

Johns Hopkins International Injury Research Unit

World Health Organization
Collaborating Center
for Injuries, Violence and
Accident Prevention

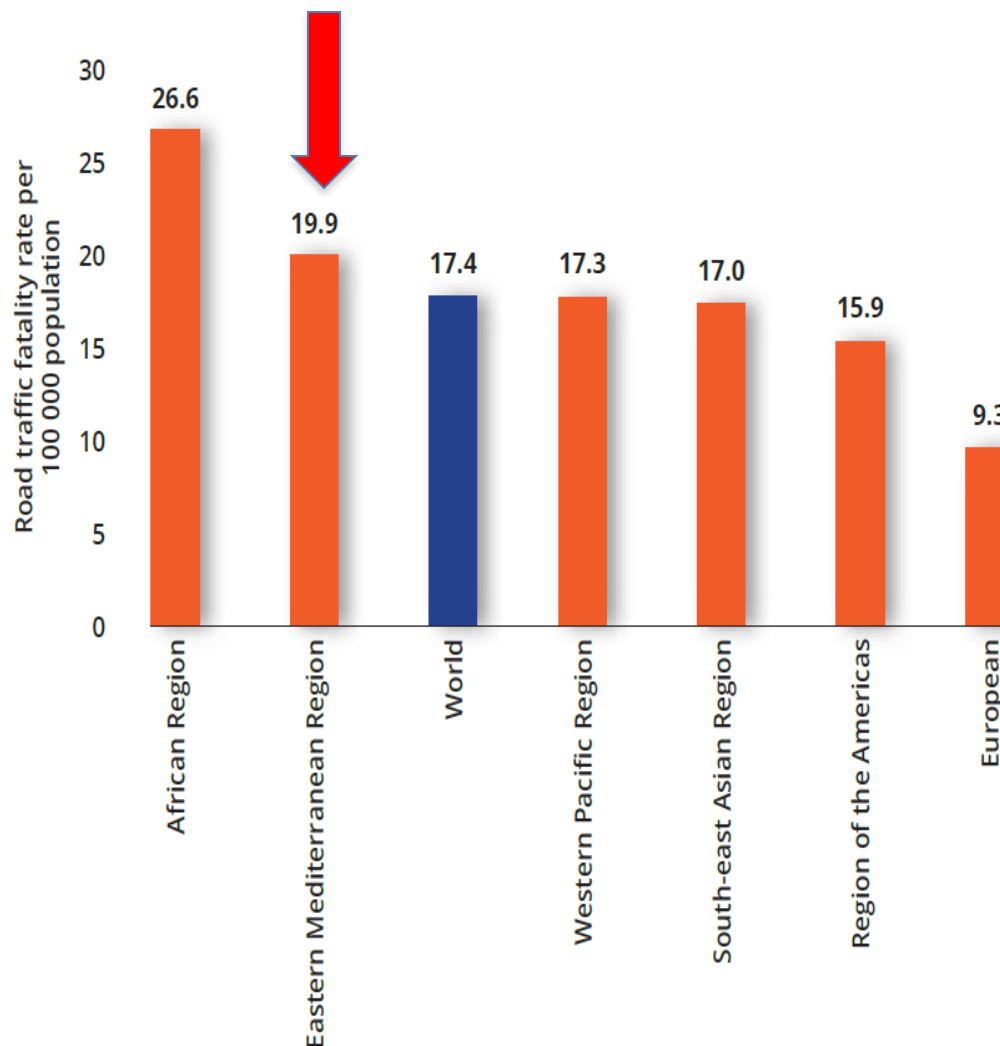


Road Traffic Injuries in the Eastern Mediterranean Region: Current Burden and Evidence-Base for Action

