

factors and service delivery mechanisms

INTRODUCTION

Background

1. Road traffic injuries are the ninth leading cause of death globally, and the principal cause of death among those aged 15–29 years. Road traffic crashes are responsible for over 1.25 million deaths each year, while estimates of the burden of non-fatal injuries range from 20 to 50 million.¹

2. Half of all deaths on the world's roads are among those with the least protection – motorcyclists (23%), pedestrians (22%) and cyclists (4%). However, the likelihood of dying on the road as a motorcyclist, cyclist or pedestrian varies by region: for example, the African Region has the highest proportion of pedestrian and cyclist deaths at 43% of all road traffic deaths, while in the South-East Asia Region motorcyclists comprise the highest proportion of road traffic deaths at 34%. This partly reflects the predominant forms of mobility in different regions, as well as the level of safety measures in place to protect different road users.

3. Although road traffic injuries have been a leading cause of mortality for many years, most traffic crashes are both predictable and preventable. There is considerable evidence on interventions that are effective at making roads safer: countries that have successfully implemented these interventions have seen corresponding reductions in road traffic deaths. Rolling out these interventions globally offers huge potential to mitigate future damage and save lives at a global level.

Mandate

4. In recognition of the scale of the health, social and economic impacts of this problem – and the potential to intervene effectively – in 2011 the United Nations declared a Decade of Action for Road Safety, with the aim of reducing the number of global road traffic deaths. In September 2015, the Decade of Action goal was augmented by ambitious global targets within the *2030 Agenda for Sustainable Development*². Sustainable Development Goal 3.6 calls for a reduction in the absolute number of road traffic deaths and injuries by 50% by 2020, relative to a baseline estimate from 2010. Road safety is also covered in SDG target 11.2, which aims to provide access to safe, affordable, accessible and sustainable transport systems for all by 2030.

¹ http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/

² <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

5. The importance of setting performance targets and monitoring progress towards the achievement of the SDG targets was highlighted in United Nations General Assembly Resolution A/70/260, adopted in April 2016,³ as well as by the World Health Assembly. Indeed, WHA Resolution 69.7, adopted in May 2016,⁴ requested WHO, in collaboration with other United Nations agencies and the United Nations regional commissions, to continue facilitating a transparent, sustainable and participatory process with all stakeholders to assist interested countries to develop voluntary global performance targets on key risk factors and service delivery mechanisms to reduce road traffic fatalities and injuries.

6. This paper puts forward a set of voluntary global performance targets for the prevention of road traffic injuries, as well as the indicators that will be used to assess their achievement for Member States consideration. Further information on the process to develop this framework follows.

VOLUNTARY GLOBAL PERFORMANCE TARGETS

Why do we need global targets?

7. The process of developing voluntary global performance targets on key risk factors and service delivery mechanisms to reduce road traffic fatalities and injuries will complement the relevant SDG targets.

8. Countries that have managed to improve road safety have shown that doing so is aided by setting targets and reporting on progress towards those targets based on agreed indicators. This can serve to maintain momentum and action towards national road safety efforts in support of positive impacts. Targets and associated indicators provide a means to monitor the extent of progress, and provide an opportunity to adjust the focus and scale of national road safety activities as needed in order to ensure that targets are met in support of objectives.

9. While the global targets to be developed are to be used by countries to guide further action on national road safety efforts, monitoring of progress towards these targets has an important function for the global agenda as well. It serves to raise awareness and reinforce political commitment for stronger and coordinated global action involving all relevant stakeholders for road safety. Global performance targets can also be helpful in assessing progress towards coordinated multi-country initiatives, such as the Decade of Action for Road Safety 2011–2020 and the relevant Sustainable Development Goals.

10. Targets must be quantifiable and should be as specific and realistic as possible. They should be set in consultation with government agencies responsible for implementation. Establishing the baseline against which progress is measured and defining a strategy for monitoring progress towards the targets are essential for future progress in road safety.

