

## Road Safety 2022 1



# The political and social contexts of global road safety: challenges for the next decade

Adnan A Hyder, Connie Hoe, Martha Hajar, Margaret Peden

The goal of this Series paper is to show how road safety has evolved as a global public health issue over the past two decades and to discuss the political and economic dynamics that led to this change. Specifically, the key stakeholders, influences, networks, issue framing, actor power, and synergistic interactions that have contributed to how road safety has evolved as a global public health issue will be discussed. In doing so, we capture the important chronology of events and discuss a set of challenges that highlight the complexity of road safety. We posit that the global road safety community needs to re-evaluate its role and strategy for the next decade and focus more on implementation and country action to achieve reductions in road traffic injuries. We call for an open and inclusive process to ensure that such a reflection occurs before the end of the current decade.

## Introduction

Approximately 1·35 million people die every year from road traffic injuries (RTIs), and more than 50 million more are injured or disabled as a result.<sup>1,2</sup> In the past decade, this issue has been raised on the political agenda around the world, including through the adoption of an ambitious UN Sustainable Development Goal (SDG) target. SDG target 3.6 aims to halve the number of road traffic deaths and injuries by 2020, whereas SDG goal 11, which focuses on cities and sustainable development, also includes road safety.<sup>3</sup> RTIs have been the focus of three global ministerial conferences and several UN and WHO resolutions. Unfortunately, the national and regional responses to this recognition have not been proportional to the burden in many countries and the world is at great risk of not achieving these SDG targets. In fact, recent trends in absolute numbers of deaths indicate a further increase and reflect the gaps in evidence-based interventions around the world.<sup>1</sup>

The goal of this Series paper is to show road safety has evolved as a global health issue over the last two decades and to discuss the political and economic dynamics that led to this change; specifically, the key stakeholders, influences, networks, issue framing, actor power, and synergistic interactions that have contributed to this change. In doing so, we capture the important chronology of events and discuss a set of challenges that highlight the complexity of road safety. This paper is an analytic commentary, which was written under the guidance of a policy framework. We gathered data from a purposive review of key documents, a retrospective analysis of events, and the extensive experience of authors (particularly from MP and AAH) over the past 20 years or more, to meet the aim of this commentary. We posit that the global road safety community needs to re-evaluate its role and strategy for the next decade and focus more on implementation and country action to reduce road deaths globally.

In the subsequent sections of the paper, we first provide a rapid review of the timeline of events that occurred between 1999 and 2022 to orient readers to contemporary

road safety efforts. Next, we conducted in-depth analyses of global road safety on the basis of the policy framework developed by Shiffman and Smith. These analyses helped inform our ten recommendations.

## Rapid review of contemporary road safety

In 1999, the International Federation of the Red Cross and Red Crescent published their annual World Disasters report. The 1999 report drew attention to the number of humanitarian workers who were injured or killed from RTIs while conducting relief activities in low-income and middle-income countries (LMICs; figure).<sup>4</sup> In 2001, WHO initiated a five-year-strategy on global road safety,<sup>5</sup> which was followed by expert meetings and advocacy events culminating in the passage of the first UN General Assembly (UNGA) resolution on global road safety in 2003 (A/RES/57/309). This resolution called on governments and civil society to raise awareness for, promulgate, and enforce appropriate laws (appendix pp 2–3). Later that same year, the UN Secretary-General issued his first Global Road Safety Crisis report, which integrated RTI considerations into a broader vision of urban development and transportation planning.<sup>6,7</sup>

The challenge was also taken up by the Department of Injuries and Violence Prevention at WHO, which was formed in 2020. WHO published the first world report on road traffic injury prevention together with the World Bank. The report was published on World Health Day in 2004, which was especially dedicated to road traffic injury prevention due to it being a growing public health issue.<sup>8–10</sup> Both the UNGA and WHO passed further resolutions endorsing the recommendations of the 2004 world report and encouraged member states to take action to tackle the issue.<sup>11,12</sup> Oman championed the first series of UNGA resolutions in 2003.<sup>13</sup> Russia took over this role in 2008, followed by Sweden in 2018. Biennial UNGA resolutions and UN Secretary-General reports were initiated to monitor progress on global road safety, and an additional World Health Assembly resolution was

Lancet 2022; 400: 127–36

Published Online

June 29, 2022

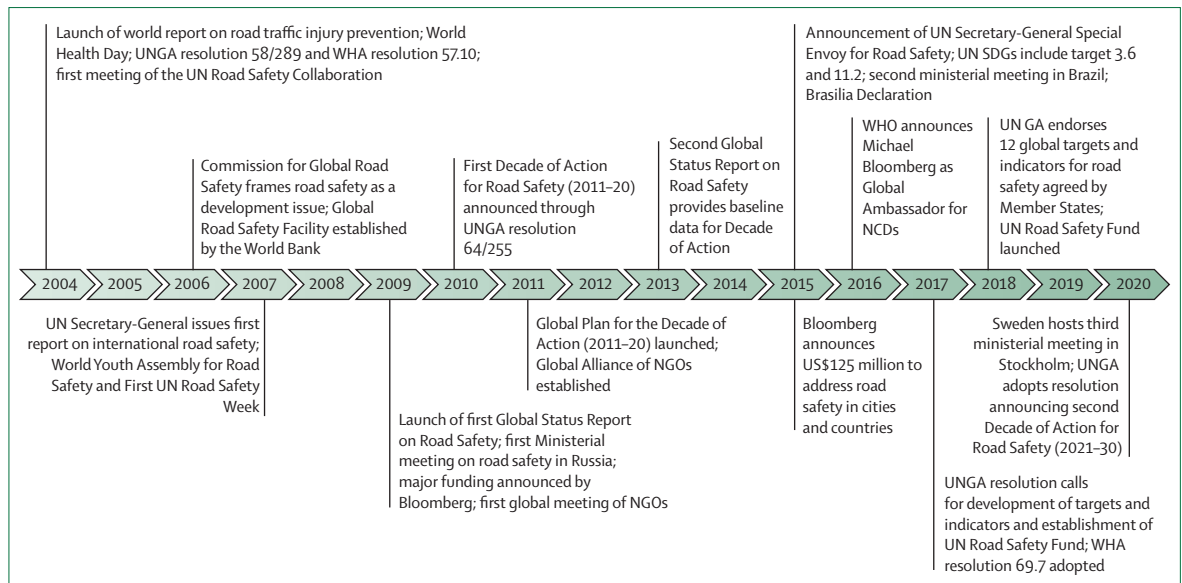
[https://doi.org/10.1016/S0140-6736\(22\)00917-5](https://doi.org/10.1016/S0140-6736(22)00917-5)

