

# PREVENTION OF ROAD INJURIES IMPACTING CHILDREN IN SOUTH AFRICA (PRISCA)

Policy briefs: **Child Passenger Safety**



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## PROJECT OVERVIEW

From January to December 2018, research and stakeholder engagements were conducted as part of Childsafe's Prevention of Road Injuries Impacting Children in South Africa (PRICSA) project.

The objective was to: explore the major South African contributors to this challenge; establish what interventions could be best suited to help address the problem; and lastly, to identify the correct stakeholders to adequately engage with, in addressing the issue of child pedestrian safety.

This policy brief considers the findings that emerged from the research programme relating to child passenger safety, child pedestrian safety and the need for safer zones around schools in particular. It also contains recommendations related to each of these three areas.

## METHODS

ChildSafe<sup>2</sup> is an advocacy organisation that promotes child safety. It has been doing so for 40 years. With funding from UNICEF, and research conducted by the University of Cape Town, the PRICSA research project used primary and secondary methods and research tools to investigate the problem. The purpose of using these various research methods was to capture the complexity of the challenge and surface multiple perspectives. These include:

- A comprehensive literature review of the magnitude and extent of the challenge globally
- A comprehensive secondary data collection and report on the status quo of child road safety
- A series of stakeholder workshops conducted in all nine provinces of South Africa. These workshops included representatives from the departments of Transport, Health and Education. These fields play an important role in child road safety. Collaborations with multiple departments enables Childsafe to understand and tackle the problem through partnership
- A policy review of current legislation and policies that impact children, from the South African Constitution to national, provincial and local government mandates

<sup>2</sup> Registered Non-Profit Organisation as Child Accident Prevention Campaign of Southern Africa - [www.childsafe.org.za](http://www.childsafe.org.za)



# CHILD PASSENGER SAFETY

## Background

The seat-belt is the single most effective feature in a vehicle to reduce the severity of injury to the vehicle occupants that results from road traffic crashes. Article 7 of the Vienna Convention on Road Traffic of 1968 states: *“The wearing of safety belts is compulsory for drivers and passengers of motor vehicles, occupying seats equipped with such belts, save where exceptions are granted by domestic legislation.”*



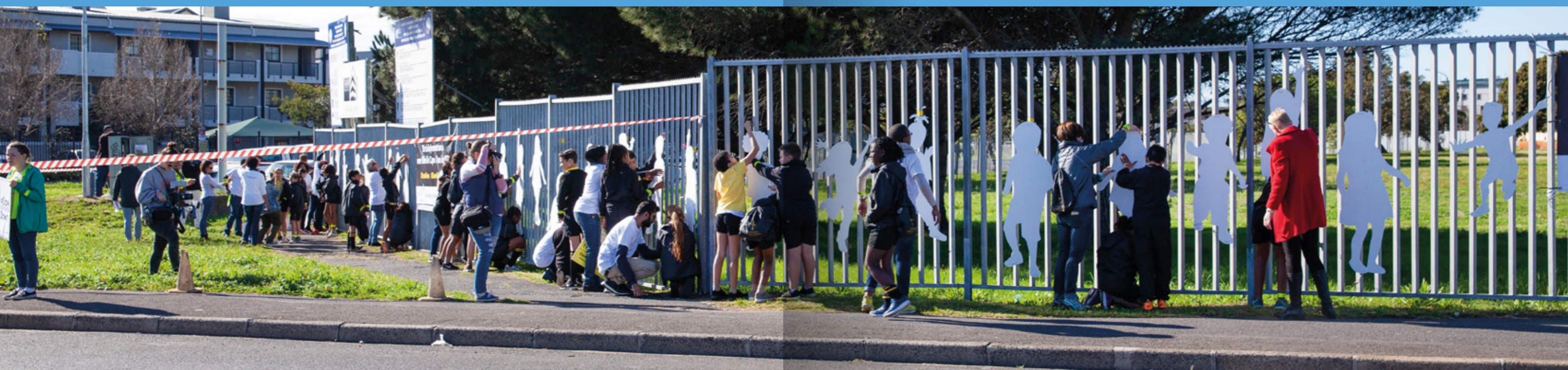
The South African Arrive Alive website (2018) lists the following research data and statistics on the importance of seatbelts, child restraints and baby seats:

