISS) is designed to collect data on all injuries from all accident and emergency (A&E) departments in Wales, and to calculate population based event rates.³

AWISS data fields include:

- Name.
- Address.
- Postcode.
- Sex.
- Date of Birth.
- A&E number (unique number for each individual attendance at hospital).
- NHS number (unique number for each person).
- Referral source (self, general practitioner, other).
- General Practitioner code (codes for individual general practitioner or practice).
- School attended.
- Occupation.
- Ethnic group.
- Time of incident.
- Date of incident.
- Initial complaint (text field, which often contains information on symptoms, activity, location, and mechanism of injury).
- First/repeat attendance.
- Mode of arrival (private transport, ambulance, helicopter).

- Road Traffic Crash (RTC) place.
- RTC location.
- RTC road user.
- RTC safety device.
- Triage category (five point national priority score).
- Patient group (accident, assault, self-inflicted).
- Incident type (home, public place, etc.).
- Incident location (text field which can contain information on address, name of premises etc, but often also contains information on activity and mechanism of injury).
- Diagnoses 1 to 6.
- Diagnostic anatomical site 1 to 6.
- Side of body 1 to 6.
- Treatments (varies by unit).
- Investigations (varies by unit).
- Disposal (discharged, admitted).
- Follow up (A&E, outpatient, GP, none).

Policy Background/Driving Force

Established by recommendation of the Welsh Health Planning Forum, a pilot system was implemented in a county in Wales. Following the success of the pilot study, it was decided to extend the system to all of Wales. AWISS started in 1996, funded by the National Assembly for Wales.

In 1999, upon assessing the value of AWISS, the National Assembly for Wales recommended permanent funding. Additional recommendations included using the data as a

means of setting and monitoring injury reduction targets, facilitating national and local initiatives, and sharing and discussing data with other agencies on a regular basis in order to highlight the injury problem and develop interagency action plans.

Partners

- University of Wales
- National Assembly for Wales
- Hospitals

Aims & Objectives

- To collect population-level data on injury morbidity.
- To use the data to:
 - Measure the magnitude of the injury problem to identify areas or group with particularly high rates of injury.
 - Develop and implement injury prevention initiatives.

Evaluation

In 2003, AWISS was estimated to cover 80% of the 2.9 million people in Wales through data collection at 13 of 17 A&E departments.⁴



The narrative field of the surveillance system was investigated to see if it provided useful information that was routinely and automatically analysable.⁴ Almost 100,000 records dating from January 1999 to June 2000 were used to develop automated algorithms.

The algorithms were tested on a new set of 50,000 records with narrative statements. This dataset was subsequently compared with a 50,000 record dataset of records with no algorithms. In the no narrative data set, 67.5% of injuries were coded as “other” or “not known,” compared with 49.5% in the narrative dataset.

The narrative increased injury identification particularly in cases where sensitivity was highest. For example, for school-related injuries, an additional 51.8% of injuries were identified; for rugby and soccer, 137.2% and 86.8% more injuries were identified, respectively.

AWISS has initiated injury prevention activities in a number of different areas.³ For example, the development of the Child Safe Penarth initiative, identification of pubs and clubs with high assault incidents and development of interventions, the use of body padding to reduce rugby-related injuries, and development of the Wales Collaboration in Accident Prevention and Injury Control.

Key Steps

- Sign-up key partners to the importance of surveillance. This includes policy makers who may want the data for policy reasons, data holders (i.e., hospitals), and informatics (i.e., bodies that hold national data, which may enable data linkage).
- Develop an agreement on what can be provided (e.g., the data themselves, reports based on data analyse, etc.) and timelines. Develop guidance on the use and interpretation of the data.

- Surveillance is more likely to continue if data have multiple uses (e.g., identifying scale of problems, hot spots, targeting and evaluating interventions). A research link is valuable, as is a policy link. Data can be invaluable in influencing politicians – demonstrating need, and using data to suggest and test potential solutions.
- Continue to demonstrate value and usefulness of data, as this is key to ensuring continued support and funding.

Lessons Learned

Barriers

- There is considerable variability in the computer systems and amount of data collected by different hospitals.
- Because some residents of Wales choose to attend A&E departments in England, some areas are not entirely captured.
- Variability in data and coverage of the system means the ability to compare areas can be limited. Analyses at the national level are relatively crude, but in some areas allow much more detailed levels of analysis.
- New interpretations of the UK 1998 Data Protection Act hold that patient consent is required for the use of data beyond that required for treatment purposes. This has resulted in some hospitals pulling out of AWISS. A solution is being implemented in which data would be sent to another organization within the Welsh Health System, which would link the data with other data sets, remove duplicates and make them anonymous before sending on for analysis.
- Data collection is not mandatory, making it possible for hospitals to pull out of the process. However, it is to be made mandatory shortly.

- Resources cover only data analysis expenses. No resources are provided to hospitals for data collection.

Facilitators

- Capitalising on data already collected by A&E departments for treatment purposes.
- Sufficient common data collected across hospitals to allow aggregation and comparability.
- A champion for AWISS also sat on the body examining corporate information, which makes decisions on national database.
- Collecting data for all age groups, because policy makers may be interested in different age groups at different times. This ensures that data are always seen as relevant.

Advice to Countries/Transferability

- Members of the AWISS team participated in two European Commission funded projects for the development and testing of minimum data sets for injury surveillance, and EUROCOST – a system to assess the medical cost of injury in Europe.



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See also:

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Child Safety Good Practice Guide:

Good investments in unintentional child injury prevention and safety promotion

The need for knowledge of what works is growing every day among those working to reduce the burden of unintentional injuries amongst Europe's children. Good use of evidence is central to achieving this and knowing 'what works' is at the heart of developing good policy and programmes. The Child Safety Good Practice Guide builds on previous work by the European Child Safety Alliance, a programme of Eurosafe, and child safety researchers from around the globe and is a step in supporting countries in Europe to move toward evidence-based good practice.

The purpose of the guide is to enable Member States to examine strategy options for unintentional child injury, move away from what has 'always been done' and move toward good investments – strategies that are known to work or have the greatest probability of success. These are highlighted in "at-a-glance" tables which provide referenced evidence statements and strategy transfer and implementation points. Arranged by injury category and the 3 E's (engineering, enforcement and education) the tables allow readers to quickly identify evidence-based good practice and best investments for having a real impact on childhood injury. As such the guide also serves a tool to raise awareness and communicate those strategies/interventions that have an evidence-base. It also provides practical advice on how to use good practice in strategic and action planning for unintentional injury prevention and safety promotion and stresses the importance of taking the time to address transferability issues prior to final selection of strategies. Further, where available examples of 'real world' success in at least one setting in Europe are provided as learning tools for those considering uptake, transfer and implementation of select strategies/interventions.



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