

Low Speed Vehicle Run-over Prevention Strategy



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Low Speed Vehicle Run-over Prevention Strategy

Challenge / Need

Low speed vehicle run-overs (LSVRO) have been highlighted as a significant health issue in Australia since the 1990s and continue to be a significant cause of injury and death amongst children.

On average, each year in Victoria there are 41 children (0-14 years) killed or injured in a low-speed vehicle run-over incident.

These statistics are more than just numbers, they represent everyday families whose children have died or been injured. The psychological impact that LSVRO have on the families and communities involved is immeasurable – their lives are forever changed and impacted.

Actions



Focus area 1: Vehicle safety

Short – medium term:
Encourage industries to develop affordable retrofitting of key safety technology and promote public adoption of retrofitting existing safety technologies.

Long term:
Develop a safe family car category in collaboration with the Australasian New Car Assessment Program (ANCAP) and Used Car Safety Ratings (UCSR).



Focus area 2: Property design

Short term:
Develop a LSVRO safety checklist for parents and carers.

Medium – long term:
Develop guidelines to improve the design of driveways which are embedded in planning permits.



Focus area 3: Public education

Short term:
Update public education campaign messaging to raise awareness of the risks of LSVROs and practical measures that can be employed to improve safety.

Long term:
Implement statewide, always on communications where parents and carers are.



Focus area 4: Data collection and reporting

Ongoing: Conduct regular research and reporting.

Outcomes and impact

OUTCOMES

- ✓ Increased awareness of LSVRO incidents.
- ✓ Improved vehicle and property safety standards, legislation and policy.
- ✓ Enhanced vehicle and property industry safety practices and technology.
- ✓ Improved parent, carer and community safety behaviours.

IMPACT

- ✓ Decrease in children dying and being injured due to LSVRO in Victoria.

“Communication messages need to reinforce that a driveway is inherently risky, and not a safe place for a child to play.”

Measures

➤ Reach and engagement with public education and awareness campaigns and messaging.

➤ The development and progression of collaborations and guidelines.

➤ Uptake of driveway safety practices amongst the Victorian community.

➤ The number of childhood deaths and injuries due to LSVRO incidents.

About the Strategy

This strategy has been developed to address the issue of low-speed vehicle run-overs and reduce the number of child deaths and injuries in Victoria.

The strategy provides a background into low speed vehicle run-over (LSVRO) incidents – including the frequency and circumstances which they occur – identifies key risk factors, and establishes a framework for the development and implementation of driveway safety initiatives including advocacy, awareness raising and education.

The development of the strategy was supported by the TAC Road Safety Grant Program and informed in consultation with a number of stakeholders including the

Coroners Court of Victoria, Victoria Police, Department of Transport and Planning, Municipal Association of Victoria – Maternal and Child Health, Department of Health, TAC, Safer Care Victoria, RACV, Australasian New Car Assessment Program (ANCAP), Delta-V Experts, Talk Torque Automotive, Metricon, AHB Group (Royston Homes and Sherridon Homes), Australian Institute of Architects and Safe System Solutions.

We would also like to acknowledge the families—Emma and Peter, Mel, Eve, Jayde and Brendan—who contributed to the development of this strategy and generously agreed to share their stories. We are deeply grateful for their time and courage in helping shape this important work.



On average, each year in Victoria there are 41 children killed or injured in a low-speed vehicle run-over incident.

What we know about LSVRO incidents

LSVROs – particularly in driveways and car parks have been highlighted as a significant health issue in Australia since the 1990s, and continue to be a significant cause of injury and death amongst children.

On average, each year in Victoria there are 41 children (0-14 years) killed or injured in a driveway run-over incident (2 deaths and 39 hospital treated injuries per year).

Research has shown that there has been a reduction in hospitalised injuries from LSVROs in Victoria over the last decade. However, it is concerning that the number of deaths has not reduced. In 2023 there was a spike in LSVRO deaths in Victoria, with 6 children tragically losing their lives.

How do these incidents occur and who is most at risk?

Of the 25 deaths caused by LSVROs in Victoria from 2012 to 2023, the majority occurred in household driveways, carparks, or caravan parks:



Children aged 1-5 years of age were the most common age group involved



Incidents occurred in both metropolitan (52%) and regional areas (48%)



72% of incidents occurred when the vehicle was travelling in the forward direction



A range of vehicles including sedans, utilities, SUVs and vans were involved, with larger vehicles (e.g. SUV's and large utilities) overrepresented



At the time of the incident, the driver was most commonly returning home, repositioning the vehicle, or leaving the home

Lived experiences

These statistics are more than just numbers, they represent everyday families whose children have died or been injured. The psychological impact that driveway run-over incidents have on the families and communities involved is immeasurable – their lives are forever changed and impacted.