This is the first in a Series of three papers about road safety

Milken Institute School of Public Health, George Washington University, Washington, DC, USA (Prof A A Hyder MD PhD); Department of International Health, Johns Hopkins University, Baltimore, MA, USA (C Hoe PhD); National Institute of Public Health of Mexico, Cuernavaca, Mexico (Prof M Hajar PhD); George Institute for Global Health, Imperial College London, London, UK (M Peden PhD); School of Population Health, University of New South Wales, Sydney, NSW, Australia (M Peden)

Correspondence to: Dr Adnan Hyder, Milken Institute School of Public Health, George Washington University, Washington, DC 20052, USA [hydera1@gwu.edu](mailto:hydera1@gwu.edu)

See Online for appendix



**Figure:** Timeline showing major global events in road safety between 2004 and 2020

NGO=non-governmental organisation. NCD=non-communicable disease. SDGs=sustainable development goals. UNGA=UN General Assembly. WHA=World Health Assembly.

passed in 2016. This resolution drew attention to the public health consequences of RTIs and how the health sector could help to resolve this issue (appendix pp 2–3).

Although political support was crucial, funding was also a key component to move this issue forward. In 2006, the World Bank established the Global Road Safety Facility, a multidoror trust fund, to support client countries with funding and technical assistance to address the challenges of road safety management. In 2009, Bloomberg Philanthropies made a substantial financial contribution (about US\$125 million) to support the implementation of evidence-based interventions in LMICs. In 2018, the FIA Foundation donated \$10 million to the UN to support the creation of the UN Safety Trust Fund. This fund was intended to catalyse road safety action globally, using donations to help unlock new government and municipal funding and re-focus national road safety budgets towards evidence-based interventions targeted to individuals, which is known as the safe system approach.<sup>14</sup> Some high-income countries have also made contributions to global road safety to support activities in resource-poor settings.

Awareness around the world about road safety was further raised through a series of five UN Road Safety Weeks (in 2007, 2013, 2015, 2017, and 2019). The 2007 week focused on youth and road safety, the 2013 week focused on pedestrian safety, the 2015 week focused on child safety, the 2017 week focused on speed management, and the 2019 week focused on leadership. The Road Safety Weeks were complemented by three ministerial road safety conferences. The first conference was hosted by the government of Russia in 2009 and called for a Decade of Action for Road Safety, which was

announced in 2010 through a UNGA resolution (A/RES/64/255). The second conference was hosted by the government of Brazil in 2015 and, through the Brasilia Declaration, called for the development of global voluntary targets, indicators for road safety risk factors, and service delivery. 12 targets and their related indicators were later agreed on by member states and endorsed through a UNGA resolution (A/RES/72/271) in April, 2018 (panel 1). The third conference was hosted by the government of Sweden and resulted in the Stockholm Declaration, which encouraged the UNGA to extend SDG 3.6 to 2030 and to focus more on the safe systems approach to road safety. SDG 3.6 was extended to 2030 through a UNGA resolution (A/RES/74/299), which came into effect on Sept 2, 2020.

UN agencies have nominated ambassadors for road safety as well. Jean Todt was as the UN Secretary-General's Special Envoy for Road Safety in April, 2015, and Michael Bloomberg was nominated as WHO Global Ambassador for non-communicable diseases (NCDs) in August, 2016. Non-governmental organisations (NGOs) have also had an important role, including by establishing a Global Alliance of NGOs on road safety to advocate and implement activities around the world. These combined efforts have been instrumental in raising the issue of road safety on political agendas around the world and are partly monitored through the publication of Regular Global Status Reports on Road Safety by WHO.<sup>1, 15–18</sup>

Road safety is a multisectoral issue that requires an intersectoral response. Consequently, the major contributing sectors at all three levels (ie, global, regional, and local) include transport, police, health, education, and justice, among others. In each sector, civil society,

academia, foundations, and private organisations play an important supportive part. In the face of this complexity, coordination of efforts and effective communication are challenging. As a result, in 2004 the UNGA invited WHO to work in close collaboration with UN regional commissions and act as the coordinator of road safety issues within the UN system. Later that year, WHO accepted this request (World Health Assembly resolution 57.10). A multisectoral group, the UN Road Safety Collaboration (UNRSC), formed of UN organisations, international agencies, governments, NGOs, and academics, was created with WHO as secretariat.<sup>19</sup> The UNRSC is an informal consultative mechanism with the goal of facilitating international cooperation and strengthening coordination between road safety partners. The UNRSC meets biannually and includes more than 90 members who have been instrumental in developing a series of good practice guidelines for member states, in helping with the organisation of the two ministerial level conferences, in raising awareness through a series of global road safety weeks, and in monitoring progress of the first Decade of Action for Road Safety.<sup>18</sup> A detailed list of major stakeholders in road safety is presented in the appendix (pp 2–3).

Despite these public developments, details about how road safety has evolved as a global public health issue are less known or are less analysed. We focus on delving deeper into these events and trying to understand how they shaped global or national actions. We discuss key partnerships, issues around country level implementation, and analyse how the field of road safety has evolved. Many of the authors of this Series paper have been closely linked with, worked on, or been part of, several of the global road safety events, programmes, and projects discussed in this paper. We have tried to be reflexive and used an analytic lens in our approach. We have also allowed evidence to inform this analysis. However, we also believe we bring very strong collective insight and expertise to these analyses due to our exposure and experiences.