³ http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/70/260&referer=/english/&Lang=E

⁴ http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_R7-en.pdf?ua=1

11. Some countries have already established highly ambitious long term performance goals for making their roads safer, such as zero deaths and serious injuries on the road. These longer term goals are usually accompanied by shorter term interim objectives and targets, which in turn articulate specific indicators formally adopted by governments. The indicators are assessed on their projected potential to achieve the target on the basis of the evidence of effectiveness available. All countries are encouraged to adopt long term goals of this kind as a framework for achieving the SDG targets.

What process will be used to develop the targets?

12. While WHO will lead the process of developing these voluntary global targets, this process will be guided by the expertise of the leading agencies in different road safety domains. To ensure the representation of these sectors, in September 2016 WHO established a technical working group to advise on the development of the targets and related indicators.

13. While ultimate endorsement of the voluntary global performance targets will be requested of the World Health Assembly in 2018, a number of consultative steps will be taken in the development process. As well as the full participation of Member States, the process will involve wide ranging multi-sectoral participation, including from the United Nations Road Safety Collaboration members, the Inland Transport Committee of the United Nations Economic Commission for Europe, the relevant working parties of the United Nations Economic Commission for Europe, as well as relevant Non-State actors. In this way, representatives from national road safety lead agencies, as well as relevant stakeholders from other ministries (including ministries of health, transport, interior) and civil society will be represented in the process. Figure 1 outlines the systematic and participatory multisectoral process that is expected to take approximately 18 months.

14. The final agreement on voluntary global performance targets will be finalised no later than November 2017, through a global Formal Meeting of Member States. The Formal Meeting will result in a report which will be transmitted to the 142nd session of the the Executive Board for consideration by Member States. Member States may decide at the Formal Meeting that the report will include a final set of voluntary global targets for road safety risk factors and service delivery mechanisms. In May 2018 Member States will consider the report of the Formal Meeting at the Seventy-first World Health Assembly.

Figure 1: Proposed process for developing voluntary global performance targets on road safety risk factors and service delivery

Meeting of WHO technical expert group to generate candidate voluntary global performance targets and indicators	September 2016
Release of WHO Discussion Paper (zero draft)	October 2016
5 informal consultations on WHO Discussion Paper (zero draft)	Oct. – Dec. 2016
<ul style="list-style-type: none"> • Web based consultation • Member States • UNECE Working Party 29 • UN Road Safety Collaboration • Safety 2016 (injury conference) 	
Release of updated WHO Discussion Paper (Revision 1.0)	February 2017
4 informal consultations/hearings : WHO Discussion Paper (Revision 1.0)	Feb. to May 2017
<ul style="list-style-type: none"> • Open web-based consultation • All Member States (WHO HQ) • Inland Transport Committee (UNECE) • UNECE Working Party 1 • Non-state actors (e.g. civil society, road safety NGOs, professional societies, private sector) 	
Release of updated WHO Discussion Paper containing Revision 2	June 2017,
Global Formal Meeting of Member States (WHO HQ)	Aug. – Nov 2017.
Regional Committee discussions	
Release of final WHO report	November 2017
WHO Executive Board meeting	January 2018
WHO World Health Assembly	May 2018

Defining and monitoring voluntary global performance targets

15. The Global Plan for the Decade of Action for Road Safety 2011–2020 is based upon recommendations of the 2004 World report on road traffic injury prevention. These recommendations have served as a platform for galvanising international road safety action and have been endorsed in a number of UN General Assembly and World Health Assembly resolutions. As such, the targets for inclusion in the global monitoring framework are aligned with this Plan and address the following core areas of road traffic injury prevention:

- Road safety management
- Safer roads and mobility
- Safer vehicles
- Safer road users
- Post-crash response

16. In addition, other general criteria that should be assessed in developing targets for inclusion in a road safety global monitoring framework include:

- High epidemiologic and public health relevance (strong causal links, other health co-benefits)
- Evidence driven targets and indicators
- Availability of effective and feasible public health interventions whose implementation is practical, including in low- and middle-income countries.
- Evidence of achievability at the country level
- Ease of communication (simplicity)

17. For each voluntary global target one or more indicators will need to be developed which may be outcome indicators, intermediate outcome indicators or national systems response indicators⁵. Indicators should:

- Be strongly associated with the injury and/or fatality occurrence
- Be sensitive to changes brought about by road safety measures; and
- Have a clear operational definition, and have feasible monitoring mechanisms available
- Be feasible for countries to collect, compile, analyse and communicate, with high- quality data relating to these indicators on a regular/timely frequency.