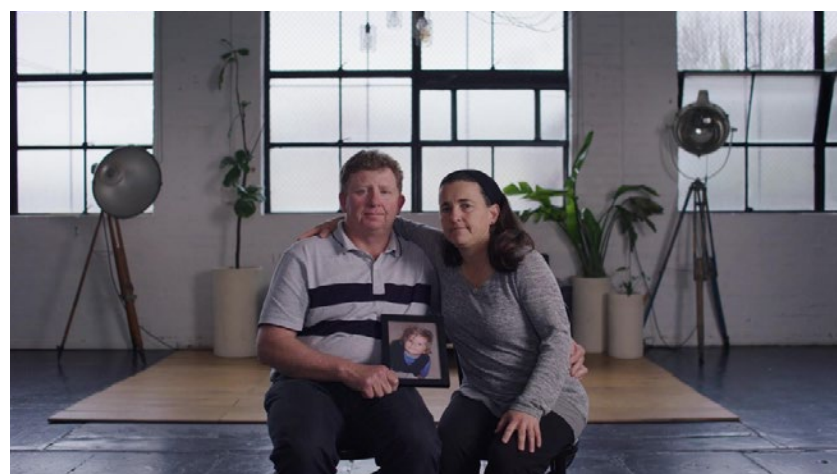
The families below have bravely shared their stories in the hope that nobody else has to go through what they are.

Georgina

April 16, 2011, was just like any other Saturday until Emma and Peter's lives changed in a single moment.

"I reversed my ute and tool trailer into the garage. Unfortunately, I didn't realise Georgina had got into the garage. I felt this bump, and I don't think I've ever moved so quickly to jump out of the car, and I ran out there and there's my little girl. Your world just turns upside down."

Peter, Georgina's Dad.



[!\[\]\(17413706fd4997a1a4bdf85c6864eee1_img.jpg\) Learn more about Emma, Peter and Georgina's story](#)

Pippa

Pippa tragically died in a driveway run-over incident at home in December 2012.

"I jumped up instantly and ran straight to her whilst the vehicle inched forward. Pippa was standing right in front of the truck. There was no way he could have seen her."

Eve, Pippa's Mum.



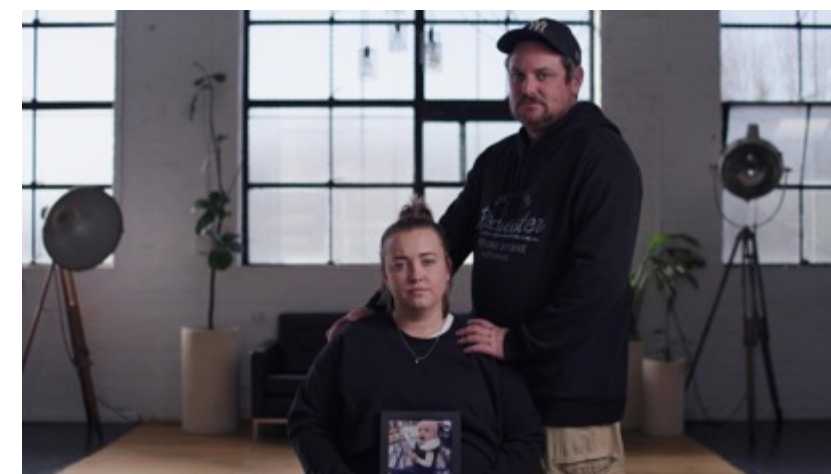
[!\[\]\(b4eeff342f60cc7bcd67d869b4fedca2_img.jpg\) Learn more about Eve and Pippa's story](#)

Seth

Seth tragically died in a driveway run-over incident at home in 2019.

"I knew straight away something had happened. I ran to the back of the car and saw his little red bucket under the car. It didn't feel real. I was so numb to it all. Don't think it can't happen to you because I was so conscious of driveway safety and it still happened to me. It changed my life forever."

Jayde, Seth's Mum.



[!\[\]\(5a351309c3b87e4420622c1f0e57efc0_img.jpg\) Learn more about Jayde, Brendon and Seth's story](#)

Sierra

Sierra was injured in a driveway run-over incident at a regional property in 2010.

Sierra was lucky to survive – she was rushed to hospital where it was revealed she had suffered internal bleeding, a laceration to her spleen, a punctured lung and fractured pelvis.

"I just remember looking at her face, and she had so much fear in her eyes."

Mel, Sierra's Mum.