### Political and policy analysis of road safety

For our analysis of road safety, we used a framework in global health from Shiffman and Smith that has been applied to many health policy analyses and is drawn from collective activism and social constructionism.<sup>20</sup> The framework proposes four determinants for global priority setting: actor power, ideas, political contexts, and issue characteristics (table 1). Actor power draws from collective action theory, in which concepts such as network cohesion, leadership, civil society mobilisation, and guiding institutions with clear mandates to spearhead advocacy around a policy agenda have been identified as key factors for successfully gaining priority for policy issues. Ideas describe how groups negotiate and coalesce around internal or external frames, and the understanding of problems and solutions. These ideas

#### Panel 1: Global road safety performance targets

Target 1: By 2020, all countries establish a comprehensive multisectoral national road safety action plan with time-bound targets.

Target 2: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.

Target 3: By 2030, all new roads achieve technical standards for all road users that consider road safety or meet a three-star rating, or better.

Target 4: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that consider road safety.

Target 5: By 2030, 100% of new (defined as produced, sold, or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognised national performance requirements.

Target 6: By 2030, halve the proportion of vehicles traveling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities.

Target 7: By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100%.

Target 8: By 2030, increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100%.

Target 9: By 2030, halve the number of road traffic injuries and fatalities related to drivers using alcohol, and/or achieve a reduction in those related to other psychoactive substances.

Target 10: By 2030, all countries have national laws to restrict or prohibit the use of mobile phones while driving.

Target 11: By 2030, all countries to enact regulations for driving time and rest periods for professional drivers, and/or accede to intentional/regional regulations in this area.

Target 12: By 2030, all countries establish and achieve national targets to minimise the time interval between road traffic crash and the provision of first professional emergency care.

Targets are the WHO global road safety performance targets.<sup>49</sup>

are fundamentally shaped by the lenses of knowledge, culture, and norms through which they are viewed. Issue characteristics include the features of the problem that might help elevate its importance in the global arena, such as the severity of the problem and the presence of credible indicators and interventions. Political context includes the entire policy process, with windows of opportunity potentially emerging for priority setting to gain traction, and national and global institutions setting the norms for the policy making process.

Shiffman and Smith's framework was selected since it is a commonly used and useful framework that focuses on examining political prioritisation of health issues at

	Description	Factors shaping political priority development for global road safety	Current status
Actor power	Policy community cohesion; leadership at the global level; guiding institutions; civil society mobilisation	Increasing; none; UNRSC; Global Road Safety NGO alliance	Moderate
Ideas	Internal frame; external frame	Systems perspective; systems perspective	Weak
Political contexts	Policy windows; global governance structure	SDGs; weak structure	Moderate
Issue characteristics	Credible indicators; severity; effective interventions	Global status report on road safety; Global Burden of Diseases, Injuries, and Risk Factors Study; Save LIVES technical package	Strong

The factors and their current status are adapted from the framework developed by Shiffman and Smith.<sup>20</sup>

**Table 1: Categories of factors shaping political priority for global road safety**

	Number of countries* with good† laws	Estimate of global population covered
Speeding	46	3.0 billion
Drink-driving	45	2.3 billion
Helmet use	49	2.7 billion
Seat belt use	105	5.3 billion
Child restraint use	33	652 million

\*45 countries had laws covering one risk factor (1.3 billion people), 31 countries had laws covering two risk factors (1.9 billion people), 22 countries had laws covering three risk factors (2.1 billion people), 20 countries had laws covering four risk factors (3.74 billion people), and five countries had laws covering all five major risk factors (144 million people). †Good laws were determined on the basis of the WHO Global Status Report 2018.<sup>1</sup>

**Table 2: Countries with good laws on the five major road safety risk factors**

the global level. Other agenda-setting frameworks, such as the Multiple Streams Framework, have rarely been applied at the global level. Our goal was to understand each of the four categories for road safety by examining the interconnectedness of actors, ideas, and contexts, instead of determining a particular order in which these factors contribute to political priorities. We illustrate findings from each of the categories in detail. Table 2 summarises these results and provides an assessment of the current status of each of these four determinants for global road safety priority setting: “strong” is used when the issue has met all the indicators identified in the framework for a specific determinant; “moderate” is used when the issue has met some of the indicators identified in the framework for a specific determinant; and “weak” is used when the issue has met none of the indicators identified in the framework for a specific determinant.

### Actor power

The road safety policy community, defined as the range of actors (ie, governmental organisations, NGOs, international agencies, and academics) who are interested in

influencing a specific policy topic,<sup>21</sup> has been historically plagued by fragmentation, particularly regarding intervention strategies. Fragmentation was particularly apparent during the 1950s and 1960s when road safety management was uncoordinated and underfunded, with a predominant focus on promoting good driver behaviour.<sup>22,23</sup> This thinking evolved into a more systems-wide focus, when Dr William Haddon developed the Haddon Matrix to illustrate the various phases (ie, pre-crash, crash, post-crash) and factors (ie, human factors, vehicle factors, equipment factors, and environmental factors) that can contribute to RTI.<sup>24</sup> The shift to a systems-wide focus led to the next phase of thinking, when so-called good practice countries such as the UK and Australia were not only focusing on system-wide interventions, but also on setting targeted results and creating institutional leadership roles.

Since the late 1990s, the Dutch Sustainable Safety and Swedish Vision Zero initiatives have increased their ambition to achieve the ultimate elimination of road traffic deaths and serious injuries. Both countries focused on speed management, shared responsibility, and refocusing attention on the system rather than on the individual.<sup>25,26</sup> Otherwise known as the safe systems approach, this method influences today's thinking and has helped inform the Save LIVES technical package created by WHO in 2017. These guidelines were developed to assist countries in prioritising road safety interventions.<sup>27</sup> These events have also helped the policy community slowly evolve into a more cohesive one, particularly with regards to intervention strategies.

During the past three decades, experts urged for increased collaboration among organisations working on road safety at the global level, highlighted that coordination is required to facilitate synergistic thinking and collective action.<sup>19</sup> To address this, the UNRSC was established in 2004 to improve international cooperation and strengthen coordination between partners. Although such a guiding institution has been crucial to the road safety movement, the UNRSC is informal and consultative and does not have power over other institutions. Power to influence the actions of other institutions and governments is essential to galvanise support and to define the roles and responsibilities of stakeholders. Moreover, the absence of a leading agency at the global level (WHO only serves a coordination role) has also been a barrier to road safety attaining other features of a global priority at the highest level.