⁵ National system response indicators are taken to mean interventions relating the capacity of the health and/or transport system(s): infrastructure, policies and plans, access to key health-care interventions and treatments.

- Be supported by data that can be collected through unambiguous data collection instruments with the potential to set a baseline and monitor changes over time.

18. A “target” represents the specific goal to be achieved by 2030. The baseline year to be used for all targets is 2018, in order to give time to countries to establish baseline data for targets where these are currently unavailable. Some data are available through existing monitoring mechanisms, such as the WHO Global status report on road safety, while new technical tools will be developed to support data collection for some of the proposed indicators. The “indicators” are used to assess progress and achievement of the target. The “data source” describes the origins of information for the indicator.

19. International and multisectoral collaboration in strengthening the capacity of low- and middle-income countries in data collection, analysis and reporting is an important element of a global monitoring framework.

20. High-level political commitment and cooperation between government and various parts of the UN system will be needed. The international development community will be expected to provide technical support to help countries in reinforcing data collection and monitoring functions.

Reporting and review

21. It is proposed that measurement against progress towards the final set of voluntary global targets and indicators will be reported every five years, with the first report providing baseline data for 2018.

22. Reporting must balance country ownership and application with comparability and transparency, so that lessons can be shared and progress measured. This will require close coordination of country reporting with global aggregation and analysis. The responsibility for compiling and interpreting the data and additional analyses lies with WHO, supported by an expert technical group.

CONCLUSION

23. Setting voluntary global performance targets relating to key risk factors and service delivery mechanisms can assist global road safety policy efforts. Selected targets should be based on sound scientific evidence, have related indicators that are measurable, and politically supported. This paper proposes a selection of global targets based on these considerations, and specifies a limited set of indicators that may be used by participating countries to monitor progress towards the achievement of these targets.

Table 1: Candidate global targets and indicators for review

Core area	Objective and target	Indicator	Data source	How data are collected	Justification
Road safety management	<p>Objective:</p> <p>Establish a multisectoral national road safety action plan with time-bound targets.</p> <p>Target:</p>	<p>Existence of a multisectoral national road safety action plan that is funded and includes time-bound targets</p> <p>Existence of a lead agency on road safety that performs a specified number of functions⁶</p>	Ministries of Transport via the National Data Coordinators of the <i>Global status report on road safety</i>	<i>Global status report on road safety</i>	<p>Coordination of road safety efforts across multiple sectors and stakeholders is critical for success. While there are different models for how this coordination is implemented, a lead agency with the mandate and resources to coordinate road safety is recommended.</p> <p>Achieving sustained reductions in road traffic injuries requires countries to have a strategy for road safety that is multi-sectoral, and has time bound and realistic targets set for its objectives.</p>
Safer roads and mobility	<p>Objective:</p> <p>Eliminate high risk roads</p> <p>Target:</p> <p>100 % of new roads are 3 star or better for all road users</p>	<p>% of new roads that are 3 star⁷ or better for all road users</p> <p>% of travel on existing roads that are 3 star or better for all road users</p>	Ministry of Highways or Ministries of Transportation and/or infrastructure	Collected and published annually for 70+ countries by iRAP – or another equivalent system of rating, e.g. EU direction 2008/96/EG.	<ul style="list-style-type: none"> • Road infrastructure has traditionally maximized accessibility and economic efficiency but at the same time has led to increased concerns about safety. • The major crash types that kill or seriously injure road users include pedestrians and cyclists moving along or crossing the road, and head-on, run-off road or intersection crashes involving motorcyclists, cars, buses or trucks. • Cost-effective infrastructure solutions exist for all crash types.

⁶ These functions are defined in the *Global status report on road safety* and include coordinating, legislative and monitoring and evaluation roles.