[!\[\]\(241407ae374027aec4b030ca93d07b05_img.jpg\) Learn more about Mel and Sierra's story](#)

Strategic focus areas

Research has identified three key factors involved in driveway run-over incidents – vehicle design, property design and human factors. This strategy is centred around these focus areas, with a recognition that action is required across all three to effectively reduce the number of child deaths and injuries.

All vehicles have large blind spots in front and behind them.



Vehicle design

All vehicles have large blind spots in front and behind them, which can make it hard for a driver to see a child. Technologies such as Autonomous Emergency Braking (AEB), reversing sensors and cameras can help, however not all vehicles have these, and they can't be relied upon on their own to keep children safe. While AEB can't be cost effectively retrofitted to older vehicles at this stage, its effectiveness in preventing collisions highlights its importance in future vehicle safety.



Property and driveway design

Property design can both positively and negatively influence driveway run-over risk levels, including factors such as accessibility to the driveway or garage from the home or playspaces, and visibility around the driveway.



Public education

Human factors include awareness and perception of the hazards that driveways can pose for children, the uptake and implementation of safety practices such as supervision, children's small size which makes them harder for drivers to see, and their behaviour – including that they are mobile, inquisitive and don't understand the dangers that vehicles can pose.

Levers for change

There are a range of initiatives which can be employed to facilitate change across the three strategic focus areas, including the development and implementation of:

- › Innovation and technology
- › Standards, legislation, policies and guidelines
- › Community education programs and awareness campaigns
- › Data analysis and research



Action Plan

How together, we can reduce the number of deaths and injuries and improve driveway safety in Victoria.



Focus area: Vehicle Safety Helping families to choose safer vehicles

Action: Develop a safe family car category in collaboration with the Australasian New Car Assessment Program (ANCAP) and Used Car Safety Ratings (UCSR).

ANCAP and UCSR both play a pivotal role in informing consumers of the difference in safety performance of new and used vehicles, assisting them to make safer choices. While both rating programs do consider vehicle safety technologies relevant to driveway safety, more prominence could be given to the benefits of these for families.

Many parents purchase a new vehicle in early stages of pregnancy, when planning a family, or when their family grows. Providing parents with information that helps them select a safe vehicle not only for when their children are occupants, but also for when they are around the vehicle, can help improve their overall safety as well as reduce the risk of driveway run-overs.

A family car category would include aspects of vehicle safety that reduce the risk of driveway run-overs, as well as occupant protection features.

It would need to consider Autonomous Emergency Braking (AEB), both forward and reversing technology and visibility, along with other new and emerging safety features.

Action: Engage with manufacturers and other key stakeholders to investigate, develop and implement affordable, life saving technology that can be retrofitted to older vehicles in the next 5 years.

There have been significant advances in options such as reversing technology, which is now widely available on newer vehicles. However, the average age of registered vehicles in Victoria is 11.2 years (BITRE 2024), and many people are driving cars which are much older and do not include this or other key safety features. Industry should be engaged to develop and offer options for affordable retrofitting of key safety technology – such as [Daihatsu's initiative](#) in Japan in 2018 (Daihatsu 2018) – complemented by communication messages encouraging uptake from parents and carers.





Focus area: Property and driveway design

Creating safer driveways

Action: Develop guidelines to improve the design of driveways.

Research has shown that there are driveway design factors which can both increase and reduce the risk of run-over incidents.

Improving driveway safety at a design level is a longer-term initiative that can be explored further through technical design workshops involving urban planners, architects, developers and builders.

There are examples of initiatives from both Australia and overseas which should be used as the basis for the development of driveway design guidelines, including:

- **'A guide to driveway safety for property owners'** – developed in New Zealand, this document provides property owners with general guidance on making driveways at their properties safer to reduce the risk of young children being run-over.
- **'Smart Housing'** – an initiative of the Queensland Department of Housing which provided guidelines on safe and secure house design, and included information about making driveways safer.

Action: Develop a driveway safety checklist for parents and carers.

Our engagement with parents has identified key barriers to them implementing safety changes to their driveways – including seeing the changes as being outside of their control or too difficult to make – which highlights the need for a resource which provides practical advice about achievable changes which can be made, and how these will help to reduce the risk of driveway run-overs.