Although the Global Alliance of NGOs on road safety comprises more than 275 NGOs from over 80 countries, civil society mobilisation is considered moderate compared with other public health issues. The Framework Convention Alliance for Tobacco Control, for example, is made up of almost 500 organisations from 100 countries. The International AIDS Society, which is the largest HIV professional association, is comprised of over 10 000 members from 180 countries. There are few

road safety civil society organisations around the world, and even fewer of them are working on the global dimensions of the issue.

### Ideas

Another key challenge for road safety has been identifying ways to portray this public health problem in a way that would foster cohesion within the policy community and mobilise political support. Historically, the frame that most dominated the conversation about road safety was individual responsibility; road traffic crashes were seen to be the result of individual behaviours (eg, crashes were due to aggressive drivers or distracted pedestrians). Accordingly, policies were enacted to penalise these groups of individuals. This narrow type of framing meant that a disproportionate amount of attention was placed on law enforcement of driver behaviour.<sup>28,29</sup>

In 2004, efforts were made to shift this conversation, by framing road safety in a way that it would garner collective action. In line with Vision Zero—which aims to achieve a system where there are no serious injuries or deaths through the collective, multisectoral action of both transport system designers and road users—advocates pushed for a systems perspective that would highlight the macroscale factors that can influence RTIs.<sup>30</sup> This shift included framing road safety as a collective public health problem that had broader societal implications. For example, recognising that the media can play an important role in influencing political and public agendas, WHO (through the Bloomberg Initiative for Global Road Safety) launched two road safety journalism fellowship programmes in Philippines and Tanzania and developed a Reporting on Road Safety guide.<sup>31</sup> Furthermore, journalists from countries with high RTI burden were also sent to the 11th Annual World Conference on Injury Prevention and Safety Promotion in New Zealand in October, 2012. These activities were aimed at training journalists to frame road safety stories as health stories.

Despite these efforts, this new framing appears to have sensitised, but not convinced, a sufficient number of political leaders around the world. In fact, the political response to RTIs, particularly in terms of public sector investments, has not been proportional to the burden in many countries.<sup>32</sup> For example, in Mexico only 0.7% of the total budget for preventive programmes at the Ministry of Health for 2012–18 was allocated for injury prevention, including road safety. In Turkey it has been reported that, although there has always been some public funding for traffic safety, it had not increased by the launch of the first decade (ie, 2011–20).<sup>33</sup> To increase the prominence of road safety, more work is needed to develop an effective case that would resonate with decision makers, particularly political elites.

### Political context

The global political environment can also be influential in deciding the amount of political support given to a

public health issue.<sup>20</sup> Although it is difficult to exert control over these contextual factors, advocates have worked ceaselessly to build a favourable global political environment for road safety. Our review of contemporary road safety shows that several tactics have been used to achieve this favourable environment, including the dissemination of evidence through global reports to showcase the severity of the epidemic, and organising high-visibility global events (eg, ministerial road safety conferences and global road safety weeks). Since 2004, these efforts have led to multiple resolutions, declarations, and reports (appendix pp 2–3).

Advocates also seized policy windows, which are defined as “a political moment when global conditions align favorably for an issue, presenting opportunities for advocates to influence decision makers”.<sup>20</sup> This moment came about when negotiations for the 2015 SDGs took place. During these negotiations, stakeholders coordinated an advocacy campaign for the inclusion of road safety targets on the global development agenda for the very first time. Staff from several organisations were instrumental in meeting with government missions and UN agencies, and with participating in intergovernmental negotiations.<sup>34</sup> These efforts led to a landmark achievement for RTIs: two road safety related targets (3.6 and 11.2) were included in the SDGs and they aligned well with the five pillars of the Global Plan for the first Decade of Action for Road Safety (2011–20).

Although these global road safety policy instruments are vital, they are non-binding and, as a result, not as influential as international legal frameworks (eg, the Framework Convention for Tobacco Control [FCTC]), which can help institutionalise a public health issue within an intergovernmental structure and prescribe well defined policy obligations on its signatories. Countries that have ratified the FCTC, for example, are mandated to adopt and implement evidence-based tobacco control laws and report progress. Moreover, as with many other public health issues, road safety has a weak global governance structure, including the absence of a declared lead organisation at the global level. Because of these limitations, there is an urgent need for road safety advocates to amplify their efforts to build a more favourable global political environment for the issue. Lessons could be drawn from other public health and environmental movements that have succeeded in negotiating for international legal frameworks (eg, the UN Climate Change Conference of the Parties).

### Issue characteristics

Several issue characteristics have facilitated the slow but steady rise of road safety as a priority on the global agenda. Firstly, credible indicators were available to shed light on the health burden posed by RTIs. In 2004, the first World Report on Road Traffic Injury Prevention elevated the visibility of this global epidemic and subsequently, WHO has released four editions of the



### Panel 2: Ten challenges to be addressed in the second global Decade of Action for Road Safety

- Road safety is a multisectoral issue
- Financing for road safety is not proportionate to the rhetoric
- Other effects on health and the environment need to be included in the solutions
- Safety is still not truly valued
- Global health still does not own road safety
- Legislation without enforcement does not work
- Interventions need implementation in countries
- Vision Zero might not be the first answer in all low-income and middle-income countries
- Caution is needed for industry engagement
- Scarcity of trained human resources is a bottleneck in low-income and middle-income countries

Global Status Reports on Road Safety.<sup>1,15–17</sup> These data continue to remind the global health community that RTIs are one of the leading causes of death worldwide and the number one cause of death for young people aged between 5 and 29 years.<sup>1</sup> For example, the 2018 report unveiled the fact that the absolute number of deaths from RTIs have increased to 1.35 million per year, with the highest rates occurring in low-income countries.<sup>1</sup> However, there are substantial disparities across countries and even within countries. For example, considerable heterogeneity across Mexican states was found during a review, published in 2020, of the Global Burden of Diseases, Injuries, and Risk Factors Study 2017 data.<sup>35</sup> Road safety advocates are keenly aware of these figures and understand that deaths are just the tip of the iceberg. Traffic crashes also contribute to an estimated 50.0 million non-fatal injuries each year.<sup>12</sup>

