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# STREETS FOR LIFE

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SAFE AND HEALTHY  
JOURNEYS FOR THE  
CHILDREN OF LATIN  
AMERICA AND THE  
CARIBBEAN

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# INTRODUCTION



Like many others, Nancy Rodriguez's family has suffered as a result of road traffic injury.

Life in the low-income neighborhood of Kennedy in Bogotá, Colombia was never easy for the Rodriguez family. A 37-year-old single mother of two, Nancy Rodriguez rarely has the chance to say good morning to her 19-year-old son as she leaves for work as a garage assistant, and he returns from the overnight shift washing city buses.

Education is the only way out of poverty. Her 17-year-old daughter, Laura Gabriela, attends a vocational school. Each day, she walks to school with her friends. One day, tragedy struck just two blocks from school, when she crossed a two-way street intersection with heavy traffic. A bus hit her – and then ran over her again. She was dragged under the rear tires as it sped away. Mrs. Rodriguez has seen the footage of her daughter’s hip, right femur, and pelvis crumpling under the impact.

There were no speed humps, zebra crossings, or school zone signs to protect her. The lone stop sign is visible only to drivers going in one direction. Sidewalks are narrow and often non-existent.

Laura Gabriela spent days in the hospital undergoing surgery, and now faces an indefinite amount of recovery time. To care for her daughter, Mrs. Rodriguez had to quit her job, leaving her without income. Since she was informally employed, she received no leave or layoff compensation. The household now relies on the salary of her son, and support from her sister and brother-in-law.

Mrs. Rodriguez is most concerned with her daughter’s recovery. Doctors fear she may never have full mobility of her lower limbs. “Laura loved sports and was on her school’s kickboxing squad. That’s been the hardest part. I’m hoping to see my daughter kick again,” she says.

Laura Gabriela is not alone. In Kennedy, Bogotá’s most populated precinct, more people walk and use public transport than in affluent areas of town. In 2016, almost one pedestrian was killed weekly, another 559 were injured. The media labeled it a ‘pedestrian tragedy’<sup>1</sup>.

This story is repeated time and again across Latin America and the Caribbean. Families and children strive for a better life and barely pull themselves out of poverty, only to be dragged back down when tragedy strikes on the roads.

Children and adolescents are at risk on their journey to and from school. Millions of working, lower income families are exposed to unsafe, high speed roads which have no protection. Overcrowded minibuses and unsafe motorcycles are often the most affordable transport option. Particularly for those on motorcycles, protection is often non-existent, as many countries fail to enforce helmet laws or do not have them.

With growing populations and motorization, the region is becoming increasingly urbanized and developed. Yet policy makers neglect their responsibility to protect the most marginalized, vulnerable members of society. Those most in need of access to basic services, employment, and education are protected least, and forced to resort to unsafe transportation. As children grow up and become more mobile and independent, they walk or take transport to school. Poorer families suffer a double impact, exposed to dangerous traffic and related toxic air pollution. Failing to provide safety and ensure the health of children and young people is a violation of their rights.

By neglecting the safety of young people, policy makers and planners allow tragedy to occur on our roads, leaving families and victims like Laura Gabriela devastated. The lack of an adequate policy response means that road traffic injuries are the leading killer of children and youth from ages five to 14<sup>2</sup> in the region and a burden on families – a significant threat to health and sustainable development.

This is a major challenge for the Sustainable Development Goal (SDG) agenda in the region. The SDGs have an action plan for child and adolescent health, the multi-billion dollar Every Woman, Every Child (EWEC) global strategy, which includes the Latin America and the Caribbean region<sup>3</sup>. It explicitly acknowledges the burden of road traffic on young people – yet it fails to galvanize action or route funding to this issue, as it has for others.

There is no excuse not to implement the solutions. Policy makers at all levels must protect our children by delivering on their commitments: the Convention on the Rights of the Child; the SDGs; and the New Urban Agenda which prioritizes safe and healthy journeys to school for every child. They must address the biggest threats to children and adolescents, including the burdens arising from road traffic, within global, regional and national strategies to achieve these agendas. They must implement cost-effective global best practices on road traffic injury prevention. The solutions exist. But the political will, prioritization and funding do not.

This is a central concern of the Child Health Initiative convened by the FIA Foundation. Safe system solutions, such as the ‘speed vaccine’ – low speed zones to protect children where they live, learn, and play – must be implemented across the region, without exception. Policy leaders must recognize that every child has the right to health and a safe environment. They must fulfil their obligation to protect our children.

This report calls for region-wide action and global support to end the preventable epidemic that destroying our children’s lives. It presents the solutions, that we can, and must use to protect our future – our children.

# KEY MESSAGES





In Latin America and the Caribbean, school-age children and adolescents are falling victim to unsafe roads and poor air quality. Those in low-income areas are most at risk.

- Road traffic injury is the leading cause of death for children ages five to 14. For adolescents 15 and over, it is the second leading cause of death behind interpersonal violence. Nearly 50 children are killed on the region's roads every day.
- The highest rate of motorization and inequality in the developing world leaves younger children in low-income neighborhoods particularly vulnerable. In many countries across the region, more children are killed as pedestrians than as passengers or cyclists.
- Along with pedestrians, motorcyclists are often at risk. Young people and working families are using motorcycles more often, but injury and fatality rates are increasing. Authorities should address growing trends in mobility, particularly motorcycle use and must protect the vulnerable.
- Especially in cities, where 80% of the population resides, and in deprived areas, road traffic poses both visible and invisible threats - injury, fatality, and dangerously high levels of toxic air pollution. Across Latin America about 100 million children live in areas that exceed limits for PM2.5, particulate matter which penetrates deep into lungs and causes permanent damage. The poorest children breathe the dirtiest air, plagued by health consequences.

It does not have to be this way. The solutions exist.

- When urban policy and design prioritizes people over cars, lives are saved. Cities that implement policies to protect vulnerable road users see success, but these examples are rare and must be scaled up. Street and city design resources featured in this report can help replicate these efforts.
- We must stop blaming the victim - blaming children for being children. Speed kills children. With a focus on speed management, the Vision Zero approach that includes a safe system for children, works. Vision Zero for Youth is gaining traction in North America and must be promoted regionally and globally. In particular, Mexico City is demonstrating its applicability and effectiveness.
- School zones are an important place to start, serving as a hub for the community and a catalyst for change. The school journey - the most important journey a child takes every day

must become the focus for collective efforts to implement the safe system approach to protect children on the roads.

We must urgently implement solutions. They must be integrated into child health and development policies region-wide.

- Governments and cities must deliver on their New Urban Agenda commitment to safe and healthy journeys to school. While the burden of road traffic injuries on children is recognized in the implementation of the SDGs,<sup>4</sup> governments and the development community must take immediate action.
- Governments, donors and leading agencies tasked with addressing child and adolescent health must commit to a funded regional action plan to address the burden of road traffic on youth. This must feed into the SDG Global Strategy for Women's Children's and Adolescent Health<sup>1</sup>.
- At its core, this action plan must include solutions to protect children on the roads - Vision Zero for Youth and the safe system approach for children.
- At a national and city level, we call upon leaders to respond to emerging public health threats to youth such as road traffic injury, air pollution, and resulting non-communicable diseases. Measures to safeguard children from toxic vehicle emissions should be adopted and integrated into urban policy.
- These efforts at regional, national and city level must be complemented by significant donor investment from the public and private sector and development banks.



BOX 1:

# A VOICE FOR THE FUTURE



Shelly-Ann Fraser-Pryce (above centre) is a double Olympic Champion, a Goodwill Ambassador for UNICEF Jamaica and advocate for the Child Health Initiative.

In my work with UNICEF in Jamaica, I have become increasingly aware of how important it is to uphold the rights of our children. I'm privileged to be able to use my voice to make sure children are protected everywhere. I want the kids growing up today to benefit from the same opportunities I had.

To achieve this, we need to focus on the rights of our children beyond the classroom as well as within the school gates. It's vital that we start with the journey to school. The biggest killer that school-age children face worldwide is road traffic injury. This is a huge and unacceptable burden for children in our region. Each day millions of children across Latin America and the Caribbean make that most important journey – the journey to school. Far too many are exposed to severe danger, facing traffic moving at life-threatening speed, with no footpaths or safe crossings. On top of this, many children in our cities are forced to breathe toxic air. Our kids are simply trying to go to school and we are failing in our duty to keep them safe and healthy.

I remember my own journey to school, it was such an important part of growing up. I lived in the inner-city community of Waterhouse, in Jamaica's capital. It was clear that my journey to school and back home was traumatic for my mom. Each day she would wait for me at the bus stop on Spanish Town Road and walk me safely home. Now that I'm a mother I understand this feeling, I want to do everything I can to protect my son, Zyon.

I know how lucky I was to be given the protection I needed so that I could grow up safely, become independent and thrive. Now I call for action for the children of my country, of our region and the world. We cannot stand by and allow them to face threats and danger when all they are doing is trying to go to school. We must do everything we can to keep them safe and uphold their rights on their most important daily journey.

**Olympic Champion Shelly-Ann Fraser-Pryce**

## Children and road traffic: calling for SDG Action

The UN Secretary General's global strategy for Women's, Children's and Adolescents' Health aims to achieve the sustainable development agenda for young people worldwide. The strategy is supported by the cross-sectoral Every Woman, Every Child (EWEC) movement which includes major development agencies, donors, governments, the private sector and NGOs. The regional arm for Latin America and the Caribbean is EWEC-LAC.

The EWEC Global Strategy for the SDGs builds on the focus of the Millennium Development Goals, continuing collaborative responses to leading global killers of mothers, new-borns and the children under age five, as well as major communicable diseases.

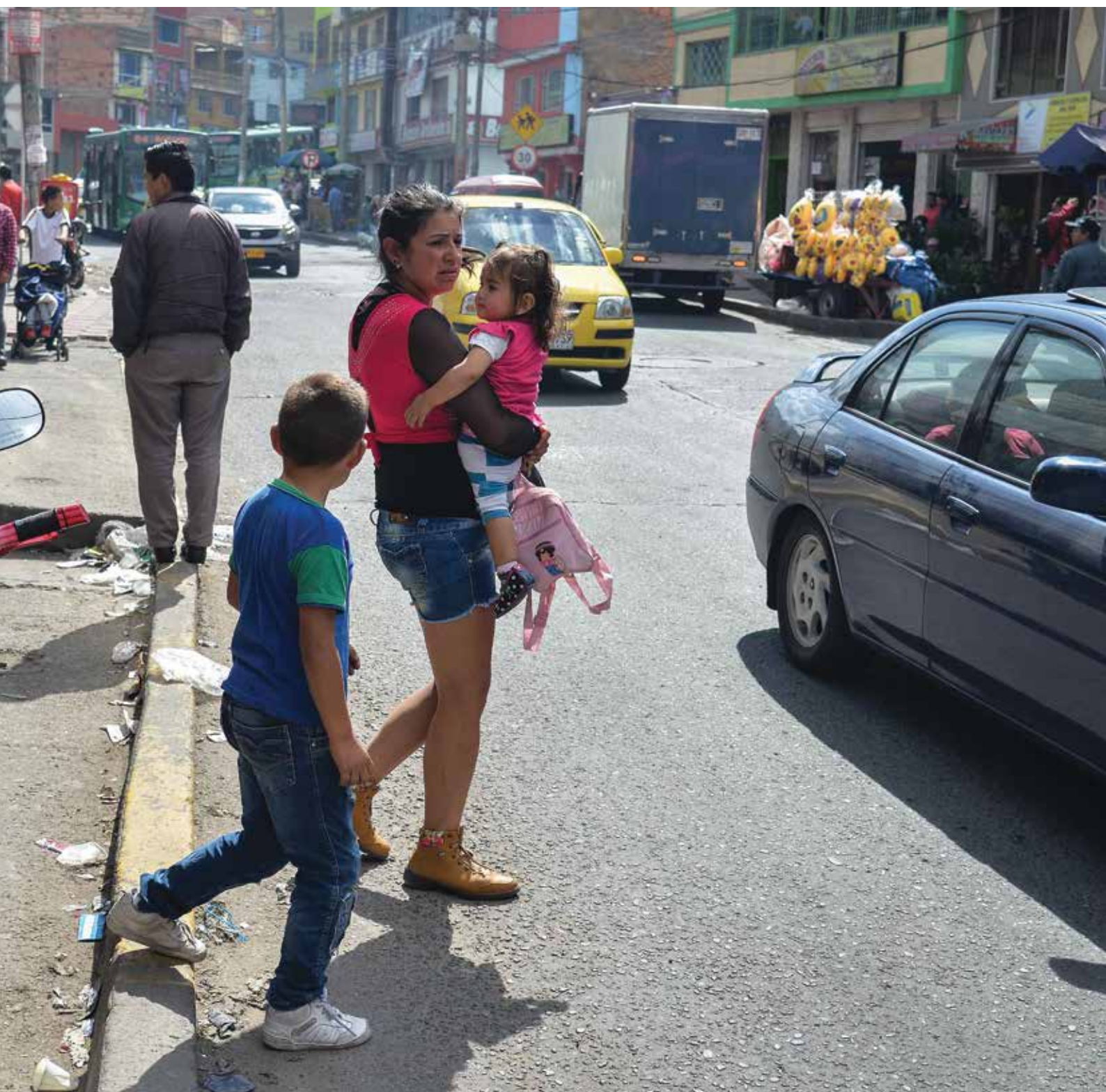
Its focus is also expanded to include new issues, including non-communicable diseases, air pollution

and - the leading global cause of death for adolescents - road traffic injury. It is supported by the World Bank-hosted Global Financing Facility Trust Fund which unlocks and redirects national budgets towards child and adolescent health<sup>5</sup>. Billions of dollars have been pledged by countries to achieve their own health goals. However, little of this funding and effort has been allocated to improving air quality, and none to preventing road traffic injury.

The Child Health Initiative has called for this to change. It proposed a UN Summit to mobilize high-level global political commitment to fight these emerging health burdens, scaled-up action, and increased funding<sup>6</sup>. This must include a regional component. EWEC-LAC should collaborate with the initiative in advocacy for a funded action plan integrating the UN New Urban Agenda priority of safe and healthy journeys to school, Vision Zero for Youth and the safe system approach, outlined in this report. This framework should galvanise government and city policy responses and encourage donor support to address one of the region's biggest health burdens on children and adolescents.