- A review of research on the effectiveness of seat-belts found that their use **reduces the probability of being killed by 40-50%** for drivers and front seat passengers and by about 25% for passengers in rear seats.
- **Head injuries make up some 60% of all injuries to vehicle occupants.** Drivers and front seat passengers who do not use seat-belts suffer almost the same percentage of head injuries as non-users in rear seats.
- **Ejection from a vehicle is one of the most injurious events** that can happen to a person in a crash, with 75% of all vehicle occupants ejected from a vehicle in a crash dying as a result.
- **Seat-belts are effective in preventing ejections:** overall, 44% of unrestrained passenger vehicle occupants killed are ejected, partially or totally, from the vehicle, as compared to only 5% of restrained occupants.
- **Seat-belts are approximately 50% effective in preventing fatalities in crashes in of death for infants is reduced by 70% if all the children had been in child which motorists would otherwise die.**
- Studies have shown that child safety seats that are correctly installed and used for children aged 0-4 years can **reduce the need for hospitalization by 69%.**
- **The use of child restraints rather than adult seat-belts for children up to 135 cm in height or aged 12 years and above will save over many child injuries or deaths every year.**

The effectiveness of child restraints is determined by the ability to keep a child firmly secured in their seat so that **in the event of sudden braking or collision the child is not thrown against the car interior or ejected from the vehicle.** The restraint must absorb kinetic energy (created by the motion of the child during the crash) without itself injuring the child and must be easy to use. A review of the effectiveness of child restraints compared the risk of injury to children in different seating positions in cars (American Academy of Paediatrics, 2011) showed that:

- Children who sit in the rear without child restraints have around 25% lower risk of being injured than children who sit in the front without restraints.
- For children using restraints in both seating positions the risk in the rear is 15% lower than in the front.
- The effect of child restraints varies depending on the type of restraint used. A child up to 4 years of age has a 50% lower risk of injury in a forward-facing child restraint and 80% lower in a rear-facing seat





A recent visual survey by the Automobile Association revealed that a staggering 93% of children are not strapped into their safety or booster seats in a way that will help them survive a crash.

According to Matzopoulos *et al.* (2008) road traffic crashes account for 20% of all passenger deaths among children in South Africa aged between 0 and 19. For children aged 14 years and younger, Arrive Alive (2018) reports that motor vehicle crashes remain the leading cause of unintentional, injury-related deaths.

South Africa is a participant in the United Nation's Decade of Action for Road Safety 2011-2020 campaign, signed at the first global conference for Ministers of Transport in November 2009 in Moscow, Russia. South Africa remains one of the highest contributors to Africa's road fatality crisis. In response, **the national government is targeting a 50% reduction in road fatalities by 2020.**

The number of fatalities per 100 000 population in the country declined over the first years of action<sup>3</sup> after joining the campaign. However, in 2013, the country still recorded the second highest fatality rate in the continent for the general population, at 31,7 fatalities per 100 000 population (Peden *et al.*, 2013). **Children in South Africa are among the most vulnerable road users in the country – the child fatality rate in the country is double the world's fatality rate.** (Matzopoulos *et al.*, 2008).

Children are still being injured and killed on the roads, despite the promulgation of a myriad legislative and policy recommendations in the past five to 10 years. Although child pedestrians make up a greater portion of child injuries and fatalities on the road, children who travel by car make up another 36% of those killed (Janmohammed *et al.*, upcoming).

Pedestrians and passengers are considered vulnerable<sup>4</sup> in respect of child road injuries and fatalities; and child passengers are most at risk. In the event of a crash, or even an emergency stop, the human body takes on the weight of the speed at which it is travelling, multiplied by the body weight. A child weighing 10 kilograms, in a car travelling at 60 kilometres per hour will take on a weight of 600kg in a crash. Statistics show that children are at even greater risk if they are not restrained in car seats or boosters.

<sup>3</sup> The lowest decline registered in 2013 at 22.3 fatalities, from a baseline of 27.5 in 2010

<sup>4</sup> Vulnerable road users are defined by the number of road injuries and fatalities impacting a particular group.