Secondly, the economic burden posed by RTIs is also considerable and available. Globally, the economic cost of RTIs was estimated at \$518 billion in 2000, with LMICs accounting for about \$65 billion, which is more than these countries received in development aid at that time.<sup>36</sup> In 2014, the economic cost of serious and fatal RTIs worldwide was estimated to be \$1.8 trillion, which equated to an average of 3% of gross domestic product (GDP) in middle-income countries and 5% of GDP in low-income countries.<sup>37,38</sup> The World Bank also estimated the economic cost of RTIs to be between 7–22% of GDP across LMICs in 2010.<sup>39</sup> In addition, economically disadvantaged families are hardest hit by both direct medical costs and indirect costs (eg, lost wages) that result from RTIs. Due to the economic costs of RTIs, many families are driven into poverty or suffer adverse social, physical, and psychological effects. Non-fatal RTIs also impose a substantial burden on the health, insurance, and legal systems in countries because 90% of all RTIs occur in LMICs.<sup>1</sup>

Although the interventions required to address road safety can be complex, the global community has recently coalesced around several key evidence-based interventions because of the Save LIVES technical package. Launched in May, 2017 by WHO, the Save LIVES technical package highlights six components (speed management, leadership, infrastructure improvement, vehicle safety, enforcement, and post-crash survival) and 22 corresponding interventions to facilitate decision making around the world.<sup>28</sup> Although challenges related to the prioritisation of these interventions will remain, this technical package represents a key step in garnering technical consensus among the array of stakeholders involved in road safety.

Our political and policy analysis reveals that, despite the fact that progress has been made in generating credible indicators and fostering consensus around key evidence-based interventions to feature road safety as a global problem of concern (ie, issue characteristics), more work is needed to ensure that road safety is prioritised at the highest level. There is a pressing need for more effective frameworks to be developed (table 1). Currently, the way in which road safety advocates understand and portray the issue (ie, ideas) has been particularly challenging for the movement. More work is also required to further strengthen cohesion, mobilise civil society, identify a lead agency (ie, actor power), and build a more favourable global environment (ie, political context) for this pressing public health issue.

### Problem analysis: challenges

Awareness of a high burden, identification of some priority interventions, and a higher status on the global agenda have been successes for road safety. Although these efforts show the development of a relatively unified global community, most data show that the road safety challenge has not yet been fully addressed. This discordance is a symptom of what the road safety movement has not been able to achieve thus far (panel 2). Therefore, we offer the following ten challenges for global road safety. This list is not in order of priority. These challenges should be seen in the context of major global health movements for achieving SDGs, universal health care, and addressing the COVID-19 pandemic. We hope that these challenges can be used to encourage further dialogue to implement and deliver during the second Decade of Action for Road Safety (2021–30).

#### (1) Road safety is a multisectoral issue

Many multisectoral issues can have little clarity around roles and leadership, which means that no one has a clear lead and no one pays attention. The road safety situation in LMICs represents two types of scenarios. The first group are countries that have been immersed in a rapid process of motorisation and urbanisation, with little development of safety standards or infrastructure. This first group contributes highly to the burden of RTI worldwide. The second group of LMICs have a pattern

similar to that observed in high-income countries in the beginning of the industrialisation era, where pedestrians and cyclists are the most vulnerable road users. As a result, new transdisciplinary approaches are needed to understand which strategies must be implemented in both groups of countries, and how they should be implemented (panel 3). The role of each sector (eg, health, transport, and law sectors) will differ depending on the context and one sector will need to take the lead. As a result, at a country level, strategies to strengthen local and national leadership remain crucial.

### **(2) Financing for road safety is not proportionate to the rhetoric**

Road safety is a long-term and ongoing investment. New infrastructure and technological advances will provide new opportunities and risks, so road safety systems will need to continuously evolve and adapt. This requires a long-term view by countries to leverage their own resources and bring domestic funding to bear on the issue. In addition, the role of development partners and private donor organisations needs to be supportive to national priorities and enable the strengthening of national systems. Independent programmes, ad hoc funding, and multiple vertical programmes within a country, which are often the norm in some countries, will not enable sustainable road safety outcomes.

### **(3) Other effects on health and the environment need to be included in the solutions**

The global road safety community has largely focused their attention on crashes, injuries, and deaths as primary outcomes. Although some efforts have been made to enlarge the discourse to other health effects of transport, these have not been dominant and those communities have not been cored to the cause. The negative health implications of road transport via air pollution, noise pollution, sedentary lifestyles, and mobility issues have not been well integrated into the key narrative of global road safety (with some exceptions). It might be time to coalesce a larger, and potentially stronger, global community around the holistic consideration of road transport and offer the advantages of co-investment and co-benefits to a stronger and larger group of allies. Reaching out to other sectors outside of health and transport would help shape a strong global movement for road safety. Such a framework would help to galvanise a strong set of stakeholders and would eventually help to reduce road injuries and deaths. The new global Decade of Action for Road Safety plan, launched in October, 2021, was an opportunity to call attention to the co-benefits of addressing road safety; however, these benefits do not appear to have been highlighted.<sup>40</sup>

### **(4) Safety is still not truly valued**

On the basis of three observations, we have deduced that safety is still not truly valued. Firstly, RTIs are often viewed as a negative externality of development, but they do not

#### **Panel 3: Brief case studies on road safety**

##### **Mexico**

Mexico, like many other countries, accepted the UN commitment to reduce mortality due to road traffic injuries (RTIs) by 50% in 10 years (2011–20). The goal was considered an aggregated measure and without much national discussion, but there was also little clarity on methods to evaluate progress and achievement of the Decade of Action for Road Safety. Mexico conducted an exercise in 2015–16 to assess whether it was possible to meet the goal of reducing mortality by 50% in 10 years.<sup>50–52</sup> This exercise revealed that: (1) the aggregate goal at a national level had implications when the same goal was established for each of the country's 32 states, and the analysis found that it was not the most appropriate approach for each state; (2) Mexico started focused action for road safety in 2008 (linked to the Mexican Road Safety Initiative) before the Decade of Action and this clearly affected the trends and influenced the establishment of the national and state goals between 2011 and 2020; (3) many of the interventions promoted were focused on vehicle occupants and observed trends showed a substantial decrease in RTIs (in comparison with trends expected without the programme); and (4) when analysing RTI trends between 2011 and 2020 among vulnerable road users such as pedestrians, cyclists, and motorcyclists, observed trends were higher than expected.