# YOUNG AND AT RISK



## SUMMARY:

- Rapid urbanization and motorization has led to negative impacts on health and development in the region.
- As income increases for young people, they travel more and are at high risk of road traffic injuries.
- Low-income individuals are most affected, signaling an urgent need to protect the vulnerable.

For the region's younger children ages five to 14-years-old, roads are the number one killer, accounting for 14.22% of deaths. They are the second leading cause of death for youth ages 15-19, and fourth leading cause of death for those ages one to four<sup>9</sup>.

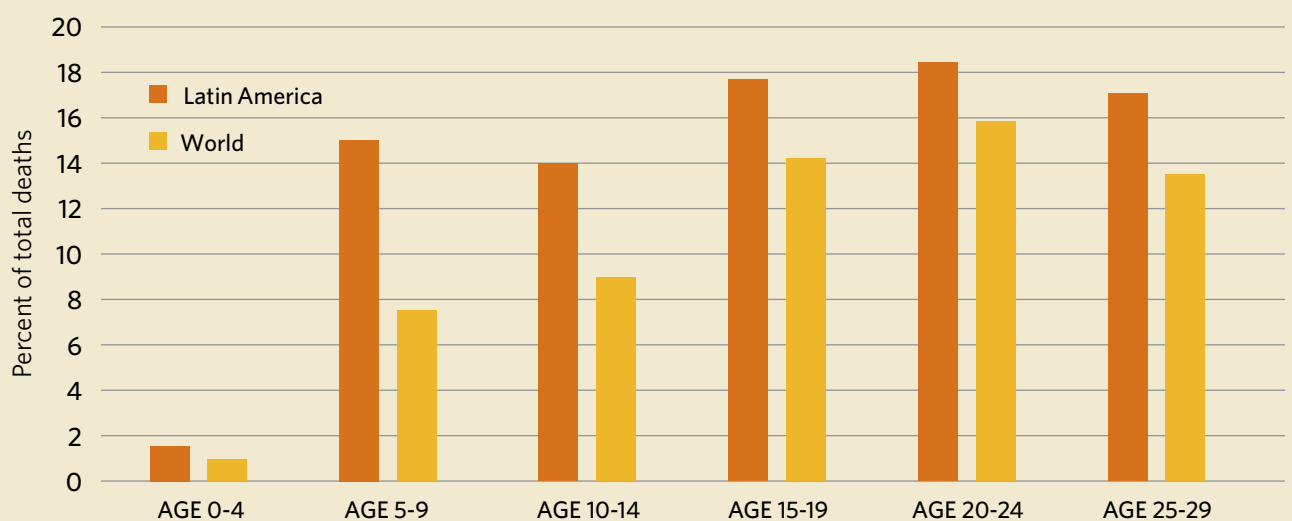
About 20,000 children die on the region's roads each year<sup>10</sup>. That's 46 children per day, the equivalent of two or more classrooms disappearing. Countless more are permanently injured, with road traffic crashes as the leading cause of child disability related to injury<sup>11</sup>.

Almost half of the population of Latin America and the Caribbean is under age 24<sup>7ii</sup>. For those ages five to 14, the road traffic fatality rate is almost double the global average<sup>8iii</sup>. Policy makers are failing to provide them with safe roads, a vital connection to school and work.

Particularly in low-income families, young people contribute to household income. Injuries due to dangerous roads and chronic illnesses due to air pollution prevent them from going to school and getting the education necessary to climb out of poverty, or cut their lives short. Their families are left destitute.



**FIGURE 1: CHILD ROAD TRAFFIC DEATH RATE**

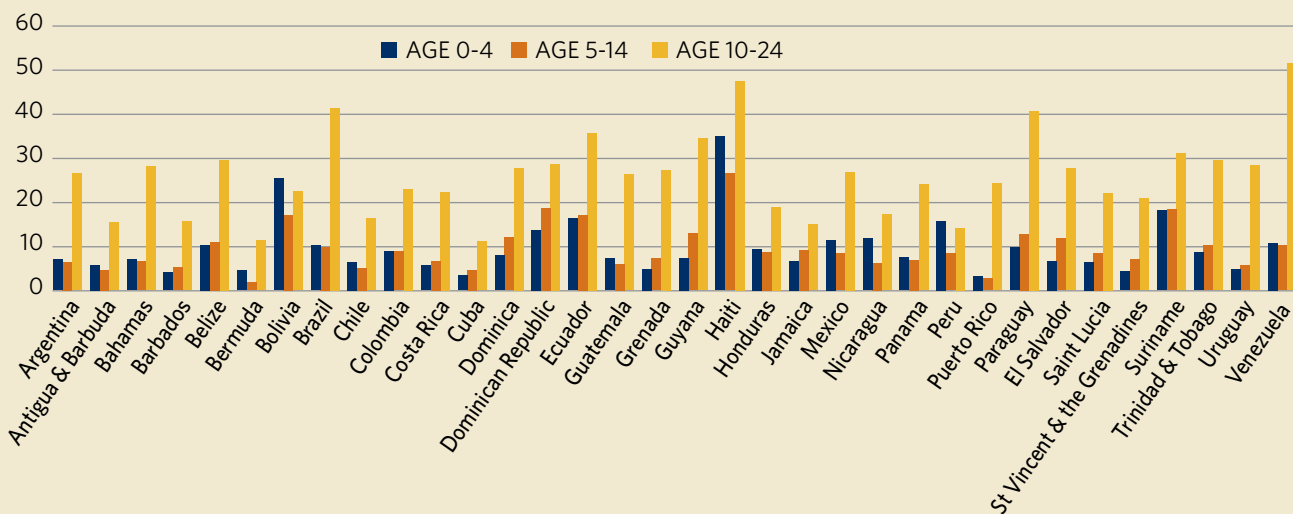


Source: (2016) Global Burden of Disease, Institute for Health Metrics and Evaluation

Many of these injuries and fatalities occur on their way to school. The poorest children generally walk, those of modest means ride motorcycles, and those from higher income families take buses, taxis, or private vehicles. Those who are killed on roads below the age of 14 are most often pedestrians<sup>12</sup>. The trends differ among countries: In Colombia, most

children who die before age 14 are pedestrians, but from age 15-17, fatality rates are drastically highest among those on motorcycles<sup>13</sup>. In Uruguay, most children who die before age 12 are pedestrians. For those between age 12-17, deaths are highest among motorcyclists, followed by pedestrians<sup>14</sup>. In Chile and Argentina, most children die as car passengers<sup>15,16</sup>.

**FIGURE 2: DEATH RATE OF CHILDREN BY AGE GROUP ACROSS LATIN AMERICAN AND CARIBBEAN COUNTRIES**



Source: (2016) Global Burden of Disease, Institute for Health Metrics and Evaluation

Death rates vary across different parts of the Latin American and Caribbean region. On average, they are highest in the Andean region, and lowest in the Non-Latin Caribbean and Central America.



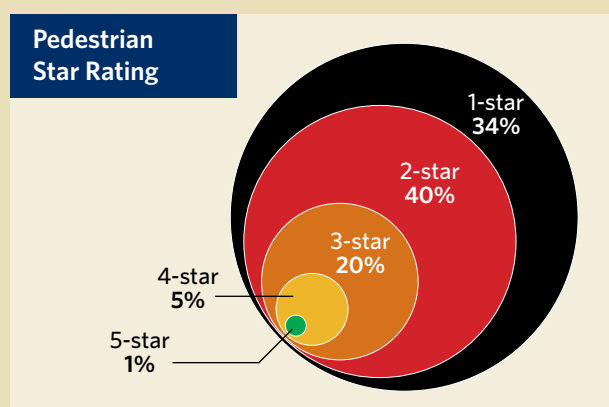
BOX 2

# INTERNATIONAL ROAD ASSESSMENT PROGRAM

Unsafe roads are killing children and youth, particularly those who are low-income and have no alternative to walking. To better understand the risks that roads pose to pedestrians, the International Road Assessment Program (iRAP) assessed 135,000km of roads in Latin America and the Caribbean using a one (least safe) to five (safest) star rating.

The key findings below represent approximately 6,000km of assessed roads with pedestrians present, across Argentina, Barbados, Belize, Brazil, Cayman Islands, Chile, Colombia, Dominican Republic, El Salvador, Haiti, Mexico, Peru and Uruguay:

- **74%** of the roads assessed meet a one or two star standard for pedestrians. Only **26%** are three star or better for pedestrians.
- **68%** of roads with pedestrians, and speeds at or over 40 km/h have no formal sidewalks.
- **88%** of roads with pedestrians and speeds at or over 40 km/h have no pedestrian crossing facilities.



Sidewalks	%
None	60%
Informal path	8%
Non-physical separation	32%
Physical barrier	0.3%

The most vulnerable road users are the least protected – a trend iRAP has documented all over the world. Find out more at [irap.org](http://irap.org).



## Air pollution: Invisible killers

Millions of children suffer from not only the visible killers on our roads, but the invisible ones too. Dirty vehicle emissions contribute to air pollution, the fourth leading cause of death globally<sup>17</sup> and a serious public health issue for children. About 100 million children in Latin America live in areas that exceed limits for fine particulate matter (PM2.5) which penetrates deep into lungs and causes permanent damage<sup>18 19</sup>.

Emissions and dangerous roads are concentrated in cities, which are becoming increasingly populated. The region is the second most urbanized globally with over 80% of the population living in urban areas and nearly half living in cities of over 200,000<sup>20</sup>. Since the 1960s, cities have been growing in rapidly and chaotically with large sprawling slums and suburbs.

This created an immense need for public transportation. For example, the establishment of Bus Rapid Transit (BRT) and an extensive cycle network has been successful in cities such as Bogotá. Nonetheless, public transportation options are often nonexistent or inefficient.

Coupled with urbanization and economic growth, more people have both the need and the means to buy cars and motorcycles<sup>21</sup>. Congestion results - the number of vehicles in the region almost doubled between 2005-2015 - and

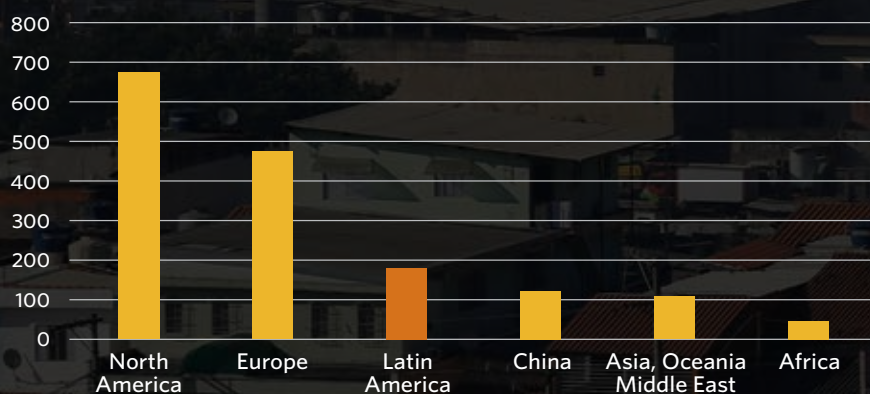
in many countries, including Bolivia, Guatemala and Panama, the number of vehicles increased by more than 100% in a decade. Mexico City is the most congested city in the world<sup>22</sup>.

With this comes air pollution and the health implications are clear. As air pollution increases, so does children's risk of mortality from cardiovascular and respiratory conditions such as asthma<sup>23</sup>. Damage is long-term, as their immune system and lungs are not fully developed.

One way to reduce emissions is to introduce and enforce the highest vehicle emissions standards. However, across Latin America and the Caribbean, several countries have yet to introduce such world-class regulations. Vehicle emissions standards are often based on, or similar to, the European system. It ranges from Euro 1 to the current and latest standard, Euro 6. Comparing the region's countries to the European system provides a reliable indication of progress in introducing clean vehicle policies.

Andean and Central American countries tend to have lower vehicle emissions standards, although these are improving. Sulphur levels are generally high - meaning that particle filters are not effective. The largest markets with the most cars, Brazil and Mexico, have the most developed vehicle emissions standards and policies, but levels of motorization are increasing rapidly in many other countries that are still developing policies.

FIGURE 3: MOTORIZATION RATE



Latin America has the highest rate of motorization in the developing world, but still is below Europe and North America. There is room to grow, creating potential for increased risk if it is not coupled with safe infrastructure to protect the population.

Source: OICA, 2017



## The combined threats from road traffic

Daily, the region's medical experts witness the devastating combined health effects of road traffic upon children. Frustrated with a lack of policy and leadership to prevent these burdens, they have become child health champions.

As a child in São Paulo, Dr. Paulo Saldiva suffered from asthma. He blames air pollution, responsible for the deaths of nearly two million children under age five around the world<sup>24</sup>.

Now a pathologist at São Paulo University in Brazil, he says: "The cloud of pollution over the city is not evenly distributed. Socioeconomic conditions make some more vulnerable than others. Less privileged areas of the city have air pollution levels that are six times higher than in more affluent areas."

Those without other risk factors like obesity and diabetes still exhibit fatal health consequences of air pollution. "If you go to the emergency wards and autopsy rooms, you will see black spots of carbon in the lungs of people who didn't smoke," Dr. Saldiva says.

São Paulo has tried to combat its air pollution issue. Despite opposition, the Mayor implemented bike lanes to reduce traffic congestion and enable active lifestyles that prevent obesity and other health issues associated with inactivity (see p 29). Particularly for children, physical

activity is crucial. "Traffic means that our streets are violent, which keeps children locked into their homes. Confining our children to four walls increases the risk of obesity. An obese child has four times greater risk of becoming an obese adult. In São Paulo, type two diabetes, which people generally develop in the fourth or fifth decade of their lives, is becoming more prevalent than type one diabetes. I constantly see children with clogged coronary arteries. It is not fair," he says, blaming traffic congestion. While the health ramifications of physical inactivity are enormous, opportunities also exist. In São Paulo alone, a radical shift to walking and cycling by 2040 could reduce deaths from heart disease by 5%<sup>25</sup>.