## Findings

**Attitudes and behaviour are major contributors to child passenger deaths.** Human factors contribute 73,6% to fatal crashes (RTMC, 2014). Adult behaviour exacerbates the challenge. In particular, adults do not always comply with the legal requirements related to child passenger safety, child seats and other constraints or seatbelt regulations.

There are other factors that also impact on child passenger safety, namely:

- **Indifference of parents or lack of knowledge** about the safety benefits of child restraints.
- **Drivers in low-income areas cannot afford child safety constraints.** To counteract this challenge in South Africa, **businesses have been established, selling or hiring** reusable second-hand child restraints to people that cannot afford new child restraints.
- **Vehicles lack adequate, fitted seatbelts, and their use is not adequately enforced.** This is often the case with public transport vehicles that are transporting learners.
- In many parts of South Africa, especially in rural areas, **children are transported to school by LDVs (open bakkies) or animal drawn transport.** The safety hazards for children, inherent in these systems, are obvious.
- In addition, **unroadworthy vehicles pose a safety hazard** to all occupants and other road users.

These factors have a particular impact on scholar transporters, whether the service is contracted by parents or by schools. Parents, teachers, law enforcers and care-givers do not approach the challenge with the requisite urgency and priority. There appears to be a lack of awareness of the importance of improving child safety; and knowledge of the risks and dangers to infants, toddlers and children in a crash is limited. Adults in general, and authorities in particular, have limited scientific knowledge of the magnitude and implications of the challenges around child passenger safety.

Enforcing child safety laws and regulations is very limited. Socio-economic factors such as parents' education level and income also play a fundamental role in child passenger safety. That said, vehicle drivers, from the high-income spectrum, often do not prioritise the use of constraints either. Children from lower income groups are also at a higher risk when in transit, as they mostly use public transport. In some cases, unlicensed vehicles or scholar transporters operate without the requisite permits. This leaves child passengers particularly at risk while travelling to school and back. In addition, public transport vehicles transporting learners are often overloaded, which also imposes an additional safety risk for unrestrained children.