##### **Turkey**

In 2010, Bloomberg Philanthropies launched the Bloomberg Initiative for Global Road Safety (formerly known as the Road Safety in 10 Countries Project). Turkey was one of the ten priority countries selected for this project due to the high rates of RTIs and road traffic-related deaths. After a series of meetings with national stakeholders, two cities, Ankara and Afyon, were identified as sites where interventions related to seat belt use and speed were to be implemented. Results showed that, although speed reduction did not improve substantially during the project periods (2010–14), seat belt use increased dramatically in both cities, drawing national attention.<sup>53–54</sup> In Afyon, the percentage of seat belt use by drivers and front-seat passengers increased from 6·8% in 2010 to 72·9% in 2013, but then declined by 28·0% in 2014. In Ankara, the percentage of seat belt use by drivers and front-seat passengers increased from 22·4% in 2010 to 37·1% in 2014.

need to cost human lives. We argue that RTIs are the cost of unregulated and unplanned efforts that are under development, particularly when infrastructure projects are not evaluated for their effect on human safety. Prevention of RTIs is fundamentally about valuing safety, and countries should not assume, although they sometimes do, that mobility and safety are at odds. Safety ought to be consistent with efficiency in travel, and our current knowledge is quite capable of balancing those aims. Secondly, unlike maternal health or breast cancer, RTIs affect all ages and groups: there is no single group that is exclusively affected. The pervasiveness of RTIs makes them almost invisible, which means many communities are affected, and this requires active strengthening of victim organisations. Thirdly, the framing of road safety has been about numbers of injuries and deaths and has not used a framework (or set of frameworks) that resonates with other political leaders or civil society leaders. Advocates for other public health issues have effectively used frameworks that resonate with other stakeholders, such as by framing health issues as injustices. Mobilising social justice and inequity as a core argument for road safety will add value to global efforts. Moreover, understanding the priorities of political and civil society

leaders, and ensuring that the road safety frameworks align with these priorities, will also facilitate advocacy.

#### **(5) Global health still does not own road safety**

We argue that despite all the progress, as our analysis shows, road safety is not germane to global health thus far. Firstly, a good indicator of such ownership is financial commitment, and a wide variety of global health stakeholders have not provided this. Secondly, RTIs are not explicitly a major part of the efforts for universal health care; maternal, child, and adolescent health; or healthy aging. RTIs need to be a core component of these commitments. This absence of integration is reflective of the focus on the unfinished agenda of infectious diseases and related conditions, with slow uptake of NCDs by these communities. Furthermore, this separation reflects the absence of effective advocacy directed at these communities by global road safety groups. Thirdly, the global road safety community is unclear on how to consider the COVID-19 pandemic as a way to highlight the mortality toll of road safety.

#### **(6) Legislation without enforcement does not work**

Comprehensive national or state road safety laws and regulations are effective in reducing RTIs.<sup>1</sup> The enactment of such laws is often influenced both positively and negatively by political will, competing priorities, public pressure, and resources.<sup>41</sup> Laws that are relevant to road safety include transport laws, criminal laws, insurance laws, constitutional laws, public health laws, and tort laws. It is well documented that enforced legislation can have a powerful effect on some risky behaviours, which leads to reductions in crashes, injuries, and deaths.<sup>42</sup> However, in 2016, only five countries (covering a total population of approximately 144 million people) had laws that met good practice on all five of the major RTI risk factors (table 2) and self-assessed enforcement was extremely variable.<sup>1</sup> It is therefore imperative the countries are not only encouraged to formulate laws on road safety but also helped to enforce them at all governmental levels.

#### **(7) Interventions need implementation in countries**

In 2017, WHO published the Save LIVES technical package that provides an inventory of 22 evidence-based interventions in six core components. These core components were founded on the pillars in the global plan for the first Decade of Action.<sup>43</sup> The package offers policy makers and practitioners potential solutions to address their road safety crisis; however, although it is a major step forward, the real challenge is the translation of this knowledge into implemented real-life interventions.<sup>28</sup> The package falls short of implementation guidelines, country capacity reviews, and guidance for national support systems to enable them to understand and implement these interventions. Such an approach also does not address the inherent variation in the burden, risks, and

implementation challenges across LMICs. Production of packages has become a strategy for WHO in many fields, but the assumption of national absorptive capacity is a major drawback, especially in LMICs. Road safety is fraught with a scarcity of human, technical, financial, and political resources. More work is needed if such packages are going to make a real-world difference (panel 1).

#### **(8) Vision Zero might not be the first answer in all LMICs**

The development of Vision Zero in resource-rich, organised, and homogenous societies was a testament to the technically sound arguments used for it and the amount of social solidarity in the countries that it was implemented in. Discussions of short-term to medium-term goals, under a locally appropriate vision for road safety in large, heterogeneous, and politically diverse countries could be fundamentally different. The variation in RTI rates, absolute numbers of deaths, and risks across LMICs has been well documented and this variation means that a standardised approach might not work universally. We believe in the value of the safe systems approach but argue that premature discussions framed as Vision Zero could complicate early achievement of measurable reductions in RTIs in some (albeit not all) contexts. Vision Zero cannot be a government decree or the logo for an NGO. Vision Zero has to be a social compact agreed upon by societies when they are ready. In the meantime, it might be fruitful to aim for, and achieve, meaningful reductions in RTIs to showcase the value and belief in evidence-based interventions. This approach implies a shift in responsibility from road users to roads systems, which means that governments, the private sector, and civil society share co-responsibility with road users to make transport systems safe.<sup>44</sup> The approach demands new modes of governance in which social actors are mobilised and persuaded to assume responsibility for their actions in support of public values like road safety. This kind of joint action requires a lead agency that unfortunately does not exist in almost 50% of LMICs.<sup>45</sup>

#### **(9) Caution is needed for industry engagement**

Road safety has several commercial determinants of health, including well-defined risks (eg, alcohol) and other influences (eg, car industries and oil companies). The risk of engaging with industries like the alcohol industry (alcohol is one of the major risk factors for RTIs) is clear, has been well studied, and the tactics of these industries have been exposed.<sup>46–48</sup> Alcohol companies use engagement with road safety to their benefit, to promote potential solutions that have little or no evidence and to detract from effective interventions against the product they sell. Caution has been expressed for engagement with other industries as well, although in more nuanced ways. Analysis of industries relevant to public health serve as a reminder that the role of the private sector in road safety needs transparency, careful examination, and continuous evaluation.