Building infrastructure is not enough, it must also be safe. "We see many fatalities because of the traffic. Sometimes it takes the ambulance 30-40 minutes to get from the crash to the hospital. People die inside the ambulance," he said.



**Dr. Paulo Saldiva**  
Pathologist  
São Paulo University  
Brazil

# CHILD POVERTY AND ROAD TRAFFIC: AN UNSAFE ENVIRONMENT



## SUMMARY:

- Throughout the region, a trend is clear – poverty and road traffic injuries are linked.
- Low-income children are more likely to suffer a high burden of road traffic injury, and face longer term impacts after a crash.
- About a third of the region's children in urban areas live in poor quality environments, often with unsafe roads.
- When families gain income, they often buy unsafe motorcycles to access economic opportunities.

There is a clear need to urgently address the life-threatening impact of road traffic on children within the SDGs and its agenda to combat poverty. Children living in poorer areas are more exposed to the dangers of road traffic and are therefore more likely to suffer severe ongoing health, social and financial consequences following related injuries<sup>26</sup>. This pattern is particularly acute in urban and peri-urban areas, which have dense populations, high concentrations of vehicles, and inadequate access to basic services.

Although poverty fell by half and the middle class doubled in size (earning between \$10 and \$50 per person, per day) between 2003-2013, inequality in Latin America and the Caribbean is still higher than in other developed regions, making it one of the most unequal in the world<sup>27</sup>. Many who escaped extreme poverty are at risk of returning. Over the ten-year period, 13% became poorer – and 25 to 30 million were at risk of falling back into the cycle of income poverty<sup>28 iv</sup>.

Urban areas in particular have become more unequal, evidenced by the rise of informal settlements. UNICEF's study of eight countries in the region showed that half of urban children live in poor housing conditions<sup>29</sup>. Throughout the region, close to a third of children and adolescents in urban areas live in severely deprived households, including poor quality urban environments<sup>30</sup>.

As poverty in these areas grows, the quality of children's environments diminishes, severely impacting them. They are vulnerable to the harmful effects of deprivation: inadequate sanitation, unsafe drinking water, and overcrowded housing<sup>31</sup>.

Children who live in such environments are also less likely to have adequate safety. They not only suffer from a high burden of road traffic injury, but also face longer term impacts following a crash<sup>32</sup>. Denying them of the right to a safe environment – a key indicator of child wellbeing<sup>33</sup> – has negative lifelong effects.

Urban areas like the district of San Juan de Miraflores in Lima, Peru serve as an example. This district on the edge of the city has high levels of deprivation. Over 300,000 people live in the area, which has a population density of 14,000/km<sup>2</sup> – similar to some of the most densely populated areas in Latin America.

There, a research project on child road traffic injury and poverty found that of 120 evaluated sites, only one had a traffic light, two had stop signs, and none had posted speed limits. The risk of child pedestrian injury was elevated due to high vehicle volume, traffic speed, a lack of lane demarcation, and street vendors competing for pavement space. A sample population of 10,210 child pedestrians sustained 117 serious road traffic injuries – over 200 injuries per 100,000 people annually – an unacceptably high health burden.

Researchers found that a large proportion of injuries among children ages five to nine occurred during trips to or from the market. Among those ages 10-14, most pedestrian injuries happened during trips to or from school<sup>34</sup>. This research supports the fact that children are most exposed to the risks of road traffic injury when they become mobile and independent, particularly in environments that fail to protect them.

The case study is in line with broader research on the relationship between poverty and road traffic injury, echoing findings that factors associated with road traffic injury among children living in urban poverty include high vehicle volume, speed and lack of road markings<sup>35</sup>. Unsafe transportation and road infrastructure pose serious threats to children as they go to school, access services, or play with friends.

Leading child rights organizations such as UNICEF recognize that children in poor urban areas are acutely affected by factors of deprivation such as poor sanitation, unsafe drinking water and overcrowded, poor quality housing. Additionally, they recognize that these unsafe urban environments often include significant exposure to road traffic injuries<sup>36</sup>. Working together, urban planners, policy makers, police, and community stakeholders can address these factors<sup>37</sup>.

BOX 3:

# CHILD RIGHTS AND THE JOURNEY TO SCHOOL



As part of its Jamaica program, UNICEF is working to protect the children of Denham Town on the journey to school.

“As a major focus of the 2030 Agenda and of the Sustainable Development Goals (SDGs), the world has committed to ensuring that children and adolescents can be safe by 2030. We must ensure that children grow up in a safe environment in the Latin America and Caribbean region. UNICEF works with partners to guarantee that strategies such as the Secretary General’s Global Strategy for Women’s, Children’s and Adolescents’ Health, linked to the SDGs, include all relevant elements of the survive, thrive and transform agenda, and that important strategies such as child road safety are incorporated. This is one of the priorities for UNICEF in its 2018-2021 Strategic Plan, and among Latin America and the Caribbean regional priorities.

In the Latin America and Caribbean region, road traffic injuries represent the main cause of death for children ages five to 14, the second in adolescents age 15-19 and are among the most frequent causes of disabilities for those who survive. These deaths, disabilities, the suffering and hardship they cause children and their families are predictable and preventable. The responses required to tackle child deaths, injuries and disabilities due to road traffic incidents include legislative, regulatory, environmental and behavioural strategies. Within these broader responses, “safe and healthy journeys to school” provide an effective entry point to address the specific safety risks to children and an opportunity to guarantee that we uphold their rights.

UNICEF calls on governments in the region to plan, implement and support the solutions required to prevent deaths, injuries and disabilities due to road crashes, so to ensure that every child, every day, everywhere has a safe journey to school. UNICEF in the region remains available to collaborate with governments, civil society and other partners including the private sector, to guarantee that life-saving safety measures are in place for children as they make this most important daily journey.”



**María Cristina Perceval, Regional Director, UNICEF Latin America & the Caribbean**

## Child rights violations: Cases from the region

The dangers of road traffic remain unaddressed for children and young people across Latin America and the Caribbean. Urban centers across the region are known for their stark inequality. Poor neighborhoods are often

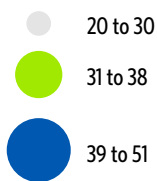
notorious for high rates of crime and violence, suffering from years of bad planning and neglect. In this context, road traffic injury is prevalent and has a severe impact. This is a child health and rights crisis, and undermines the sustainable development agenda. But it is seldom given the visibility it deserves. Here we highlight cases from across the region - cases which could, and must, be addressed by policy makers, by prioritizing the solutions outlined later in this report.

## Mexico City, Mexico: Exposed and vulnerable

The link between child poverty and road traffic injury is seen clearly in Mexico's urban centers, where child pedestrians are most vulnerable. Generally, most children in Mexico walk to school, like 60% of children in Mexico City itself. As the Institute for Transportation Development and Policy (ITDP) found, most children who walk to school are from low- and middle-income families. When ITDP mapped the percent of trips to school on foot in Mexico City against marginalization, an income poverty level indicator, they found direct correlation between poverty levels and the likelihood that a child walks to school'. While the pattern is clear, the policy response had been lacking - a gap which ITDP has begun to address (see p 26, *Mexico City: Vision Zero for Youth*).

Children in low-income areas of Mexico City are more likely to walk to school than their high-income counterparts, exposing them to higher risk on roads.

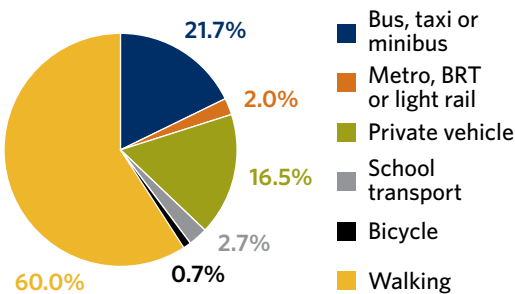
Percentage of trips on foot to school



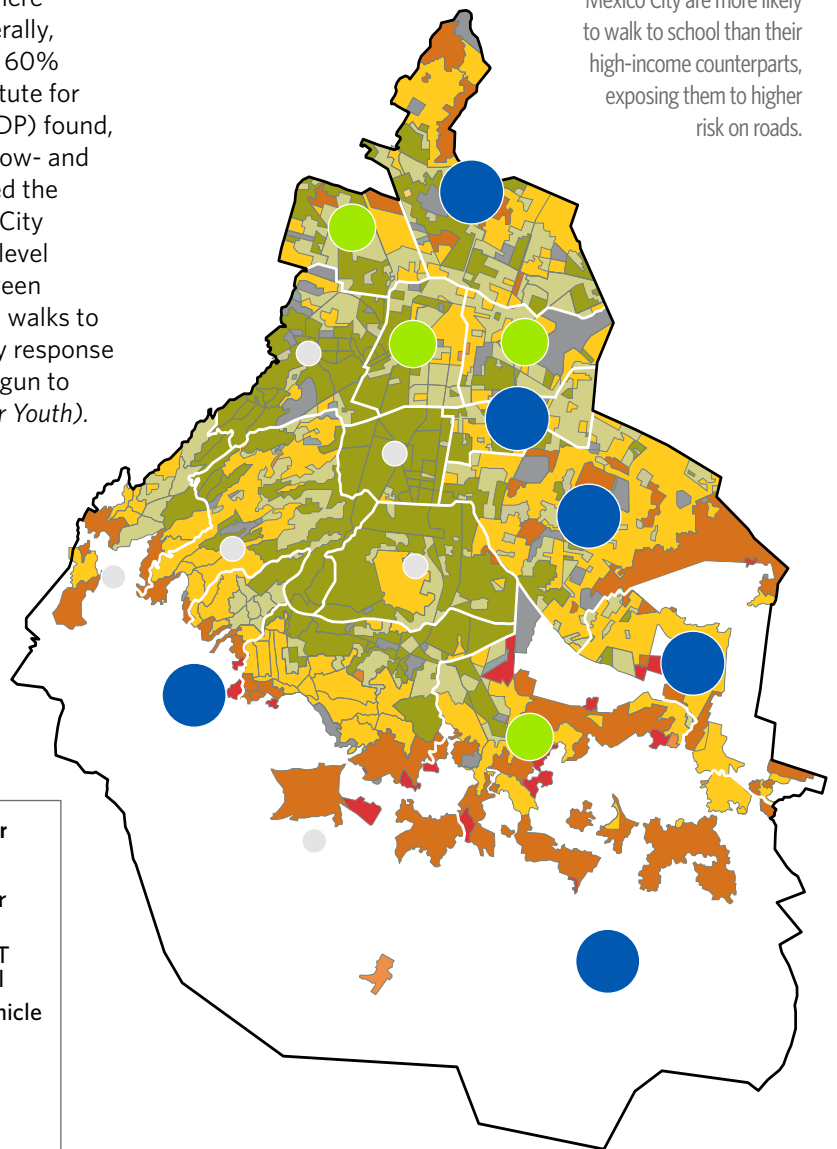
Degree of Marginalization



Percentage distribution of children 3-14 years old by their means of transportation to school, Mexico City 2015



Source: Adapted from Encuesta intercensal (2015)

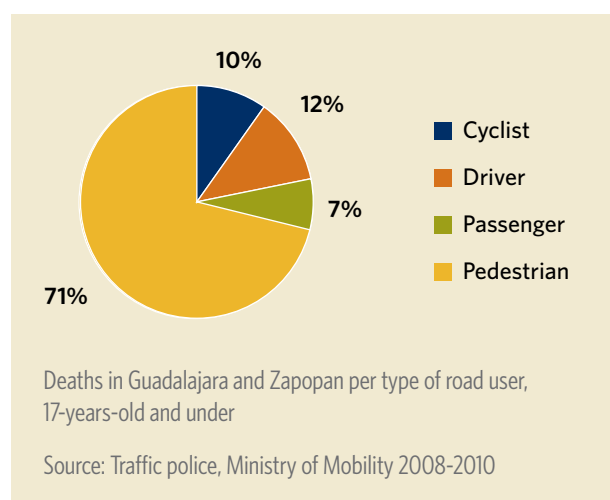


Source: Institute for Transportation Development and Policy (ITDP)

# Guadalajara and Zapopan, Mexico: A dangerous daily journey

Similar to Mexico City, low-income children in Guadalajara and Zapopan use their feet as their primary mode of transport. They travel far, walking from the busy and dangerous peripheral roads to go to schools in the city center.

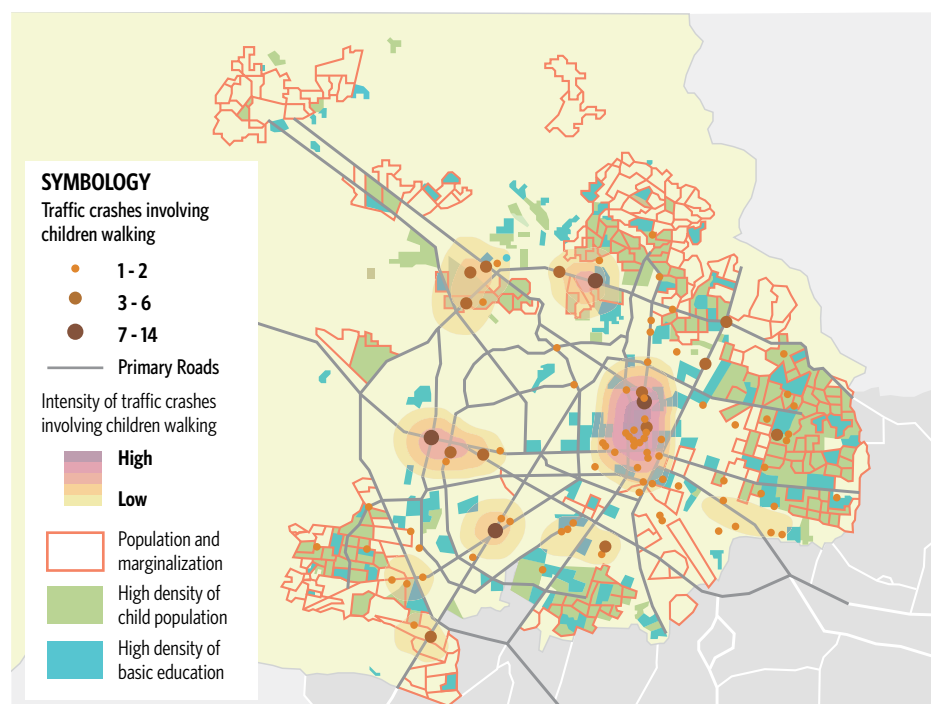
Zapopan is the second largest municipality in the state of Jalisco, located in the Guadalajara Metropolitan Area.