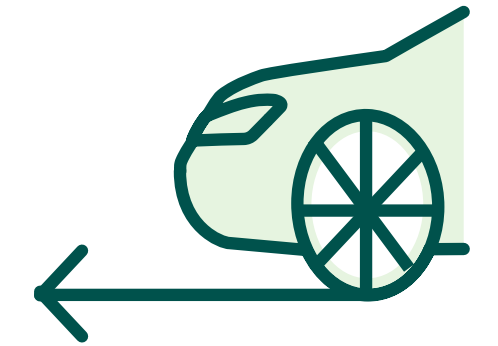
This checklist can be used by parents and carers to assess the physical aspects of their driveway, identify potential hazards, and recommend practical changes to be made to their existing driveway environment to improve safety. The checklist should include a focus on key areas including access to the driveway from playspaces and sightlines in the driveway, while providing practical solutions for those who own their own home and those who rent.





Focus area: Public Education

Empowering the Victorian community to address driveway hazards and prevent run-over incidents



“72% of LSVRO deaths in Victoria occurred when the vehicle was travelling in a forward direction.”

Action: Update public education campaign messaging to raise awareness of the risks of driveways and practical measures that can be employed to improve driveway safety.

Every year in Victoria there are approximately 78,000 births, which means that there is a constant audience of new parents, grandparents and carers. There is a need for an ongoing education campaign to empower these populations to take effective preventative measures in their homes. Key areas that the public education campaign should focus on include:

“Supervise children around driveways and carparks, eliminating distractions.”

Simple messaging that is relatable and suitable for different properties and driveways

Parents and carers never believe that this will happen to them and feel that they are keeping their children safe. For parents and carers to connect to a campaign, it needs to be relatable with everyday stories and situations. Messaging also needs to be applicable to different property types, including properties in metropolitan and regional areas.

Advice and tips for parents and carers to reduce the risk of run-over incidents should include:

- Knowing where children are before moving a vehicle
- Actively supervising children around driveways and carparks, eliminating distractions
- Having a safe place to stand while vehicles are moving
- Knowing your vehicle's blind spots

A focus on incidents that occur when a vehicle is moving in a forward direction as well as those when reversing

Earlier Australian data showed that the majority of low speed vehicle run-over incidents occurred when the vehicle was reversing, and as such reversing visibility has been the primary focus of previous safety campaigns. With the most recent data revealing that 72% of LSVRO deaths in Victoria occurred when the vehicle was travelling in a forward direction, future campaigns must focus on messaging that raises the awareness of incidents occurring while travelling forward, with imagery used to depict that blind spots are all around the vehicle. Messaging should also include that incidents can occur when arriving home, leaving home and re-positioning the vehicle on the property.



Focus area: Public Education

Empowering the Victorian community to address driveway hazards and prevent run-over incidents

Highlighting that driveways are dangerous places for children

Driveways are a part of a family home, where people generally feel safe and secure. While many parents and carers practice driveway safety initiatives, it is also common practice for children to play in driveways, with some children doing so unsupervised.

Communication messages need to reinforce that a driveway is inherently risky, and not a safe place for a child to play. It should also be communicated that a driveway is a small road, and that the risks and driver responsibilities are the same.