## (10) Scarcity of trained human resources is a barrier in LMICs

We argue that human technical capacity is essential to the future of road safety. We acknowledge the role some stakeholders are playing to address this issue, but current efforts are often specific to a few academic centres, focused on small numbers, or dominated by short courses. The development of a strong human capital for road safety, particularly in LMICs, will depend on dedicated human resources with good knowledge of technical skills who have worked in the field for many years. The allocation of a person as the focal point for all injuries (or even all NCDs) in ministries of health is not sufficient. Moreover, the diversity of skills needed to address road safety includes not only the traditional competencies in public health approaches, transport sciences, and road engineering; but also social sciences, political analyses, and economic analyses.

We present these ten challenges as key to agenda setting for the recently declared second global Decade of Action for Road Safety.<sup>40</sup> We believe that the action plan for the second decade must learn from our analysis and from more than 20 years of global road safety history.

## Conclusion

This paper pulls together a brief history and sociopolitical analysis of what has happened in the field of road safety for the past two decades. Road safety is inherently complex and political and this must be confronted to progress and create sustained change. The story of road safety includes successes at global level including advocating for a higher political priority and inclusion within the SDGs. Road safety has also involved schisms between sectors, little recognition from other global health issues, and poor financial commitments. We present ten challenges to road safety with the belief that they are important to address and that in responding to them the global community of actors (including ourselves) will welcome critical reflection, a change in course, and the adoption of smarter strategies for the next decade. We invite the road safety community and the global health community to begin an active dialogue on optimal strategies to address these challenges and ensure that the second Decade of Action for Road Safety (2021–30) is a decade of delivery that leads to real, substantial decline in both the risk and global burden of RTIs.

### Contributors

AAH and MP wrote the first draft; MP prepared tables and graphs; CH conducted the political and policy analysis; and MH reviewed and developed case studies. All authors reviewed and approved the final version of the paper.

### Declaration of interests

AAH and MP have been involved in global road safety for over 20 years and have been part of many of the programmes and projects discussed in this paper. MH has also led road safety efforts in Mexico and represented Mexico in global road safety events and CH has been part of

several teams working on programmes mentioned in the paper. We declare no other competing interests.

### References

- 1 WHO. Global Status Report on Road Safety 2018. Geneva: World Health Organization, 2018.
- 2 James SL, Abate D, Abate KH, et al. Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet* 2018; **392**: 1789–858.
- 3 UN. Transforming our world: the 2030 agenda for sustainable development. New York, NY: United Nations, 2015.
- 4 International Federation of the Red Cross and Red Crescent Societies. World disasters report 1999. Geneva, Switzerland: International Federation of the Red Cross and Red Crescent Societies, 1999.
- 5 WHO. A 5-year WHO strategy for road traffic injury prevention. Geneva: World Health Organization, 2001.
- 6 UN General Assembly. Global road safety crisis: report of the Secretary-General, A/58/228. New York, NY: United Nations, 2003.
- 7 Borowy I. Road traffic injuries: social change and development. *Med Hist* 2013; **57**: 108–38.
- 8 Krug EG, Butchart A, Peden M. A new department for injuries and violence prevention at the World Health Organization. *Inj Prev* 2001; **7**: 331–33.
- 9 Peden M Sr, Sleet D, Mohan D, Hyder AA, Jarawan E, Mathers C, eds. World report on road traffic injury prevention. Geneva: World Health Organization, 2004.
- 10 Peden M, Sminkey L. World Health Organization dedicates World Health Day to road safety. *Inj Prev* 2004; **10**: 67.
- 11 UN General Assembly. Improving global road safety, resolution A/Res/58/289. New York, NY: United Nations, 2004.
- 12 WHO. Road Safety and Health, world health assembly resolution 57.10. Geneva: World Health Organization, 2004.
- 13 Rosenberg ML, McIntyre MH, Sloan R. Global road safety. *Inj Control Saf Promot* 2004; **11**: 141–43.
- 14 FIA Foundation. UN road safety trust fund kick-started by FIA Foundation \$10M pledge, 2018. <https://www.fiafoundation.org/blog/2018/april/un-road-safety-trust-fund-kick-started-by-fia-foundation-10m-pledge> (accessed April 26, 2019).
- 15 Toroyan T. Global Status Report on Road Safety. *Inj Prev* 2009; **15**: 286.
- 16 Toroyan T, Peden MM, Iaych K. WHO launches second Global Status Report on Road Safety. *Inj Prev* 2013; **19**: 150.
- 17 WHO. Global Status Report on Road Safety 2015. Geneva: World Health Organization, 2015.
- 18 Hyder AA, Paichadze N, Toroyan T, Peden MM. Monitoring the decade of action for global road safety 2011–2020: an update. *Glob Public Health* 2017; **12**: 1492–505.
- 19 Peden M. Global collaboration on road traffic injury prevention. *Int J Inj Contr Saf Promot* 2005; **12**: 85–91.
- 20 Shiffman J, Smith S. Generation of political priority for global health initiatives: a framework and case study of maternal mortality. *Lancet* 2007; **370**: 1370–79.
- 21 Kingdon J. Agendas, alternatives, and public policies. Upper Saddle River, NJ: Pearson, 2011.
- 22 Koornstra M, Lynam D, Nilsson G, et al. SUNflower: a comparative study of the development of road safety in Sweden, the United Kingdom, and the Netherlands. 2002. <https://swov.nl/sites/default/files/publicaties/rapport/sunflower/sunflower.pdf> (accessed Nov 1, 2021).
- 23 Rumar K. Transport safety visions, targets and strategies: beyond 2000. Brussels: European Transport Safety Council, 1999.
- 24 Haddon W Jr. The changing approach to the epidemiology, prevention, and amelioration of trauma: the transition to approaches etiologically rather than descriptively based. *Am J Public Health Nations Health* 1968; **58**: 1431–38.
- 25 Bliss A, Breen J. Implementing the recommendations of the world report on road traffic injury prevention country guidelines for the conduct of road safety management capacity reviews and the related specification of lead agency reforms, investment strategies and safety programs and projects. Washington, DC: Global Road Safety Facility, 2008.