There and in Guadalajara, 58% of children under age 15 walk to school, according to a 2015 census. However, unsafe road design, high speeds, distracted drivers, drunk drivers, and other factors can make the journey fatal. Among those ages 17 and under, 71% of fatalities are pedestrians.

The marginalization index, which measures poverty, shows that as poverty increases, so do crashes involving child pedestrians. This correlation is explained by the fact that low-income families, which made up 40% of Guadalajara and Zapopan's population in 2010<sup>38</sup>, live mostly along the outskirts of the city next to a busy peripheral road. Half of Guadalajara and Zapopan's children under age 11 who live in these areas do not have good access to education, forcing them to travel to the center of the city where 63% of preschool and elementary schools are located, in higher income areas. When children are forced to walk to and from downtown schools on primary roads with high speeds, too often they do not make it to their destination. 99% of traffic crashes occurred 200 meters or less from a primary road.

The tragic outcome of this daily journey to school is documented in the map below. It shows that many crashes occur either in school areas, or in those with both high child density and poverty. Crash levels were high in downtown Guadalajara, attracting high numbers of people due to its schools, business, and public services. Safer routes to school would therefore not only benefit schoolchildren, but also the dense and diverse population of the downtown area.



## Traffic crashes involving child pedestrians age 17 and under, density of child population, basic education, and marginalization in Guadalajara.

Crashes occur mostly in low-income areas. The map shows 135 pedestrian crashes involving 239 children, an average of two per crash, from 2008-2010. Almost 80% were between the ages of 13 to 17, and 21% were 12 or under. One third of fatalities were those ages 6-11<sup>vi</sup>. Yet as the cases we highlight from Mexico show (p26, 33), this crisis among poor children can be addressed.

Source: WRI Mexico and National Statistics Institute (INEGI)

### Kingston, Jamaica: Unprotected and at risk

The children of Denham Town, one of the most deprived neighborhoods of Kingston, face severe threats and hardships. Violence is rampant, with gun crime and gang warfare often spiraling out of control. Infrastructure is crumbling, with sewage spilling onto the streets. Housing is rundown and overcrowded.

With its gates leading directly onto the neighborhood's main road, Denham Town Primary serves over 600 of Kingston's poorest children, ages six to 11. Over 70% have parents who are unemployed. Of those with jobs, the majority earn less than the national minimum wage of \$50 USD per week. Denham Town's children experience deprivation in all its forms. It's common for seven or more family members to share a two-room apartment, and proper nutrition is challenging as children often cannot afford school meals. Many children come from broken homes. The threat of severe road traffic injury is highest when they leave their homes in the early morning and walk home in the afternoon.

Seven-year-old Naheem Barnet is one of the hundreds of children who make the daily trek from the rough housing areas to school and back. On the street at 7am, returning mid-afternoon, Naheem is among many boys and girls in the neighborhood as young as six and seven who walk alone. He has no parents to care for him and is being raised by his grandmother, 52-year-old Beverley Aleyn, who is working two jobs day and night for about \$60 USD a week to provide for Naheem and his sister.

On his usual walk home, Naheem was hit by a vehicle. He had just crossed Spanish Town Road, directly outside the school where vehicles speed by at 60km/h or more. Naheem suffered injuries to his ribs, arms, and his head. He was lucky, however - the car was not speeding, and he avoided more serious injuries. Other children at Denham Primary have also been hit by vehicles. Naheem's grandmother says: "After what happened to Naheem, it really does scare me. A child can be hit at any time - children are children. This road is dangerous, and something has to be done to make it safer for our kids."



The children of Denham Town Primary on their daily journey to school

## São Paulo, Brazil: Pushed back into poverty

Tatiana da Silva lives in a rundown neighborhood on the favela-lined outskirts of northwest São Paulo. With her husband in prison, she was barely able to provide for her children alone. Tragedy struck when she and her two daughters went to visit him. A bus dropped the family off at the Rodovia Dutra, one of the busiest motorways in southeast Brazil, without a pedestrian crossing. Tatiana and her two daughters were hit by a drunk driver. She and her 10-year-old daughter suffered head trauma and broken bones - but her youngest, five-year-old Livia Mollo, died.

Unable to go back to her job as a driving instructor, she fell further into poverty. Struggling to care for her children, she calls on leaders to act: "For the decision makers, the politicians and the governors, she is a number - she will stay a statistic, but not for me. I try to take life day by day and not show all the pain, because I must care for my surviving daughter."





## San Jose, Costa Rica: Trauma on the school journey

Ronald grew up in a poor household in Costa Rica with his four brothers and sisters, his mom, Katia, and his dad, Alfaro, who works in construction and brings home meager pay. Ronald's room is part of the living room.

He always walked to school or took the public bus, because his mom thought it was unsafe to ride his bike down the steep slope. She made an exception when he was running late one day in fourth grade.

The hospital called to tell her Ronald had been hit and had to have an eight-and-a-half-hour operation. "The doctors warned us that Ronald might not be able to withstand the operation, and he ended up in the Intensive Care Unit for 76 hours. Those were the crucial hours where they would determine if he lived or died," she said. His brain swelled and he went into a coma, with no signs of progress for four days. His body was shutting down. Doctors told Katia that if he woke up, he might be mute and blind, with no use of his limbs – even suffering total paralysis.

Ronald survived but cranial, hip, and femur injuries caused him to be rushed to the hospital. Massive head trauma and several leg operations required constant care and hospitalization, placing enormous financial strain on his family.

Katia says, "There are no words to explain the pain you feel - the explosion of heartbreak - knowing you're on the brink of losing a child because of narrow roads or the lack of safe public transportation for them to go to and from school."

"In Costa Rica, roads are so narrow that two cars can hardly pass at the same time. Danger is always present, and not enough money is invested in safe roads, sidewalks, and pedestrian crossings, for cars and pedestrians to travel safely. Many politicians have their own cars and enough money to transport their children safely, or to hire a school bus. They won't see things the way we do. Our voices should be heard. Although we have limited resources, we're human and we feel pain, too."

"Picture yourself placing your hands on the hearts of every parent who lost a child, or whose child's life has been forever changed because of a crash. Feel, in each of those hearts, the realization that you can prevent this from happening in the future. You can stop the pain we feel every day."



Ronald Montero was hit while riding his bike to school.

## Cochabamba, Bolivia: Claudia, failed by adults

Latin American cities like Cochabamba are often characterized by sharp divides between affluent families and those struggling to make a living.

Six-year-old Claudia attended Concordia Elementary School in Cochabamba, where almost half the population lives in poverty, most did not complete primary school and over one-third of heads of households are illiterate<sup>39</sup>. Claudia was excited to spend her day off with her mother and her three-year-old brother. On their short walk to buy bread, a taxi driver ran a red light, killing Claudia and severely injuring her brother. She lived only 12 blocks from school.

There was nothing to force the taxi driver to slow down on the wide two-lane avenue with many tractor-trailers, no signposting, and large trees that covered traffic lights which barely worked. It was nearly impossible for drivers to see small children. Where small children cannot be seen, their lives cannot be prioritized.

The day after Claudia's death, a young student on a motorcycle was hit on the same road by a tractor trailer and was killed instantly. Many children cross this busy, high speed road every day to go to school. The unsafe infrastructure and lack of access to basic services is a reflection of Cochabamba's growth and the government's inability to keep up. It is the third fastest growing city in Bolivia, creating deep economic divides for families like Claudia's, which is mourning her loss while faced with burdensome hospital bills for her little brother.



A family exposed to high risk on a motorcycle in Uruguay where helmet enforcement is lacking.

## Motorcycles: Maiming in the pursuit of mobility

Motorcycles are a convenient mode of transport in cities with limited public transport options, opening doors to jobs and economic opportunities. However, areas with high motorcycle ownership and inadequate legislation also have higher injury and fatality rates.

Motorcycles are hard to see between automobiles, buses, and trucks. Even less visible are small, unprotected children whose limbs are no match for heavy trucks speeding by. Their brains and skulls are not fully developed, exposing them to disproportionate risk of serious injury or death.

In countries such as Uruguay, Brazil, Colombia, and the Dominican Republic, motorcycles are responsible for half of road traffic fatalities. Yet data and research about how to solve this deadly problem are scarce. Building a knowledge base about preventing injuries and fatalities for this population, Fundación Gonzalo Rodríguez conducted a study to analyze perceptions, habits, and knowledge about children transported on motorcycles in 45 cities across Argentina, Brazil, Colombia, Paraguay, Dominican Republic, and Uruguay. In countries like Argentina, most children killed before age 14 were car occupants, but the percentage of motorcycle fatalities is rapidly increasing.



Source: WHO Global Status Report, 2015

Many of the countries with higher rates of death for 15-19 age group (Venezuela, Saint Lucia, Uruguay, Dominican Republic) lack comprehensive laws for motorcycle helmets.

Younger children rarely use authorized helmets, in part because there are no authorized helmets for children under three-years-old, but also because they are not regulated or enforced. The use of other safety measures such as high visibility clothing is low, even in countries where such use is mandatory. Some countries like Uruguay require children to be able to reach the foot rest, though this is rarely enforced. Others regulate where and how the child sits on the motorcycle, but many children travel unsafely. Part of this is because there is no education about safety measures.

The study also reveals that in many countries, transporting children via motorcycle is perceived as safe. Yet cities with the highest number of children traveling on motorcycles are also the ones with the lowest safety measures.

The OECD provides several recommendations to improve motorcycle safety. Many apply to the Latin American and Caribbean region: Implement a safe system approach that caters to the needs of motorcycles; involve all stakeholders in sharing responsibility for motorcycle safety; make the needs of motorcycles an explicit part of transport policy; create a toolbox of measures to improve motorcycle safety; make helmets compulsory; and enhance safety features in vehicles; and reduce crash risk through forgiving roads. Several of these recommendations are not resource intensive and do not require technology, for example creating and enforcing helmet legislation<sup>40</sup>.

### Ezequiel: A family destroyed

A one-year-old was left orphaned and paraplegic after a tragic motorcycle crash. Ezequiel's parents died, leaving him as the only survivor, in a coma, with head trauma, severe chest trauma, rib fractures, and a serious lung injury.

Now, at five-years-old, he still has no strength or mobility in his legs and is completely incontinent. His aunt and uncle adopted him, but his life and the family's changed drastically and abruptly forever. Caring for Ezequiel is an unforeseen emotional and financial expense.

In Uruguay, there are no helmets for children under two or three-years-old. If Ezequiel had a helmet, it would have likely prevented head and spinal trauma that caused him to become paraplegic. This could have been entirely prevented if Ezequiel hadn't been on a motorcycle at all.

Ezequiel's story is repeated daily. Dr. Mercedes Bernadá studies children with serious injuries due to motorcycle accidents, just like Ezequiel. Most are in intensive care, with severe trauma to the skull, face, chest, abdomen, pelvis and limbs. Some of them suffered amputation.

Dr. Bernadá says: "From a risk reduction perspective, we should emphasize the use of quality helmets. But, as pediatricians, we are convinced that children

should not travel on motorcycles, neither as drivers nor as passengers."

"Health practitioners know that a child's death or injury due to a crash affects much more than just that child. Serious injuries require weeks or months of hospitalization, months or years of rehabilitation, or special day care treatment. Parents and siblings are forced to take on the role of nurses and doctors. Children are often forever confined to the use of prosthetics or special medical devices."

"This disrupts the family routine. Parents lose jobs and are unable to care for healthy siblings. Crashes cause marital strife and sometimes end the relationship, leaving only one care provider, often the mother. When parents are involved in the crash, other family members are left to care for children. Road crashes take a toll not just on one victim or one family, but on the entire public health system. Children have the right to be protected<sup>41</sup>."



Ezequiel suffered multiple injuries in a motorcycle crash.

# ACTION AGENDA FOR LATIN AMERICA AND THE CARIBBEAN



Vision Zero zones in action around Bosa's square, Bosa Centro, Bogota

## SUMMARY:

- Focusing on young people through Vision Zero for Youth can catalyze action to prevent crashes.
- Data driven approaches such as road assessments and traffic conflict analysis help ensure effective resource allocation.
- Prioritizing people over cars through safe design is an essential strategy.

Acknowledging that crashes are unacceptable, predictable, and preventable drives the uptake of Vision Zero, the goal of achieving a world free of deaths on our roads. At its heart, the safe system approach aims to prevent crashes and reduce their severity. It accounts for the fact that over 90% of crashes are due to human error and underlies all of the solutions featured in this report.

By improving infrastructure, vehicle safety, and enforcing appropriate speed limits, a safe system ensures that crashes are survivable. If road users cannot be safely separated, for example by dividing oncoming traffic with a median or separating cars and pedestrians, speeds are reduced to prevent serious injury.