⁷ <http://www.irap.net/en/about-irap-2/star-ratings>. Star ratings are based on road inspection data and provide a simple and objective measures of the level of safety which is built in to the road for vehicle occupants, motorcyclists, cyclists and pedestrians. Five star roads are the safest while one star roads are the least safe. Note that star ratings can be completed without reference to detailed crash data which are often unavailable.

	<p>or</p> <p>>75% of travel on existing roads are 3 star or better for all road users</p>				<ul style="list-style-type: none"> • The global evidence base on the crash risk associated with infrastructure design features and associated vehicle speeds are included in the global star rating of roads. • Fatal and serious injury crash rates on 1 and 2-star roads are more than double those on 3, 4 and 5-star roads. • Ensuring that new roads are built to meet minimum 3 star safety standards for all road users (including safe speeds, providing sidewalks, safe crossings, safe intersections, safe roadsides and median barriers) will save thousands of lives, particularly among vulnerable road users. • Maximising travel on 3-star or better roads on existing road networks can focus speed management, maintenance and capital investment on existing road networks to save lives. • More ambitious targets of 4 or 5-star performance are encouraged on road networks with high volumes of a particular road user or for higher-performing countries.
<p>Safer vehicles</p>	<p><u>Objective:</u></p> <p>Eliminate production (and importation) of substandard new vehicles.</p>	<p>Implementation of UN regulation R94 and R95 front and side impact protection⁸</p> <p>Implementation</p>	<p>UNECE Working Party 29</p>	<p>UNECE document</p> <p>Collected and published as part of <i>Global status report on road</i></p>	<ul style="list-style-type: none"> • Safe vehicles play an important role both in averting crashes and reducing the likelihood of serious injury in the event of a crash. • The UN World Forum for Harmonization of Vehicle Regulations is the primary global body responsible for the development of passenger car safety standards. The following UN regulations are considered priority standards that all vehicles should meet:

⁸ Or equivalent national standards: in the USA the corresponding standards are FMVSS 208 and 214, Canadian Motor Vehicle standards...

	<p>Target:</p> <p>100% of new vehicles (defined as produced or sold) meeting 8 priority standards (based on UN regulations or equivalent recognised national standards).</p>	<p>of UN regulation R13H⁹ electronic stability control (<i>note that as of Jan 2017 ESC will be covered by UN R140</i>)</p> <p>Implementation of UN regulation R127⁵ pedestrian protection</p> <p>Seat-belts: UN regulation 16.</p> <p>Seat-belt anchorages: UN regulation 14.</p> <p>Child restraints: UN regulations 44 and 129.</p> <p>Implementation of UN regulation R78 motorcycle braking</p>		<p>safety</p>	<ul style="list-style-type: none"> • Frontal impact protection and side impact protection (R94 and R95): these regulations ensure that cars withstand the impacts of a frontal and side impact crash when tested at certain speeds, and are thus critical to protecting occupants. These crash-worthiness regulations help to protect occupants withstand the impacts of front and side impact crashes. During simulated tests, the energy absorbed by the crash-test dummy must be below a certain threshold for the car to pass the tests. • Electronic stability control (R140⁷): this feature aims to prevent skidding and loss of control in cases of over-steering or understeering and is effective at reducing crashes and saving lives. • Pedestrian front protection (R127): Softer bumpers and modifying the front ends of vehicles (e.g. removal of unnecessarily rigid structures) can reduce the severity of a pedestrian impact with a car. • The seat-belt regulation that forms part of the UN's vehicle regulations ensures that seat-belts are fitted in vehicles when they are manufactured and assembled; the anchorage regulation ensures that the seat-belt anchor points can withstand the impact incurred during a crash, to minimize the risk of belt slippage and ensure that passengers can be safely removed from their seats if there is a crash. • The child restraint regulation means that instead of holding the child seat in place with the adult seat-belt, the vehicle is equipped with ISOFIX child restraint anchorage points to secure the restraint that are attached directly to the frame of the vehicle • Motorcycle antilock braking systems (ABS) (R78):
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⁹ Until January 2017 Electronic stability control was covered under UN regulation R13H which establishes requirements for braking systems of light duty vehicles. This is now covered by the new UN Regulation No. 140 on ESC.