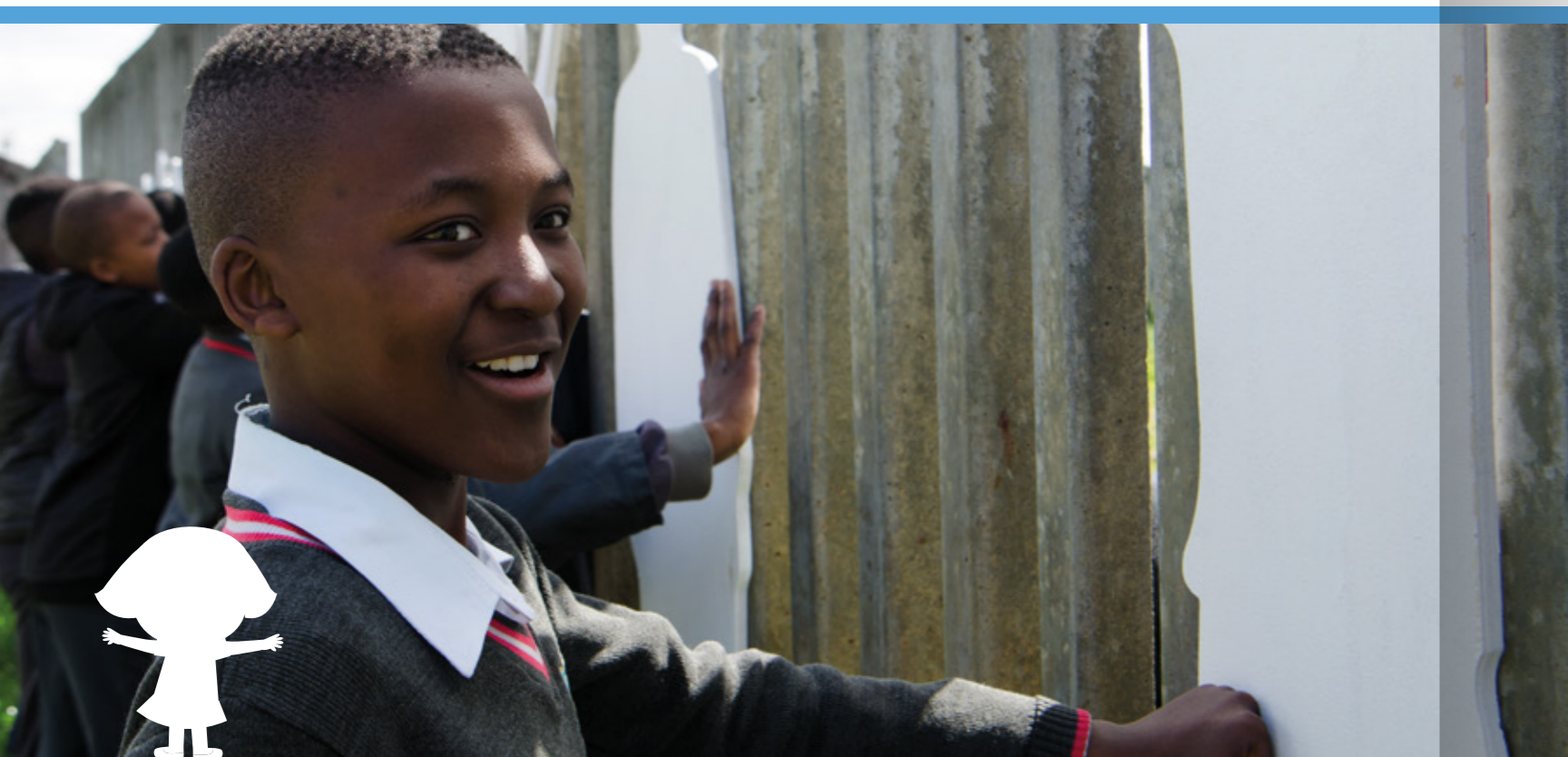


## Key insights

Multiple stakeholders bear responsibility for road safety. This transcends all spheres of government and multiple functional departments and entities, including both public and private entities. This complexity makes it challenging to co-ordinate, integrate and execute those responsibilities.

The research shows that the current approach has not yielded the desired results to reduce incidents by 50% within the Decade of Action. Currently, road fatalities in South Africa are on the same level as during the introduction of the campaign.

Child passenger safety is a challenge that requires a multi-pronged approach among multiple stakeholders. While government has a critical role to play in addressing the challenge, for policy and legislation to be effectively implemented, and to achieve maximum results, a wider range of stakeholders need to assume a level of responsibility. It is not the role of enforcement alone. Child road safety education should be addressed from the Early Childhood Development phase, in a multi-media and multiple-audience approach, which should include parents, teachers, care-givers and scholar transporters throughout a child's school years. It is also important that constructive feedback is provided, and impacts are regularly monitored, evaluated and communicated.



## Recommendations

**Behaviour is a key driver of the child passenger safety challenge.** Therefore, in addition to enforcing compliance, there is a need to implement initiatives that will modify behaviour among key stakeholders.

These initiatives include:

- **Further capacitating law enforcement officials with greater knowledge**, and providing the legislative tools to support them. This could help to address apathy towards child constraints
- **Parents and scholar transport agents need to ensure that children are restrained.** The regulations regarding child constraints should be communicated more broadly
- **All adults are custodians of children.** Each needs to take the responsibility for a child's safety
- Although enforcing the law can modify behaviour to achieve the desired goal of reducing incidents, this cannot be the only method
- **Raising awareness and reinforcing education are important tools** to equip enforcement agencies, teachers, scholar drivers, adults — and scholars themselves — of their obligations and rights
- **Technical and science-based education** is important to contextualise the problem(s) in a way that achieves co-operation and attracts greater support from implementing agents such as police, schools, parents and scholar transporters
- As an example, **compulsory courses towards health and emergency medical officials** should be delivered in public and private hospitals, focused on supporting all parents, regardless of whether they have cars or not, on the topic of keeping children safe in vehicles
- **Partnerships are critical** in effectively addressing the challenge for greater law enforcement
- **Law enforcement** need not only be the duty of officials. It should be the duty of all road users
- Promotion of the notion that **all citizens share responsibility** for ensuring the safety of children
- **Schools have a role to play** in checking and enforcing safety regulations among scholar transporters
- Crèches, Early Childhood Development centres and various other institutions, such as automobile associations and car manufacturers, can be **co-opted as partners** to promote and enforce the use of car seats and the general road safety practice.





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