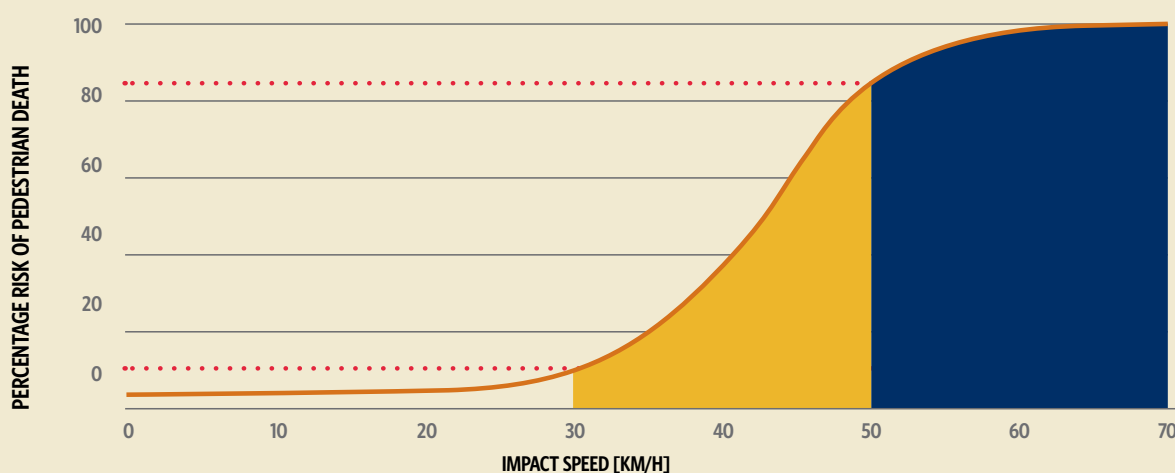
Speed is arguably the largest and most controllable factor in road crashes. It contributes to about one-third of all fatal road crashes in high-income countries, and up to half in low- and middle-income countries<sup>42</sup>. Excessive speed<sup>vii</sup> is an aggravating factor in all crashes<sup>43</sup>. Yet as of 2015, only 47 countries around the world have an urban speed limit of 50 km/h or less and allow local authorities to reduce these limits, in line with World Health Organization best practice<sup>44</sup>. In Latin America and the Caribbean, only three countries meet this criteria – Ecuador, Paraguay, and Uruguay.

Speed management is crucial for children. Their behaviors and movements are unpredictable, and their bodies cannot sustain the same impact as adults. The trip that children make every day – the journey to and from school – offers a unique opportunity to protect as many children as possible. Speed management is a cost-effective public health intervention – a vaccine against serious injury.

A range of tools can be used to introduce speed management, including: Enforcing a maximum speed limit on roads with high concentrations of pedestrians; enforcing time-based lower speed limits when students travel to and from school; enforcing speed limits through automatic speed cameras; and building roads to include features that limit speed such as traffic lights, roundabouts, and speed humps<sup>45</sup>. The absence of such interventions is acute in low- and middle-income countries, where 90% of crashes occur<sup>46</sup>.

## SPEED KILLS CHILDREN. USE THE VACCINE. #SLOWDOWN

FIGURE 4: THE RELATIONSHIP BETWEEN PEDESTRIAN SAFETY AND THE IMPACT SPEED OF VEHICLES



Source: Based on crash data results, Tingvall and Haworth, 1999

BOX 4:

# ROAD SAFETY MANAGEMENT AND DATA COLLECTION

One key component of Vision Zero is road safety management, which involves proper data collection. This must be overseen by a national road safety agency.

With varying mobility trends, cultures, and government structures, there is no 'one-size-fits all' model for national road safety agencies across the region. Currently not all countries in the region have such an agency. In Mexico, Brazil, Peru, Panama, and Bolivia, road safety is governed by police or ministerial authorities, rather than a national agency<sup>vii</sup>. While preserving autonomy and democracy of member countries, the Ibero-American Road Safety Observatory, OISEVI, prioritizes road safety by strengthening the technical competencies of national authorities, specialists, and NGOs.

In Costa Rica, for example, the National Council of Road Safety (COSEVI) has played a strong role in reducing road traffic fatality rates. One key contributor was an effectively managed response to child road traffic injury, as part of a safe system for children. Costa Rica shows that deaths and injuries can be reduced with a comprehensive and measurable road safety plan developed alongside other countries.

Argentina is focusing on uniform, quality data by moving from collecting low quality data by mail, to a digital platform with detailed daily data on individual crashes to help guide policy. Used uniformly across provinces, the new platform generates automatic reports to help local enforcement identify dangerous areas and trends. Carlos Pérez, head of the National Road Safety Agency said: "Our federal government must constantly interact with different provinces to ensure we are gathering and analyzing data using the same methods. This is necessary to generate common policies that will save lives across the country."

FIGURE 5: DIFFERENCE BETWEEN REPORTED DEATHS AND ESTIMATED DEATHS



Source: WHO Global Status Report, 2015

## Mexico City, Mexico: Vision Zero for Youth

Vision Zero has saved lives in many high-income contexts, and is being introduced across Latin America, with Mexico City at the forefront.

Like many other cities, Mexico City traditionally approached road safety through isolated policies focused on unsafe infrastructure, inadequate behaviors, or harsh sanctions. By adopting Vision Zero, it embraced an integrated strategy encompassing a wide range of prevention measures. However, momentum faltered in achieving what seemed to be an unreachable goal of zero deaths on its roads.

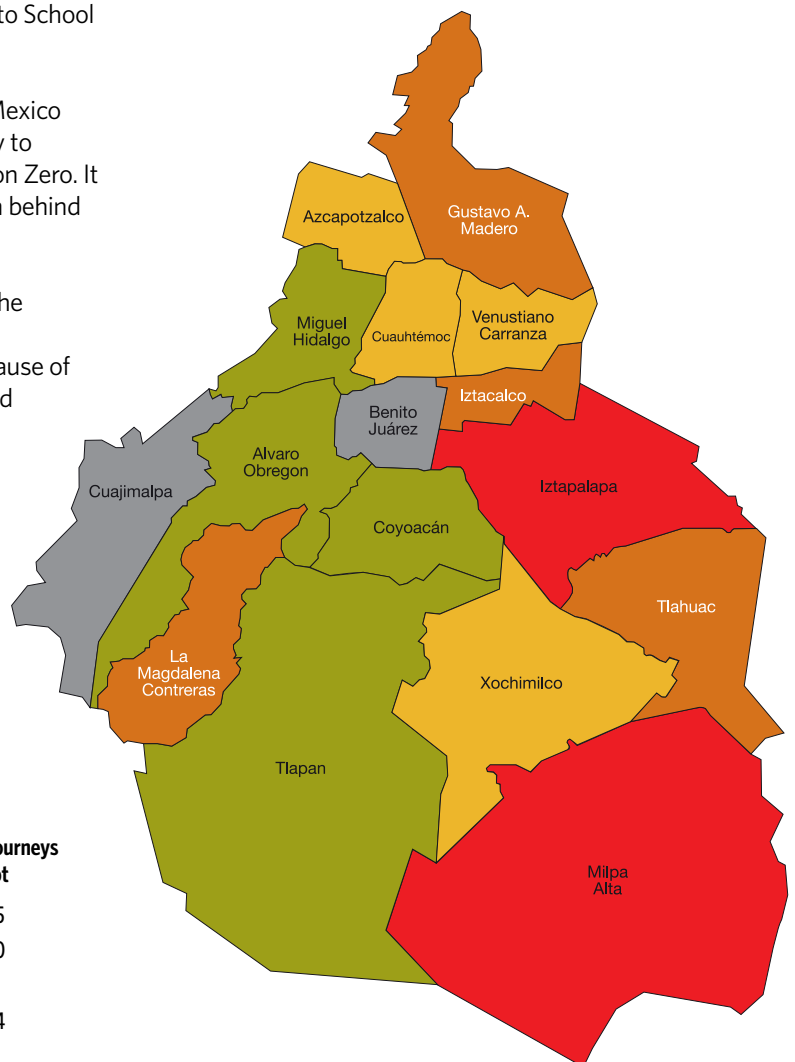
Meanwhile, Vision Zero for Youth was gaining traction nearby in the USA. Cities with Vision Zero are pledging to reach zero fatalities among youth by incorporating plans specific to children, and cities without Vision Zero utilize youth as a catalyst to build support for a wider approach. The National Center for Safe Routes to School implements Vision Zero for Youth nationwide.

ITDP noticed this success and translated it to Mexico City, which became the first emerging economy to implement both Vision Zero for Youth and Vision Zero. It was the spark necessary to reignite momentum behind Vision Zero.

ITDP capitalized on Vision Zero's emphasis of the protection of vulnerable road users - children. In Mexico, road traffic injuries are the leading cause of death among children ages five to 15, the second for those between the ages of 15 and 29<sup>47</sup>, and the seventh cause of death for all age groups. Pedestrians represent nearly half of total fatalities on roads. Speed is a known issue in Mexico, blamed for over half of injuries occurring on the country's highways in 2012<sup>48</sup>. Child pedestrians are at particularly high risk (see p 16, *Mexico: exposed and vulnerable*).

ITDP saw an opportunity to save lives by piloting Vision Zero for Youth in low-income areas of Mexico City, with support from the FIA Foundation. They elaborated on the Vision Zero strategy to include and implement a safe system for children, namely:

1. Prioritize road designs that protect children and decrease speeds.
2. Make data free, transparent, accessible to citizens, to keep the city accountable and advocate for Vision Zero for Youth to be achieved.
3. Improve enforcement in school zones to gain public acceptance. For example, installing speed cameras led to a three-fold increase in the detection of violations over a year<sup>49</sup>.
4. Educate citizens and increase awareness of Vision Zero for Youth through community workshops.



This map represents the percentage of trips to school by foot in different areas of Mexico City. Lower income children are more likely to walk.

Source: Institute for Transportation Development and Policy (ITDP)

Vision Zero for Youth brings together all sectors involved in road safety to improve coordination mechanisms and make decisions based on quality information. To implement these principles at a local level, ITDP carried out a pilot project in the Secundaria 4 Moisés Sáenz, a middle-income neighborhood with high risk roads. Most of the school's students are from low- and middle-income families.

The first phase of the project began with workshops where children played a role in making the streets they walk on every day safer. Students began to realize that the road risks they faced daily were not normal or acceptable. They helped design solutions, pinpointing areas where they felt the least safe.

The entire school community participated in a temporary redesign of an intersection outside the school, turning the students' solutions into tangible street-level transformations: Sidewalk extensions; bollards to mark

a new pedestrian area; and signals and posters to raise awareness among drivers. Active involvement of the entire community ensured greater awareness of Vision Zero for Youth, and empowered the community to achieve its goal.

To provide visibility around the positive effects of the temporary redesign of the school area, ITDP featured Vision Zero for Youth in larger international conferences. The project was covered by Mexico's largest broadcasting company and well-respected digital newspapers. In response to the campaign, Mexico City's congressman representing the district where the pilot school is located, Jose Alfonso Suárez del Real, approached both ITDP and the school principal, promising to earmark resources in the city's 2018 budget to make the temporary intervention permanent.

This success sets a precedent for other schools throughout the region and in Mexico City, acting as an example for the government to fund implementation.



Vision Zero for Youth brings together all sectors involved in road safety to improve coordination mechanisms and make decisions based on quality information.



Children take the lead in redesigning their school zones to make them safer. Simply asking children where they feel unsafe can help start dialogue about how to improve roads around schools.



The entire community participated in the pilot project implementation of Vision Zero for Youth.



The intersection outside the school was redesigned to improve safety.



## BOX 5:

## TRAFFIC CONFLICT ANALYSIS

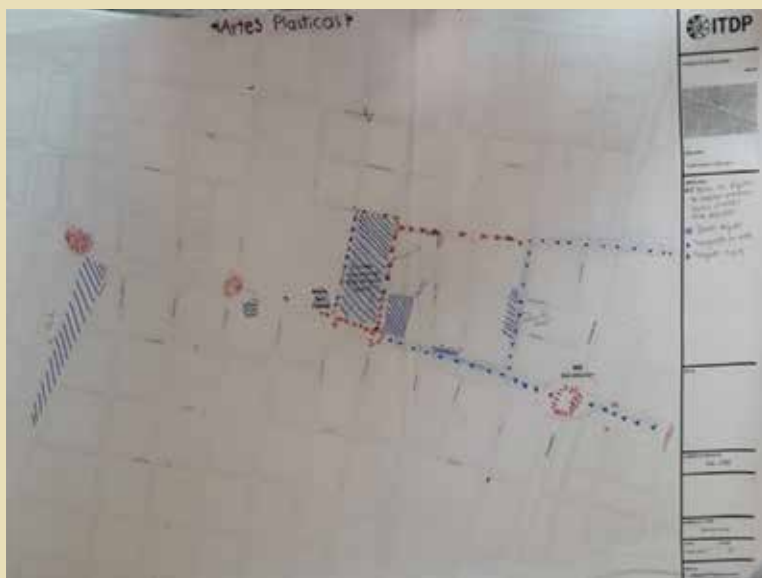
Low- and middle-income areas often suffer from another type of poverty – they are data poor.

Data is necessary to make informed, evidence-based decisions about which areas are most in need of road safety interventions. For example, it may be clear that school areas are dangerous, but there may not be data showing which specific crosswalks or intersections present the most risk. Without the data, it is hard to know where very limited budgets would be best applied. Moreover, serious injuries or deaths may not have yet occurred at the school. Nonetheless, children may not feel safe going to school, and may have to run across streets or dodge speeding vehicles<sup>50</sup>, particularly in low-income areas.

We no longer have to wait for tragedy to strike. The near miss of today is the injury or death of tomorrow.

Enter Traffic Conflict Analysis. This observational tool measures the rate of conflicts between vehicles and pedestrians. The data can be used as an indicator for risk to child pedestrians.

Traffic Conflict Analysis is used to observe and record hazardous interactions between road users (pedestrians and vehicles), which risk ending in a crash<sup>51</sup>. It is a surrogate measure of safety which recognizes that conflicts and crashes are correlated<sup>52</sup>. A conflict, by definition, is as an observed imminent collision, or near miss, which occurs if the movements of two or more road users stays the same<sup>53</sup>. A significant advantage of focusing on conflicts rather than, or in addition to crashes is that they occur more frequently and therefore provide the data necessary to accurately predict where a crash is likely to occur.



Children at the Vision Zero for Youth pilot school identify the riskiest areas.

There are several different methods of conducting Traffic Conflict Analysis with various levels of rigor, from human observation to video analytics. At its most basic level, traffic volume and pedestrian volume are counted, and conflicts are identified and categorized. This must be performed during peak hours, generally when students are traveling to and from school.

Traffic Conflict Analysis can be performed by a range of individuals, from students to engineers. For example, students at the ITDP Vision Zero for Youth pilot school in Mexico City identified the areas where they noticed the most near misses. Involving students in the identification of conflict areas helps raise awareness and foster empowerment.

## Prioritizing children over cars

The data and evidence show it, but Laura Ballesteros and Bernardo Baranda see it every day – the poorest children in Latin America are most at risk on the roads.