					These safety systems help the rider maintain control of the motorcycle vehicle during an emergency braking situation. ABS systems can reduce the likelihood of a road traffic crash and subsequent injury.
Safer road users	Objective: Reduce speeding	National legislation on urban speeds meets best practice ¹⁰	Ministries of Transport via National Data Coordinators of the <i>Global status report on road safety</i>	<i>Global status report on road safety</i>	As average traffic speed increases, the likelihood of a crash and serious injury increases. In urban areas, national speeds should be no more than 50 km/h. It is important that local authorities not only have the legal authority to reduce national limits, but also to manage local speeds according to particular road situations and in conjunction with other traffic calming or speed management policies. Where motorized traffic mixes with high concentrations of pedestrians, cyclists, and moped riders, the speed limit must be under 30 km/h. This is due to the vulnerability of these road users at increasing speed: an adult pedestrian has less than a 20% chance of dying if struck by a car at less than 50 km/h but almost a 60% risk of dying if hit at 80 km/h. There is considerable evidence that local authorities that have reduced urban speed limits to ≤ 30km/h in conjunction with other traffic calming measures have decreased road traffic injuries.
	Target: Reduce the proportion of vehicles travelling over the posted speed limit by at least 10% per year.	% of vehicles driving over the speed limit in urban and rural areas	Country surveys ¹¹		
	Objective:	Legislation on motorcycle helmet	Ministries of Transport via NDCs of the <i>Global status</i>	<i>Global status report on road</i>	Correctly wearing a quality-standard motorcycle helmet can reduce the risk of death by almost 40% and the risk of

¹⁰ Criteria considered essential for legislation on speed, according to the *Global status report on road safety 2015*: National speed law in place; speed limits on urban roads ≤ 50 km/h; local authorities have the power to modify national speed limits – for example to reduce them around schools. Note that in countries where laws are set at subnational level, countries are considered to meet legislative best practice where 80% of subnational entities meet the selected criteria.

¹¹ Guidelines on data collection related to some of these indicators will be developed by technical experts to assist countries in collecting and reporting data in a standardised manner.

	<p>Increase use of motorcycle helmets meeting a quality standard.</p> <p>Target:</p> <p>Reduce the proportion of unhelmeted motorcycle riders by at least 10% per year</p> <p>Or</p> <p>At least 90% helmet wearing</p>	<p>use meets best practice¹²</p> <p>% of motorcycle riders (drivers and passengers) wearing helmets</p>	<p><i>report on road safety</i></p> <p>Country surveys¹¹</p>	<p><i>safety</i></p> <p>Collected as part of <i>Global status report on road safety</i></p>	<p>severe injury by over 70%.</p> <p>To meet best practice, helmet laws should apply to all drivers and passengers, all roads and engine types, requiring the helmet to be fastened, and making reference to a particular helmet standard¹¹.</p> <p>When motorcycle helmet laws are enforced, helmet-wearing rates can increase to over 90%.</p>
	<p>Objective:</p> <p>Increase use of seat-belts</p>	<p>Legislation on seat-belt use meets best practice¹³</p> <p>Legislation on child restraint use meets best practice¹⁴</p>	<p>Ministries of Transport via NDCs of the <i>Global status report on road safety</i></p>	<p><i>Global status report on road safety</i></p>	<p>Wearing a seat-belt can reduce fatalities among front-seat occupants by up to 50% and among rear-seat car occupants by up to 75%.</p> <p>Car seat use reduces the risk for death to infants (aged <1 year) by 71%; and to toddlers (aged 1–4 years) by 54% in passenger vehicles.</p>

¹² Criteria considered essential for legislation on motorcycle helmets, according to the *Global status report on road safety 2015*: National¹ motorcycle helmet law in place, law applies to motorcycle drivers and adult passengers, law applies to all road types, law applies to all engine types, law requires helmet to be properly fastened, law requires helmet to meet a national or international standard. Note that in countries where laws are set at subnational level, countries are considered to meet legislative best practice where 80% of subnational entities meet the selected criteria.