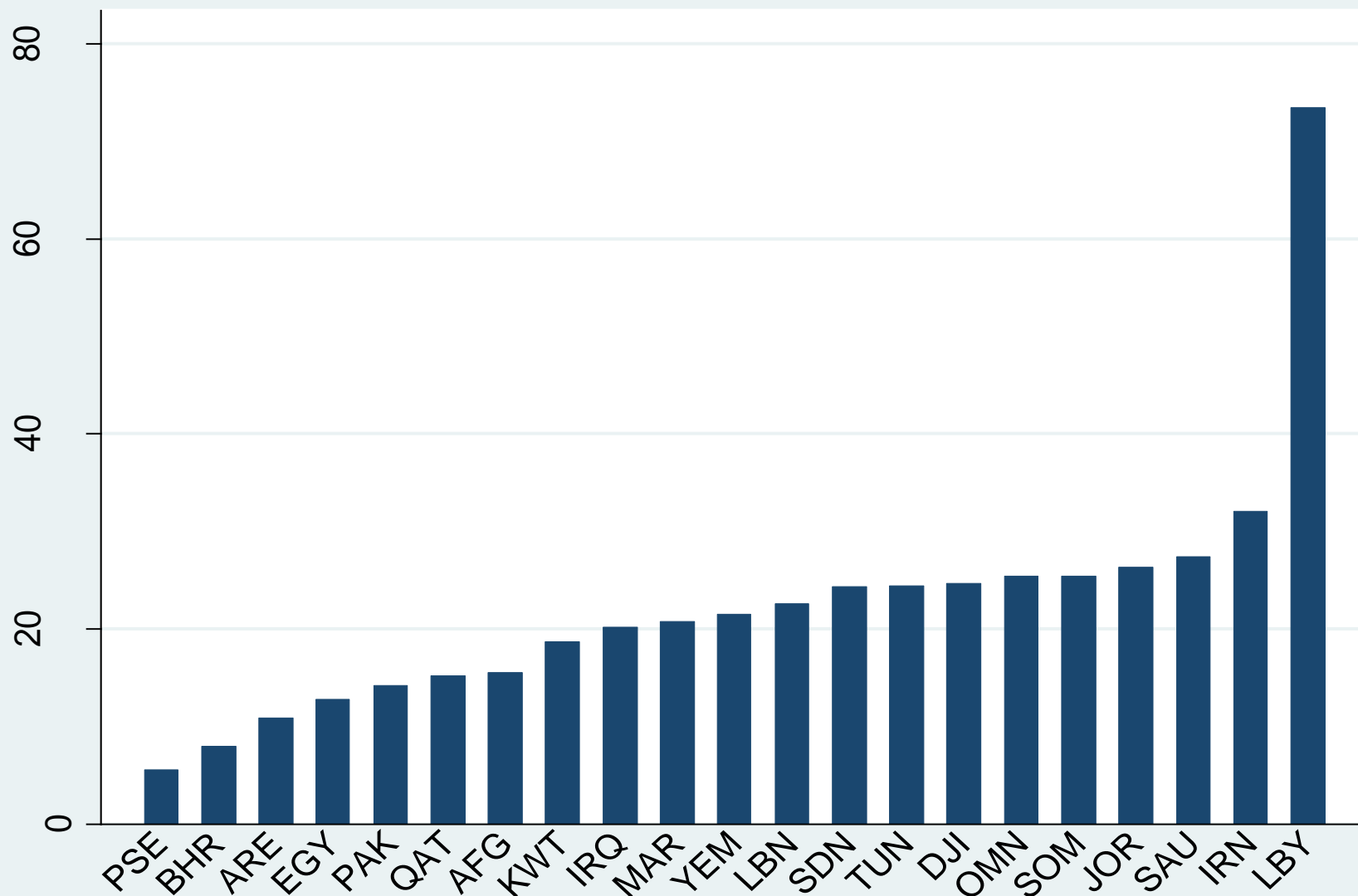
Adnan A. Hyder MD MPH PhD

Professor, Department of International Health
Director, International Injury Research Unit (IIRU)
Johns Hopkins Bloomberg School of Public Health