They were uniquely positioned to change this injustice - Laura, as Undersecretary of Planning at the Mexico City Ministry of Mobility and Bernardo, as Regional Director for Latin America at ITDP. Together they make a powerful team.

They believe strongly in adapting international best practices to local contexts. A former Congresswoman, Laura designed Mexico City's mobility law to protect vulnerable road users. This helped unlock budgets, changing the city from one where car is king, to one where sustainable mobility is the mode of choice. In the fifth largest city in the world, this was an enormous political battle.

So was the adoption of Vision Zero in 2014. Laura led the reform, lowering speed limits from 70 km/h to 50 km/h on primary roads and 50 km/h to 40 km/h on secondary roads. As Vision Zero lost momentum, Bernardo and ITDP implemented Vision Zero for Youth (see p 26) re-catalyzing momentum behind Vision Zero.

Together, their work has helped Mexico prioritize children and allocate 21% more money for 145 intersections safe for pedestrians. As a result, fatalities are down by 18%, and cyclist deaths have decreased by 77%.

## São Paulo: low speed leadership

In São Paulo, WRI Brazil, Share the Road, and Instituto Clima e Sociedade also prioritized children in urban redesign and involved them in the process. There, the quantity of cars increased by 31% from 1997 to 2007<sup>54</sup>, and transport policies prioritized cars over people<sup>55</sup>. Low-income children and adolescents often had no choice but to walk or cycle to school, placing them at high risk of injury or death. However, middle and higher income peers increasingly used private transport<sup>56</sup>. Twice as many lower and middle-income public school children didn't go to school in 2012 because they didn't feel safe, compared to their higher income private school peers<sup>57</sup>.

To play an active role in returning São Paulo's streets to people, children conducted street audits. Walking school buses (see p 31) helped children commute safely.

Political leadership was key. As Mayor of São Paulo from 2013 to 2016, Fernando Haddad was a pioneer. His goal was to make São Paulo a city for all social classes, with children at its center.

With necessary policy changes, he became a brave but controversial figure. Speed reduction is generally unpopular, yet he focused heavily on it to reduce crash severity. In 2013, low speed zones were implemented. About a year after, pedestrian fatalities decreased by 71%, and crashes fell by 18.5%<sup>58</sup>.



Laura Ballesteros (r) campaigning for the Child Health Initiative in Mexico City with the FIA Foundation's Natalie Drasin (l).



Before/After: Sidewalk extensions gave children space to walk safely and separated them from dangerous motorcycles.



## Bogotá's Vision Zero Zones

Representing 25% of Colombia's economy, Bogotá boasts 15 million trips per day, many on foot. With almost 200,000 vehicles entering the city each day, it was in dire need of safe non-motorized transport. Despite adding 187 km of bike paths and nine bus rapid transit lines, the road traffic fatality rate remained stable at 511 in 2006, and 577 in 2016, according to the WRI and ODI. Consistently, the highest proportion of victims has been pedestrians and those under age 30<sup>59</sup>.

Stable fatality rates often make Vision Zero seem too ambitious. As seen in Mexico City, it is hard to gain momentum unless more achievable targets are set. Such was the case in Bogotá, which established Vision Zero Zones in partnership with Bloomberg Philanthropies. The zones use a neighborhood approach to reduce traffic violence in 16 high risk areas, most of which were low

income heavily populated with children. For example, in Bosa, southwestern Bogotá, over 90% of families are low-income with some of the city's highest levels of informal employment.

Most of the road users around Bosa's square, Bosa Centro, are children. Without sidewalks, over 40% of children, and 70% of adults walked in the road.

The National Association of City Transport Officials, with its Global Designing Cities Initiative (NACTO-GDCI), funded by Bloomberg Philanthropies, provided support. GDCI implemented traffic calming and road safety measures such as sidewalk enhancement and intersection redesign.

Vehicle speeds were reduced with overall speed falling by 20-30%. Pedestrian safety was improved. The success in Bosa shows that cities and streets can be made safe for all by addressing the needs of the most vulnerable users, such as children.

BOX 6:

# WALKING SCHOOL BUS: PEDIBUS

Walking school buses, or pedibuses, are popular strategies to help children walk to school safely. They foster active transport and reduce demand for buses and vans, as well as associated municipal costs. WRI, Share the Road, and Instituto Clima e Sociedade included this mode of transport in their series of recommendations to promote active transport<sup>60</sup>.

In 2010, pedibuses were implemented in 40 schools across low-income communities of Bogotá to reduce the high injury and fatality rate among children commuting to and from school<sup>61</sup>. The pedibus not only provides children with a safe route to school, it also allows them to engage, learn, and play in urban environments on their daily journey.

Barranquilla also implemented walking school buses to revitalize the city, with children at its heart. There, walking school busses helped those between ages six and 12 stay safe on dangerous, busy roads. Safely exposing children to the city gave them more confidence to speak up, participate in decision-making, and voice their needs in a world of adults.



## Montevideo and Canelones, Uruguay: Star Rating for Schools

Vision Zero reflects a proactive, rather than reactive approach to road safety. This approach is at the heart of iRAP's efforts to prevent crashes before they occur.

iRAP's non-profit assessment technology can be applied to most roads. Recognizing the unique needs of children, iRAP developed a Star Rating for Schools app to allow parents, teachers, and community members to assess road risk around schools. It is the first ever systematic evidence-based tool to analyze risk on roads in school areas. This low cost solution quickly and easily measures risk, and explores potential treatment

options. The app does not require a professional skillset, yet gathers robust data. It allows users to star rate points along a road, accounting for the fact that a road around a school may be safer in one location than another.

As part of their program to ensure safe journeys to school for children, Fundación Gonzalo Rodríguez tested the app at 230 sites around 54 schools in Montevideo and Canelones, the two main provinces in Uruguay where almost 60% of the population resides. Their report, "Child transport to school, and safety in school zones" provides glimpses into how children travel to and from school, and perceptions around child mobility.

Fundación Gonzalo Rodríguez found that in Montevideo, 44% of children crossed the street in the middle of the block, and 42% didn't look before using the pedestrian crossing. The Star Rating for Schools app was therefore

## ACTION AGENDA FOR LATIN AMERICA AND THE CARIBBEAN

relevant as it examines safety around school areas from the pedestrian perspective.

Montevideo has an average acceptable star rating (3.4 stars), but Canelones has a below average rating (2.6 stars). Montevideo is also more urban than Canelones and Fundación Gonzalo Rodríguez has found a regional pattern of urban roads being safer than rural roads<sup>62</sup>. The findings suggested a correlation between low-income areas and low star ratings. For example, in the western part of Montevideo, where citizens are more disadvantaged, star ratings are lower<sup>63</sup>. Overall, children in the 20% lowest income communities have two star journeys to school, compared to those in higher income areas where the average is the recommended minimum level of three star or better.

Proving that street infrastructure design improvements and sustained road safety education can protect schoolchildren in Uruguay, the report calls for greater political commitment to addressing the issue and an expansion of the study nationwide. The Star Rating for Schools app also equips users with affordable countermeasures. This evidence-based implementation plan is suggested for the school entrance, and shows how the star rating would increase with each intervention. Particularly when attracting funding and donor support for infrastructure improvements around schools, it is important to highlight not only lives saved, but also costs saved. iRAP predicted cost benefit ratios for a selection of common school infrastructure improvements, showing that there is a significant return on investment.



Particularly in Montevideo, there is a correlation between income level and risk on roads.



Mayor of Montevideo Daniel Martínez (right) and María Fernanda Rodríguez, President of the Fundación Gonzalo Rodríguez. She said: "Measures proposed are low cost, high impact, and have already been tested in other countries. Our vision is zero child fatalities. There are countries that have achieved this - we want the same for our children."

**FIGURE 6: PREDICTED COST BENEFIT RATIOS OF INFRASTRUCTURE IMPROVEMENTS IN SCHOOL ZONES**

Intervention	High estimate	Low estimate
Signage and markings	8 to 1	3 to 1
Flashing beacons	8 to 1	2 to 1
Crossing supervisor	9 to 1	4 to 1

Predicted cost benefit ratios are heavily impacted by local traffic volume, costs, and conditions, resulting in a range of estimates. More information is available through the iRAP online toolkit.

Source: iRAP, based on a sample of iRAP Safer Road Investment Plans assessed across Latin America and the Caribbean.

BOX 7:

# CITIES SAFER BY DESIGN

Up to half of road fatalities occur in cities and on roads on the edges of cities. A resource to prevent these fatalities, the World Resources Institute (WRI) Ross Center for Sustainable Cities report, *Cities Safer by Design* includes more than 30 specific street design and planning recommendations for urban planners and policy makers to make streets safer. It also features specific guidance for schools and play areas, particularly by providing safe access for child pedestrians through low vehicle speeds, and appropriate zoning for school areas.

*Cities Safer by Design* emphasizes three key ways to improve traffic safety in cities: by building and retrofitting urban environments to reduce vehicle use; by reducing vehicle speeds where cars, pedestrians and cyclists mix; through design guidance to improve infrastructure and access for pedestrians, cyclists, and public transport users. The report includes examples from specific cities and highlights success stories.

The report provides illustrated recommendations for specific design elements proven to improve traffic safety, including:

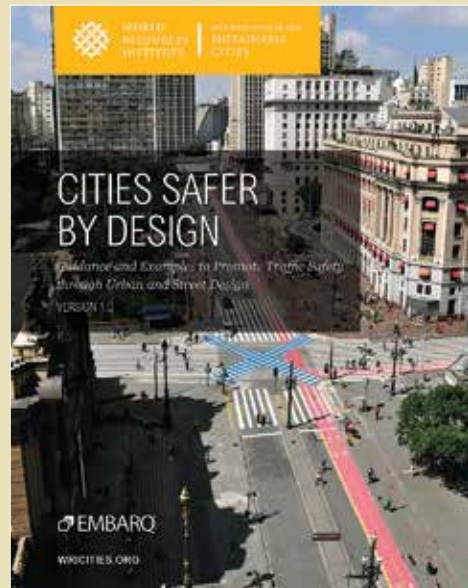
- Urban design with smaller block sizes, narrower streets, and access to destinations in compact environments, alleviating the need for vehicle travel;
- Traffic calming measures such as speed humps, curb extensions, and raised pedestrian crossings;
- Arterials and intersections that reduce conflicts between road users;
- Pedestrian facilities ranging from pedestrian-only areas to basic, consistent sidewalks;
- Bicycling networks that feature protected bicycle lanes and special attention to intersection design; and
- Safety improvements around mass transport stations and corridors.

A free download is available in Spanish and Portuguese at <http://www.wri.org/publication/cities-safer-design>

The 'Cities Safer By Design' approach has been applied to Zapopan and Guadalajara in Mexico where child pedestrians, particularly from low-income families, are highly exposed to road traffic injury (see *Mexico: exposed and vulnerable* p 17)

There, WRI Mexico conducted capacity building workshops for authorities in charge of infrastructure planning, design, and construction. With tools to make the most dangerous intersections safer, authorities focused on road safety for the first time in decades.

In 2017, WRI encouraged the Mayor of Guadalajara to sign the #EveryLife declaration, recognizing children's rights to safe and healthy environments, and has been striving to implement it since.



Mayor of Guadalajara Enrique Alfaro Ramirez signs the Declaration.

## Kingston, Jamaica: safe journeys to school

In Jamaica, leading organizations are providing external technical assistance to protect children on the journey to school. The aim is to advocate for scaled-up action by the government and donors.

With road traffic injury as the leading killer of children ages five to 14 in the country, school-age children are vulnerable, particularly in poorer urban and peri-urban neighborhoods. (see p 18, *Denham Town case*).

National partners joined forces with the world's leading school area road safety practitioners. AMEND, originally working in sub-Saharan Africa, helped the coalition conduct school area assessments and improvements. Initial activities included a workshop on child traffic injury prevention and safe and healthy journeys to schools, convened by UNICEF in Jamaica, with support from the FIA Foundation, AMEND and iRAP.

UNICEF is playing a leading role on the program, in collaboration with Jamaica National (JN) Foundation and the National Road Safety Council. Program activities include an in-depth review of gaps in policies and legislation, advocacy for safe school zones, and the implementation of infrastructure safety improvements in demonstration school areas. Dr. Rebecca Tortello, UNICEF Jamaica Education Specialist said: "Crossing the road near school should never cost a child his or her life. Together we can provide this much needed protection for our children."



Jamaican Prime Minister Andrew Holness at a CHI event.

## Cochabamba, Bolivia: Action for children

In Cochabamba, Save the Children has been working with schools like Concordia Elementary, where six-year-old Claudia was tragically killed by a taxi driver who ran a red light (see p 20).

It is the third fastest growing city in Bolivia, creating deep economic divides. Unsafe infrastructure and lack of access to basic services are a reflection of the city's rapid growth and the government's inability to keep up.

There is no protection for children like Claudia who cross the large four-lane Circunvalación Avenue. Her death moved the community, parents, teachers, and school directors to take action. Together with Save the Children, they demanded that the municipal government increase signage, change the traffic lights, and paint a crosswalk. Traffic lights now include a button that children can press to stop traffic before they cross.

To train children to use streets, Save the Children uses large tarps made from recyclable materials, painted to look like streets. Children are encouraged to ride their bicycles on the 'street.'

Road safety education was implemented as part of Save the Children's School Health and Disaster Risk Reduction strategy, which prepares children for man-made and natural disasters. Bolivian Police help them learn the rules of the road. Targeting parents, Save the Children launched a volunteer parent brigade to increase safety around the school.



Children learn to become safe road users.

# Fortaleza, Brazil: Giving the city back to the people

By prioritizing people over cars, “Cidade da Gente” created a healthier, happier society.

In two neighborhoods of Brazil, Cidade 2000 and Vila União, NACTO-GDCI promoted physical activity and spaces to play. Such projects are crucial to reversing Brazil’s 16% reduction in active transport per decade<sup>64</sup>, and further anticipated 34% decrease in physical activity by 2030. Increasing urbanization, motorization<sup>65</sup>, purchasing power, tax exemptions, and facilitating loans to buy private vehicles<sup>66</sup> has seen the number of vehicles in cities increase by 140%<sup>67</sup> between 2000-2010. Health ramifications are enormous, but opportunities exist to increase physical activity and decrease exposure to air pollution<sup>68</sup>.