¹³ Criteria considered essential for legislation on seat-belts, according to the *Global status report on road safety 2015*: National seat-belt law in place; law applies to drivers and front seat passengers; law applies to rear seat passengers. Note that in countries where laws are set at subnational level, countries are considered to meet legislative best practice where 80% of subnational entities meet the selected criteria.

	<p>Target:</p> <p>Reduce the proportion of unrestrained occupants by at least 10% per year</p> <p>Or</p> <p>At least 90% seat-belt wearing</p>	<p>% of all occupants wearing seat-belts (disaggregated by driver, front seat passenger and rear seat passenger rates)</p>	<p>Country surveys¹¹</p>	<p>Collected as part of <i>Global status report on road safety</i></p>	<ul style="list-style-type: none"> • Booster seat use reduces the risk for serious injury by 45% for children aged 4–8 years when compared with seat belt use alone. • For older children and adults, seat belt use reduces the risk for death and serious injury by approximately half <p>Seat-belt laws should cover rear-seat occupants as well as front seat occupants. Child restraint laws should take into consideration a child’s age/weight/height and the seating position in the vehicle.</p> <p>Mandatory seat-belt and child restraint laws and their enforcement are effective at increasing the use of these restraints.</p>
	<p>Objective:</p> <p>Reduce drinking and driving¹⁵</p> <p>Target:</p> <p>Reduce the</p>	<p>Legislation on drink-driving meets best practice¹⁶</p>	<p>Ministries of Transport via the National Data Coordinators of the <i>Global status report on road safety</i></p>	<p><i>Global status report on road safety</i></p>	<p>The risk of driving behaviour being impaired by alcohol starts at very low levels of alcohol consumption and begins to rise exponentially as more alcohol is consumed, particularly over a blood alcohol concentration (BAC) level of over 0.05 g/dl (grams per decilitre).</p> <p>Young and novice drivers are at a much increased risk of having a road traffic crash when under the influence of</p>

¹⁴ Criteria considered essential for legislation on child restraints, according to the *Global status report on road safety 2015*: National child restraint law in place; law is based on age-weight- height or a combination of these factors; Law restricts children under a certain age- height from sitting in front seat. Note that in countries where laws are set at subnational level, countries are considered to meet legislative best practice where 80% of subnational entities meet the selected criteria.

¹⁵ Note, this relates to drinking and driving among both drivers of 4 wheeled vehicles as well as drivers of motorcycles.

¹⁶ Criteria considered essential for legislation on drink-driving, according to the *Global status report on road safety 2015*: National1 drink- driving law in place; drink-driving law is based on BAC or equivalent BrAC; BAC limit for general population ≤ 0.05 g/dl; BAC limit for young/novice drivers ≤ 0.02 g/dl. Note that in countries where laws are set at subnational level, countries are considered to meet legislative best practice where 80% of subnational entities meet the selected criteria.

	proportion of deaths attributable to alcohol (or driving while impaired rates)		Country surveys ¹¹		<p>alcohol compared to older and more experienced drivers.</p> <p>Drink-driving laws that limit BAC to ≤ 0.05g/dl are very effective at reducing alcohol related crashes, if they are accompanied by highly visible, intensive and sustained enforcement.</p> <p>The number of crashes involving young people can be reduced by as much as 24% by laws that establish a lower blood alcohol concentration (≤ 0.02 g/dl) for young or novice drivers. Many jurisdictions have zero tolerance (0.00g/dL) for young drivers.</p>
Post-crash response	<p><u>Objective:</u></p> <p>Improve access to emergency care</p> <p><u>Target:</u></p> <p>- Reduce the time from serious injury¹⁷ to first emergency care provider by 10% per year</p>	<p>Average time from serious injury to first contact with emergency care provider (includes providers at all trauma facility levels.</p> <p>-In urban areas</p> <p>-in rural areas</p>	<p>Patient reporting and pre hospital and facility based emergency care delivery data.</p>	<p>Community surveys, systematic prehospital and facility based emergency care data collection (e.g. health information system registries, hospital reporting systems etc). WHO led global data gathering.</p>	<p>There is strong evidence that timely, appropriate emergency care can save lives and reduce disability once injury has occurred.</p>

¹⁷ Based upon countries' individual definitions of serious injury.

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