- 26 Kristianssen A-C, Andersson R, Belin M-Å, Nilsen P. Swedish Vision Zero policies for safety—a comparative policy content analysis. *Saf Sci* 2018; **103**: 260–69.
- 27 Peden MM, Khayesi M. Save LIVES technical package: 22 interventions that could make a difference. *Inj Prev* 2018; **24**: 381–83.
- 28 Guttman N. Communication, public discourse, and road safety campaigns. New York, NY: Routledge, 2014.
- 29 McAndrews C. Road safety as a shared responsibility and a public problem in Swedish road safety policy. *Sci Technol Human Values* 2013; **38**: 749–72.
- 30 WHO. Reporting on road safety: a guide for journalists. Geneva: World Health Organization, 2015.
- 31 Bishai D, Hyder AA, Ghaffar A, Morrow RH, Kobusingye O. Rates of public investment for road safety in developing countries: case studies of Uganda and Pakistan. *Health Policy Plan* 2003; **18**: 232–35.
- 32 Watkins K. Safe and sustainable roads: the case for a sustainable development goal. London: FIA Foundation, 2015.
- 33 Hoe C, Rodriguez DC, Üzümcüoğlu Y, Hyder AA. Understanding political priority development for public health issues in Turkey: lessons from tobacco control and road safety. *Health Res Policy Syst* 2019; **17**: 13.
- 34 Jacobs GA-TA, Astrop A. Estimating global road fatalities. Crowthorne, UK: Transport Research Laboratory, 2000.
- 35 Híjar M, Pérez-Núñez R, Hidalgo-Solórzano E, et al. Unintentional injuries in Mexico, 1990–2017: findings from the Global Burden of Disease Study 2017. *Inj Prev* 2020; **26** (suppl 1): i154–61.
- 36 Dahdah S, McMahon K. The true cost of road crashes: valuing life and the cost of a serious injury. Washington, DC: International Road Assessment Programme, World Bank Global Road Safety Facility, 2008.
- 37 International Road Assessment Programme. Vaccines for road safety. Basingstoke: International Road Assessment Programme, 2015.
- 38 The World Bank, Global Road Safety Facility. Global road safety facility strategic plan (2013-2020). Washington, DC: The World Bank, 2014.
- 39 WHO. Strengthening road safety legislation: a practice and resource manual for countries. Geneva: World Health Organization, 2013.
- 40 WHO. Global plan: decade of action for road safety, 2021–2030. Geneva: World Health Organization, 2021. [https://cdn.who.int/media/docs/default-source/documents/health-topics/road-traffic-injuries/global-plan-for-road-safety.pdf?sfvrsn=65cf34c8\\_27&download=true](https://cdn.who.int/media/docs/default-source/documents/health-topics/road-traffic-injuries/global-plan-for-road-safety.pdf?sfvrsn=65cf34c8_27&download=true) (accessed Nov 1, 2021).
- 41 Gielen A, Sleet D, Green L. Community models and approaches for intervention. In: Gielen AC, Sleet DA, DiClemente, eds. Injury and violence prevention. San Francisco, CA: Jossey-Bass, 2006: 65–82.
- 42 WHO. Save LIVES: a road safety technical package. Geneva: World Health Organization, 2017.
- 43 McCambridge J, Mialon M, Hawkins B. Alcohol industry involvement in policymaking: a systematic review. *Addiction* 2018; **113**: 1571–84.
- 44 Hysing E. Responsibilization: The case of road safety governance. *Regul Gov* 2021; **15**: 356–69.
- 45 The World Bank. Note on international examples of road safety lead agencies. Varsovia: The World Bank, 2005. [https://www.krbrd.gov.pl/wp-content/uploads/2020/12/WB\\_NoteOnInternationalExamplesOfNLAs\\_FINAL\\_ENG.pdf](https://www.krbrd.gov.pl/wp-content/uploads/2020/12/WB_NoteOnInternationalExamplesOfNLAs_FINAL_ENG.pdf). (accessed Nov 1, 2021).
- 46 Hoe C, Hyder AA. Alcohol industry and public health: friends or foes? *J Stud Alcohol Drugs* 2017; **78**: 635–36.
- 47 Jernigan DH. Global alcohol producers, science, and policy: the case of the international center for alcohol policies. *Am J Public Health* 2012; **102**: 80–89.
- 48 Stuckler D, McKee M, Ebrahim S, Basu S. Manufacturing epidemics: the role of global producers in increased consumption of unhealthy commodities including processed foods, alcohol, and tobacco. *PLoS Med* 2012; **9**: e1001235.
- 49 WHO. Global road safety performance targets. Geneva: World Health Organization, 2017. <https://www.who.int/publications/m/item/global-road-safety-performance-targets> (accessed Nov 1, 2021).
- 50 Pérez-Núñez R, Hidalgo-Solórzano E, Híjar M. Impact of Mexican road safety strategies implemented in the context of the UN's decade of action. *Accid Anal Prev* 2021; **159**: 106227.
- 51 Híjar M, Pérez-Núñez R, Salinas-Rodríguez A. Advances in Mexico in the middle of the decade of action for road safety 2011–2020. *Rev Saude Publica* 2018; **52**: 67.
- 52 Pérez-Núñez R, Híjar M, Celis A, Hidalgo-Solórzano E. El estado de las lesiones causadas por el tránsito en México: evidencias para fortalecer la estrategia mexicana de seguridad vial. *Cad Saude Publica* 2014; **30**: 911–25 (in Spanish).
- 53 Rodríguez-Hernández JM, Campuzano-Rincón JC, Híjar M. Comparación de datos sobre mortalidad por atropellamientos en la Ciudad de México: ¿se han presentado cambios en una década? *Salud Publica Mex* 2011; **53**: 320–28 (in Spanish).
- 54 Gupta S, Hoe C, Özkan T, et al. Evaluation of a five-year Bloomberg global road safety program in Turkey. *Public Health* 2017; **144S**: S45–56.

Copyright © 2022 Elsevier Ltd. All rights reserved.