Though Cidade 2000 is a middle-income area, families of all income levels frequent its main avenue, the Avenida Central. In 2010, the average monthly income of those over age 10 was middle-income, at 1000 to 1500 Brazilian Real, or \$300 to \$455 USD. In Vila União, it was low- and middle-income, at 500 to 1000 Brazilian Real, or \$151 to \$300 USD.



A physical activity space in Fortaleza.

Because of heavy and dangerous traffic, 78% of residents in Cidade 2000 admitted to feeling unsafe. The city implemented the project in phases to show the community how underutilized road space could be transformed into a neighborhood asset. Over two nights, the southern part of Avenida Central was transformed using paint, planters, trash cans, and benches. The number of children playing outside more than doubled, transforming the plaza into the heart of the neighborhood. The number of business owners who approved of the space also doubled, thanks to new customers who could walk and cycle to buy their goods.

Initially a pop-up intervention, the Cidade 2000 project is becoming permanent. Once skeptical about the consequences of speed reduction, residents now serve as its biggest advocate, organizing a petition for the project to become permanent. The Fortaleza Mayor is returning the streets to the people by making “Cidade da Gente” a public policy in Fortaleza City Hall.

In the low- middle-income neighborhood of Vila União, a street redesign helped draw children out of a hospital where they were often confined to beds and hallways. The public Albert Sabin Children’s Hospital treats children not only from the city of Fortaleza, but also from the entire State of Ceará, admitting children for many different reasons, including road crashes. Recognizing the harmful effects of high speeds, the hospital partnered with the Mayor of Fortaleza, NACTO-GDCI, and WRI through the Bloomberg Initiative for Global Road Safety to transform the street in front of the hospital as part of a neighborhood-wide low speed zone project.

Overall, the entire neighborhood project covered 174,000 square meters. The project renewed 1,160 square meters of sidewalk and reclaimed 1,980 square meters of asphalt as pedestrian space.

On the Tertuliano Sales Street in front of the hospital, pedestrians benefited from wide, accessible sidewalks, 67% shorter crossing distances, and a raised crosswalk. By repurposing unnecessarily wide road space, pedestrians gained 1,175 square meters of space, a 79.4% increase.

The changes in front of the hospital meant that the car was no longer king. Prior to the project, pedestrians had 31.5% of space and motorized traffic had 68.5%. Prioritizing vulnerable road users, the numbers shifted drastically after the intervention. Pedestrians had 56.5% of space, and motorized traffic had 43.5%. Over three times more people had access to new sidewalks.



BOX 8:

## GLOBAL STREET DESIGN GUIDE

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Fortaleza, São Paulo, and Bogotá are some of the places around the world where NACTO-GDCI has been applying tools and strategies from its Global Street Design Guide to implement street design projects. Created with input from practitioners across 72 cities in 42 countries, the guide offers technical details to support street design that prioritizes pedestrians, cyclists, and transit riders through real world examples.

To date, the guide has been endorsed by 37 cities, 25 organizations, one country and one region, and downloaded almost 10,000 times. It has been used for capacity building workshops and serves as a reference guide for practitioners developing their own street designs. It is also being used to support development of updated street design guides in several cities.

In applying design principles from the guide around the world, NACTO has seen that streets which are safe for children, elderly, and those with disabilities, are safe for all road users. All too often, however, streets are dangerous places for children and their caretakers. Consequently, injuries and fatalities among these populations are on the rise, and local practitioners are looking for guidance on strategies to reclaim their streets and make them safer places for kids.

Inspired by this perspective, NACTO is creating a Streets for Kids supplement to its guide together with the FIA Foundation's Child Health Initiative, Bernard van Leer Foundation, and Botnar Foundation. Capturing international best practice in designing streets and public spaces that are safe and encourage play, the supplement will help practitioners see streets from the perspective of a child. It will include real world examples of programs and policies that cities have used to engage children in the design process, create new spaces for play, provide safe routes to schools, and improve streets overall. Examples and technical assistance will span a variety of contexts, including low- and middle-income countries.

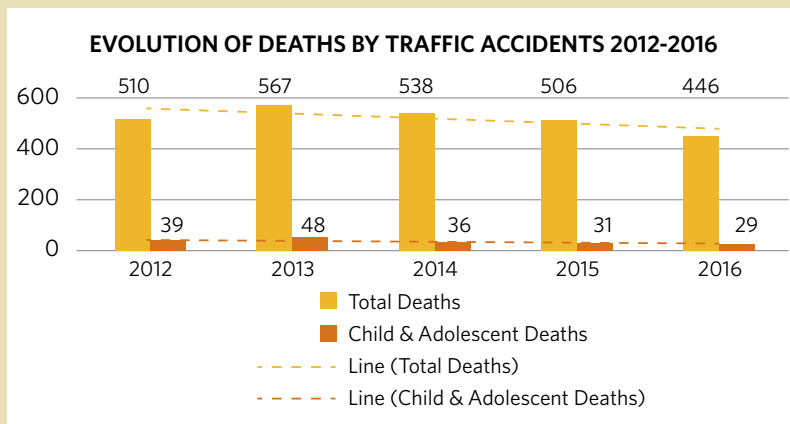
BOX 9:

# FUNDACIÓN GONZALO RODRIGUEZ

Across the region, Fundación Gonzalo Rodríguez has led the way in coordinating and managing actions with governments and focusing on road safety for children. María Fernanda Rodríguez, who goes by Nani, established the NGO after her brother, a famous racing car driver, died in a crash 17 years ago. “As a tribute, I started a journey to improve children’s quality of life. From that moment on, I have aimed to become their voice in the busy and complex world of adults. I’m not an engineer, pediatrician, or journalist. I’m a citizen, a 43-year-old mother, passionate about fighting this monster that takes the lives and happiness of thousands of Latin American children,” she says.

The Fundación’s early work placed the mandatory use of Child Restraint Systems (CRS) and the safe transport of children at the center of the public agenda. Previously, children had not been included in political discourse, and even less so in regulatory frameworks. Now, legislation and success in Uruguay has been translated to neighboring countries.

Fundación Gonzalo Rodríguez has always recognized the public health sector as an integral player in preventing injuries and fatalities on roads. In Uruguay, together with the School of Medicine of the University of the Republic, it has trained 650 pediatric students per year since 2011 on child passenger safety and other health topics. Thanks to the program, the Ministry of Public Health and the Ministry of the Interior in Uruguay have included a focus on road safety for children in their training materials and programs throughout the country.



The Fundación has helped reduce road traffic fatalities among children and youth in Uruguay. Between 2012-2016, 44.8% of children between the ages of 12-17 died as motorcyclists, 19.1% died as pedestrians, and 19.1% died as car occupants. For those under 12, 39.1% died as pedestrians.

Source: Fundación Gonzalo Rodríguez (2017) based on UNASEV (2016)



## PHYSICAL INACTIVITY: BEYOND INJURY

The benefits of safer roads for children extend far beyond the road to school. Safer roads also help fight childhood obesity – an urgent battle across the region and particularly in Mexico, which suffers from the highest prevalence globally of overweight and obese children at 33% nationally<sup>69</sup>.

The Alianza por el Bienestar de la Niñez, (Alliance for Child Welfare) aims to promote active play, physical activity and nutrition, among 22,000 low- and middle-income urban-dwelling children and parents in Mexico City.

The goal is to lay the foundation for healthy lifestyles. The project, funded by the Mondelez Foundation and carried out by Save the Children, conducts nutrition education and active play workshops among children ages two to 13. While overall results have been positive, factors such as poor air quality and unsafe roads and transportation have hindered physical activity and healthy behaviors. Without safe roads, children are unable to get the physical activity they need, placing them at higher risk of obesity and associated diseases as children and adults.



## ELLA SE MUEVE SEGURA / SHE MOVES SAFELY

Lower income children in particular rely on their mother's ability to go outside or use public transportation to access services and employment. Increasingly, mothers are the sole breadwinners in some of the poorest families. Improving women's safety on public transportation is a crucial element of economic development, and for many, a step out of poverty. The Latin American Development Bank estimates that improving women's participation in the region's workforce could add 34% to the region's GDP<sup>70</sup>.

However, women struggle to access employment, healthcare, and other services because of sexual harassment on public transportation. The FIA Foundation's Ella Se Mueve Segura (She Moves Safe) study examined the patterns of women's use of public transport across: Quito, Ecuador; Buenos Aires, Argentina; and Santiago, Chile. It found that the majority of women, including girls, who use public transportation in Latin American cities have witnessed or experienced sexual harassment.

Urban transportation professionals must recognize gendered transportation issues<sup>71</sup>. Safe public transportation is necessary to enable women and girls, particularly the poor, to be equal members of society. Without this, the sustainable development agenda will never be achieved.



## Latin NCAP

Low-income individuals are often relegated to traveling via not only unsafe roads, but also unsafe cars. Particularly for low-income children in the region, cars can be deathtraps. However, these children and their families are not second-class citizens – and cars should not treat them as such. Everyone deserves equal protection.

Not all cars are created equal, and not all cars value lives equally. Millions of new cars sold in low- and middle-income countries fail to meet UN Safety Standards, many lack seatbelts or airbags. Global NCAP (New Car Assessment Program), seeks to right this wrong, with support from the FIA Foundation.

Part of Global NCAP, Latin NCAP is an independent assessment program that offers consumers independent and transparent information about car safety levels in the Latin American and Caribbean region. The proliferation of cars throughout the region, combined with the fact that many children die as passengers, has created an urgent need for Latin NCAP to revolutionize vehicle safety.

Latin NCAP rates cars from a zero (least safe) to five (safest) star scale, and includes tests on child occupant protection. The organization has been integral in pressuring manufacturers to take zero star cars off the market.

For example, Latin NCAP and Global NCAP crash tested two cars produced in Mexico: The Nissan Tsuru, a zero

star car with no airbags sold in Mexico, and the Nissan Versa, a five star car sold in the United States. The crash test at the US Insurance Institute for Highway Safety (IIHS) made it clear that the lives of passengers in each car were not protected equally. A 50% overlap test between the two cars, with a combined closing speed of 80 mph (129 km/h) showed that the driver of the Tsuru would have suffered fatal or life-threatening injuries. All the main structures failed.

The Tsuru was involved in over 4,000 deaths on Mexican roads between 2007-2010. Had Latin NCAP not intervened, 15,000 more Tsurus would have been sold between the October 2016 crash test, and May 2017. Change takes persistence - it wasn't the first time that Latin NCAP tested the Tsuru, it had also been tested three years prior. Finally, thanks to a campaign between Latin NCAP and Global NCAP, co-funded by the FIA Foundation, the car was taken out of production.

Mexico does not yet apply minimum crash test regulations, unlike the US. Regionally, over 40,000 deaths, 400,000 serious injuries, and \$143 billion in costs could be prevented by 2030 if countries adopted basic UN vehicle regulations<sup>72</sup>.

These regulations are crucial to ensuring that all people receive the equal protection they deserve, regardless of nationality or income level. There is no longer an excuse for cars like the Tsuru to jeopardize equity. Car manufacturers must work hand-in-hand with NCAPs around the world to avoid preventable deaths.



## Car restraints

Proper use of child restraints is another important factor in the equation to protect children. Every parent deserves access to child restraints and information on how to use them properly, regardless of where they live and how much they earn. This requires legislation, awareness, education, and behavior change, along with active participation from the public, governments, and expert voices such as automobile clubs.

To promote the use of car restraints throughout the region, Fundación Gonzalo Rodríguez launched the 'EDU-CAR' child seat campaign in Uruguay in 2008, supported by the FIA Foundation and the World Bank Global Road Safety Facility. Through research, training and awareness raising, the Fundación advocated for mandatory use of child restraints, which was successfully passed in 2012.

Replicating this success, automobile clubs worldwide are building awareness among governments, stakeholders, industry, and the public to reach a critical mass and advocate for child seat safety legislation. They have the technical knowledge, influence, and tools to communicate the vital importance of child restraint systems.

For example, in 2017, Mexico and the United Arab Emirates adopted child restraint legislation following an advocacy campaign by their auto clubs using the FIA's 'Toolkit for child safety in cars.' The toolkit is part of the FIA's 'Action for Road Safety' program, funded by the FIA Foundation and built on the principle that every country can improve its child restraint use. This digital advocacy and campaigning tool has been disseminated to member clubs involved in child road safety advocacy.

Designed to serve as a centralized resource database, the toolkit provides an advocacy manual, materials and methodology to conduct surveys, and visual materials to promote child restraint use. Developed to work in five different stages of legislation, the toolkit ranges from countries without child restraint and seat belt laws, to those with strong legislation and enforcement. In late 2016, pilot projects to help clubs use the toolkit, promote regulatory reforms, and raise public awareness began in Belarus, Chile, Japan, Mexico, Paraguay, United Arab Emirates, and Uruguay.

The clubs' successful advocacy initiatives show how working together can change regulation and enhance public awareness. For example, the Belarus Auto Moto Touring Club used the toolkit to increase child restraint use from 50% to 90%, contributing to a 31% decrease in child passenger injuries.



# SPOTLIGHT ON ARGENTINA



Individual leaders are stronger when they are brought together. In Latin America and the Caribbean, this is the role of the International Forum on Child Road Safety (FISEVI). The 2018 conference was hosted in Argentina, where road traffic injuries are the leading cause of death for children over age one, and a main cause of injuries in children and adolescents of all ages.

Organized by Fundación Gonzalo Rodríguez, FISEVI brings together the region's key road safety players, such as governments, regional organizations like PAHO and OISEVI, engineers, road users, health

workers, teachers, civil society organizations, media, and private institutions. They gather to share best practices and knowledge for one common goal - to improve road safety for children.

In its third year, FISEVI provides a regional forum to address common road safety issues and affect policy change. It is integral to ensuring that success stories do not happen in silos, but that they are shared, scaled and replicated. Internationally, FISEVI serves to collect regional input in the race to meet the SDGs and the New Urban Agenda.

**BOX 10:**

## GUILLERMO DIETRICH: CONSTRUCTING THE ARGENTINA OF THE FUTURE

As Argentina's Minister of Transport, Guillermo Dietrich is pushing for change across the country implementing road safety policies and promoting transparency.