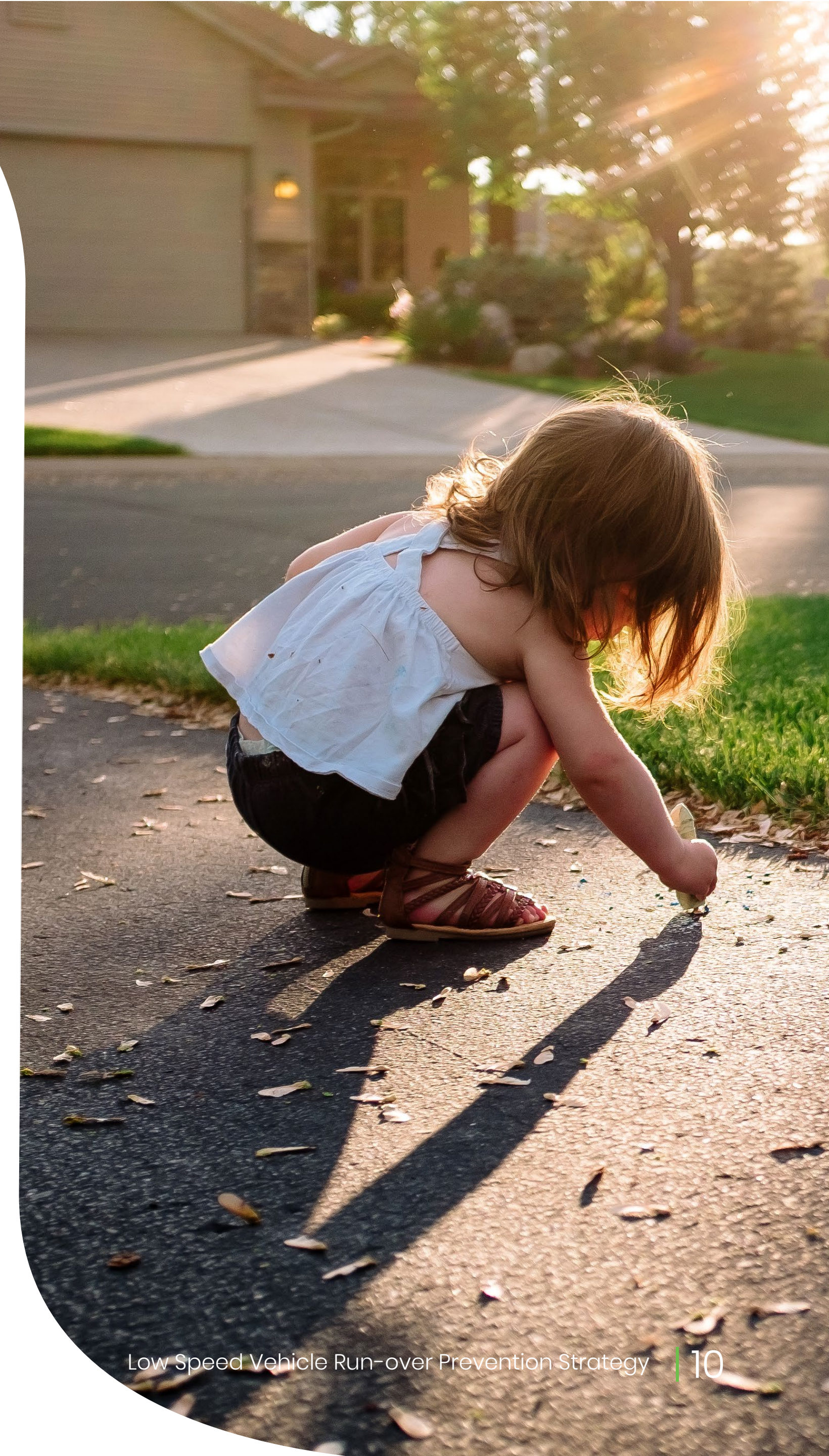
“Communication messages need to reinforce that a driveway is inherently risky, and not a safe place for a child to play.”

Vehicle safety and property and driveway design actions

Parents can be empowered to take practical actions to improve the safety of their driveway and their vehicle.

Communication messages need to include information on how to choose a safe family vehicle, technology to look for when purchasing a vehicle, and encouraging retrofitting reversing technology on older vehicles (See Focus Area: Vehicle Safety).

Communication messages should also include reference to the driveway safety checklist which will be developed as part of this Strategy (see Focus Area: Property and Driveway Design).





Focus area: Public Education **Empowering the Victorian community** **to address driveway hazards and** **prevent run-over incidents**

Action: Implement statewide, always on **communications where parents and carers are.**

Coordinating simple, repeated messages through consistent channels – including Maternal and Child Health services – will more effectively grow awareness of LSVRO in the community.

To effectively raise awareness of the dangers that driveways can pose and practical measures which parents and carers can employ to reduce the risk, it's important that public education and awareness campaigns are statewide, ongoing, promoted through various channels to reinforce the message, and that they are delivered in places where parents and carers are.

“Coordinating simple, repeated messages
through consistent channels.”





Focus area: Data collection and reporting

Measuring success and informing messaging

Action: Conduct regular research and reporting on driveway run-over deaths and injuries.

In order to measure the effectiveness of preventative measures, regular data analysis of deaths and injuries needs to be conducted. This will also allow for a greater understanding of the factors involved in driveway run-over incidents which can help shape future campaigns and messaging.

“Regular data analysis of deaths and injuries needs to be conducted.”



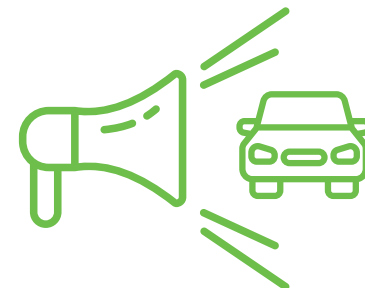
Measuring success

Ongoing evaluation and monitoring will assist in measuring the performance and success of the strategy and action plan in achieving the goal of reducing childhood deaths and injuries due to driveway run-over incidents in Victoria.

Key indicators which will be utilised to track the performance and success of the strategy include:



The number of childhood deaths and injuries due to driveway run-over incidents.



Reach and engagement with public education and awareness campaigns and messaging.



Uptake of driveway safety practices amongst the Victorian community.



The development and progression of collaborations and guidelines.



Kidsafe Victoria
info@kidsafevic.com.au,
www.kidsafevic.com.au

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