The Ministry has developed a long-term plan to double highway and road kilometers in the country, incorporating design to reduce crash probability. The Minister emphasizes the impact and reach of the policies he has launched, with a priority on road safety. "We have constructed or rehabilitated over 17,000 km of roads, implementing federal safety measures. We now enforce laws among 19% more vehicles, with 84% higher enforcement per day. Enforcement among young drivers grew by 180%. We've reached about 570,000 people through our awareness campaigns and provided training courses to 43,000 people."

The Ministry focuses on youth, which is particularly important as high school students often travel after completing their studies, exposing them to risks on roads.



# MOBILIZING FOR CHANGE





## The funding imperative

To achieve the SDG target of reducing road traffic injury and air pollution in the region, we need a dramatic shift in the scale and intensity of response. To protect and improve the health of children, and society as a whole, adequate funding and strong partnerships are of vital importance.

Governments need to recognize the health and environmental damage that road traffic inflicts on their citizens and economies. The 3-5% GDP loss from road traffic crashes, the long-term, cumulative, economic hit that countries sustain, and the healthcare costs are all compelling reasons to act<sup>73</sup>.

Most governments have the financial wherewithal to implement the safe system approach, but many lack the technical capacity and political will. A multi-million dollar safe system collaboration between the World Bank and Argentina has demonstrated<sup>74</sup> if resources are strategically directed to safe system solutions, casualties can be reduced.

This stand-alone road safety loan is an exception. It was catalyzed with seed funding from the Bank's Global Road Safety Facility. Yet international or regional sources of catalytic funding are rare. There is approximately \$30-40 million in international catalytic support for road safety each year, the majority from Bloomberg Philanthropies, and the FIA Foundation. This is far below the \$770 million USD per year for ten years that the UN says is necessary to meet the SDG road safety target<sup>75</sup>.

A UN Trust Fund for Road Safety has now been established to try to address this funding gap, using donor support to help unlock public funding and refocus national road safety budgets towards proven safe system interventions. Launched in April 2018, the Fund has yet to begin major fundraising operations. There should be significant moral pressure on donor governments, philanthropies and corporations - particularly those profiting from or contributing to the health and environmental impacts of road traffic across the region - to provide substantial support.

The private sector has responsibilities, and some are leading by example. In 2017 infrastructure giant Abertis became the first corporate donor to the Child Health Initiative with a \$3M commitment to UNICEF<sup>76</sup>. The company recognizes that by protecting children, they are protecting their employees, and the people

they serve. Abertis is also investing in safety in its core road management business, with a strategy to use IRAP star ratings to measure and improve safety performance on its roads. Others such as FedEx, UPS and Johnson & Johnson are also combining corporate philanthropy with stringent internal road safety performance metrics.

Ultimately it is governments that bear the main responsibility for the health of their citizens. The funding paradigm needs to change at the global, national and local levels for pockets of safe system implementation by a few visionary cities to grow into regional transformation change.

## Partnership for children

This cannot be achieved in isolation. Integrating road traffic injury prevention with wider objectives for child and adolescent health, and related issues such as climate change, is vital. Advocating for the rights of children to health, and linking their daily journeys helps knit together seemingly diverse causes. It makes the case for stronger collaboration within global and regional strategies such as the EWEC action plan, and the supporting Global Financing Facility.

Utilizing this strategy, the Child Health Initiative is a partnership for the SDGs that protects the rights of children to safe and healthy mobility free from road traffic danger and air pollution. It aims to mainstream child and adolescent health and mobility issues into international development and climate change policies, calling for scaled-up action and funding<sup>77</sup>. A specific objective is to ensure a safe and healthy journey to school for every child. In 2016 the initiative secured global commitment to this priority in the UN's New Urban Agenda. It's 'Declaration of Every Child's Right to Safe and Healthy Streets'<sup>78</sup> highlights the basic child rights to mobility and its 'Every Journey, Every Child' campaign calls for action.

At country level the initiative supports efforts to integrate child rights and health outcomes into national and city level policy and practice. Convened by the FIA Foundation, founding partners include the Overseas Development Institute, Save the Children, UN Environment, UNICEF and the World Resources Institute. Across Latin America and the Caribbean, partners are working with communities demonstrating that saving children's lives is achievable and affordable, and that additional funding can be effectively deployed.

# CONCLUSION



The Latin American and Caribbean region has one of the highest levels of motorization in the developing world, and urbanization is growing. For a healthy and sustainable future cities must prioritize people over cars.

The largest population – youth – are suffering most. Road traffic injuries are the leading killer of children ages five to 14. Those on the lowest rung of the economic ladder are particularly vulnerable, forced to rely on unsafe streets to go to school or work; breathing the dirtiest air, with lifelong health consequences.

However, the solutions and policy responses to this health epidemic are not only readily available, they are also increasingly being effectively implemented in many cities across the region.

The safe system approach, centered on Vision Zero for Youth and safe and healthy journeys to school, must be implemented as a priority across the entire region. Rather than just urban islands of best practice we need a concerted response, a sea of change. A focus on safe infrastructure design and speed management is the priority, but the vulnerability of the increasing population of motorcyclists, unsafe transportation of children by bus, and the lack of vehicle standards across the region must also be high on the agenda.

The impact of traffic on child health must become a priority in delivering the SDGs across the region, and particularly through the SDG delivery mechanism for children and adolescents, the EWEC strategy.

The EWEC strategy must do more than just acknowledge the burdens of road traffic on children and adolescents. The development community - international agencies, donors, governments and their partners - needs to move beyond diagnosis to action. As this report highlights, we have the tried and tested solutions. There is no excuse for delay.

Leading EWEC stakeholders like UNICEF and Save the Children are beginning to step up, incorporating road safety into health, child protection, and nutrition programs, understanding the need for safe roads to help children go to school, and be active and healthy; recognizing that active mobility helps fight climate change, and improves air quality.

The prize is great, so the response must now be scaled up. Governments must come together at regional and global level to address the needs of children in a concerted way, integrating road safety into the EWEC strategy. The Child Health Initiative is calling for:

- The addition of a funded action plan to the existing regional EWEC strategy, integrating transportation and urban planning interventions to improve health outcomes for young people. This should also focus on scaling up policy response and improving access to funding across the region;
- Regional support for a high-level UN Special Summit to address emerging child and adolescent health issues and endorse action<sup>viii</sup> with a specific objective to ensure safe and healthy journeys to school for all children by 2030, as prioritized by the UN New Urban Agenda;
- Collaboration between the EWEC Global Financing Facility and the new UN Global Road Safety Trust Fund to address the road traffic impacts on child and adolescent health.

This is an agenda central to achieving the SDGs, improving access to education, enabling children to climb their way out of poverty and protecting their rights to health.

Ultimately, if we succeed, we create greater prosperity that can be reinvested to improve mobility, health, and society. To invest in our future, we must first invest in our children.



# FUNDACIÓN GONZALO RODRIGUEZ



The Fundación Gonzalo Rodríguez is a non-profit NGO, based in Uruguay, composed of professionals from different areas with a regional focus on Latin America and the Caribbean.

The objective of the Fundación is to promote children and adolescents' safety as road users to reduce the number of deaths and injuries in road traffic crashes in Uruguay and the region, keeping Gonchi's memory alive, a source of inspiration for our everyday work. Visit [www.gonzalorodriguez.org](http://www.gonzalorodriguez.org)



# FIA FOUNDATION

The FIA Foundation is an independent UK registered charity with an international reputation for innovative global road safety philanthropy; practical environmental research and interventions to improve air quality and tackle climate change; and high impact strategic advocacy in the areas of road traffic injury prevention and motor vehicle fuel efficiency. Our aim is to ensure 'Safe, Clean, Fair and Green' mobility for all, playing our part to ensure a sustainable future. Visit [www.fiafoundation.org](http://www.fiafoundation.org)



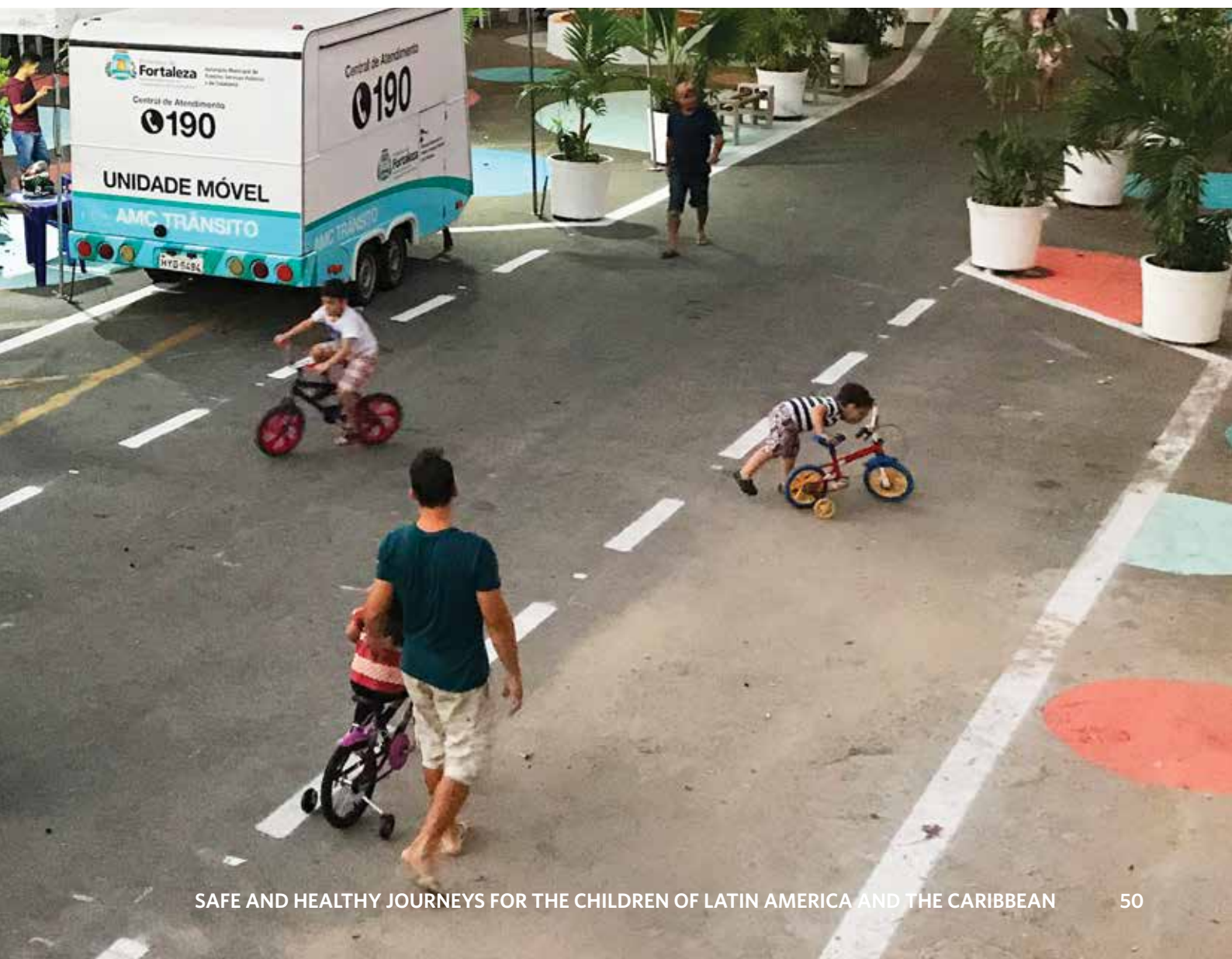
# SAVE THE CHILDREN

Save the Children is a global leader in the field of School Health and Nutrition with programs in 20 countries across all global regions. More than 3 million children benefit from Save the Children School Health and Nutrition programs, enabling them to stay in school to reach their educational potential, while also learning skills to keep themselves safe and healthy for life. For more information on Save the Children visit: [www.savethechildren.org](http://www.savethechildren.org)



# UNICEF

UNICEF promotes the rights and wellbeing of every child, in everything we do. Together with our partners, we work in 190 countries and territories to translate that commitment into practical action, focusing special effort on reaching the most vulnerable and excluded children, to the benefit of all children, everywhere. For more information about UNICEF and its work visit: [www.unicef.org/lac](http://www.unicef.org/lac)



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# NOTES

- <sup>i</sup> A regional agreement should be coordinated by the Every Woman, Every Child Latin America group and aligned with the proposed strategic Every Woman, Every Child SDG response on traffic related child and adolescent health, called for by the Child Health Initiative. Billingsley, S. (2018) *The Unfinished Journey: The Global Health Response to Children & Road Traffic*.
- <sup>ii</sup> 25% are below age 14, and 20% are between the ages of 15-24.
- <sup>iii</sup> The entire regional road traffic fatality rate is higher than the world average.
- <sup>iv</sup> Relative poverty accounts for inequality, defining people as impoverished and therefore unequal if they fall below standards of living in a given social context. By contrast, absolute poverty is based on income and measured according to money needed to meet basic needs, not accounting for quality of life such as access to services and education.
- <sup>v</sup> In Mexico, the urban marginalization index is a series of indicators collected by the National Institute of Statistics and Geography. It documents the global impact of poverty as a result of a lack of access to education, health services, housing in inappropriate conditions, and water services.
- <sup>vi</sup> For the purpose of this analysis, the map only displays traffic crashes in the municipalities of Guadalajara and Zapopan, leaving out information from Tonalá, Tlaquepaque and Tlajomulco de Zúñiga, the neighboring municipalities shown in the map.
- <sup>vii</sup> Excessive speed includes driving or riding within the speed limit when it is too fast for the conditions at the time (for example, in poor weather conditions).
- <sup>viii</sup> For a detailed discussion of a UN Special Summit to address emerging child and adolescent health issues see Billingsley, S. (2018) *The Unfinished Journey: The Global Health Response to Children & Road Traffic*.





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[www.savethechildren.org](http://www.savethechildren.org)



[www.unicef.org/lac](http://www.unicef.org/lac)



[www.childhealthinitiative.org](http://www.childhealthinitiative.org)