EMR has Second Highest RTI Death Rate



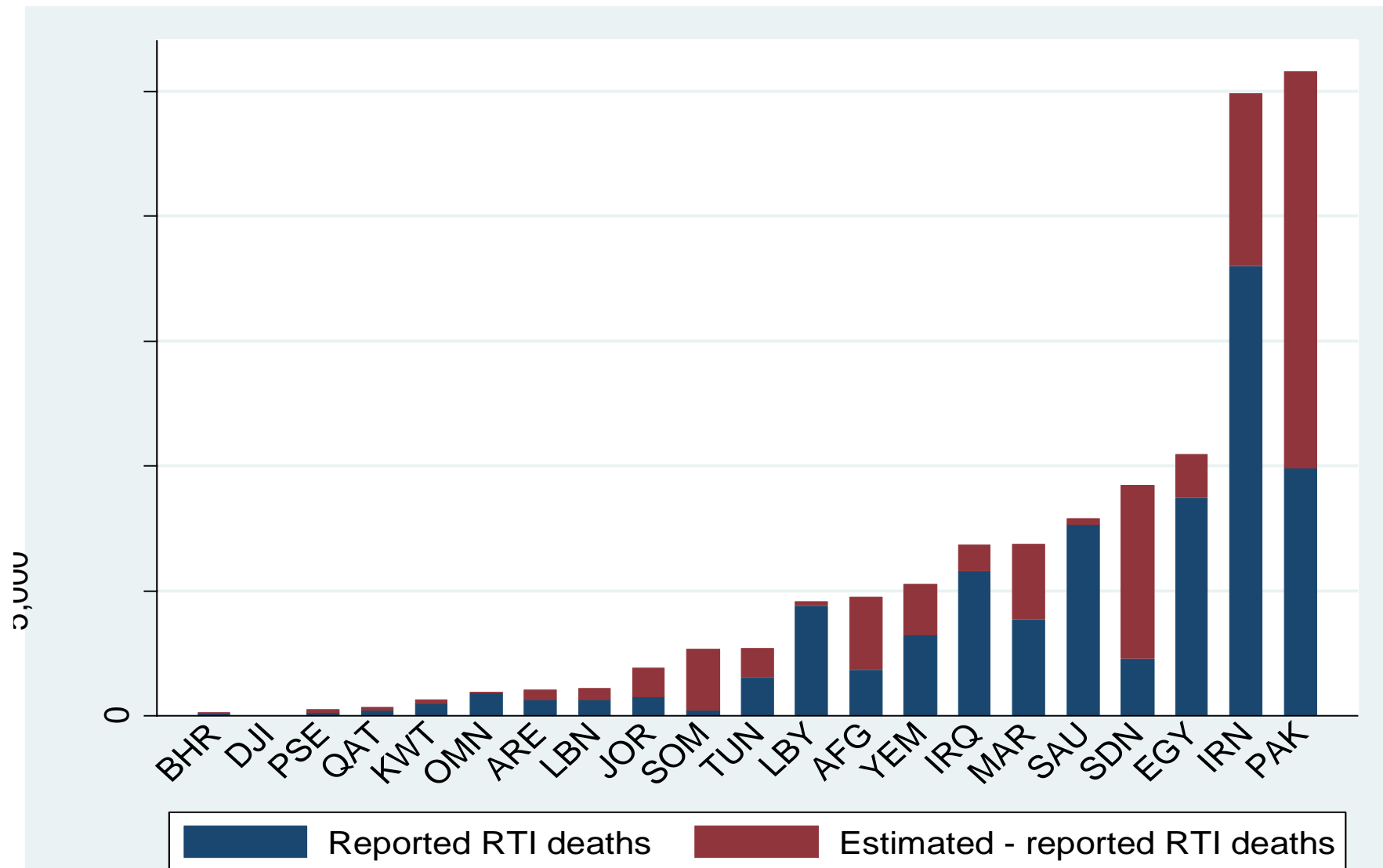
Estimated RTI death rate by EMR country: GSRRS 2015



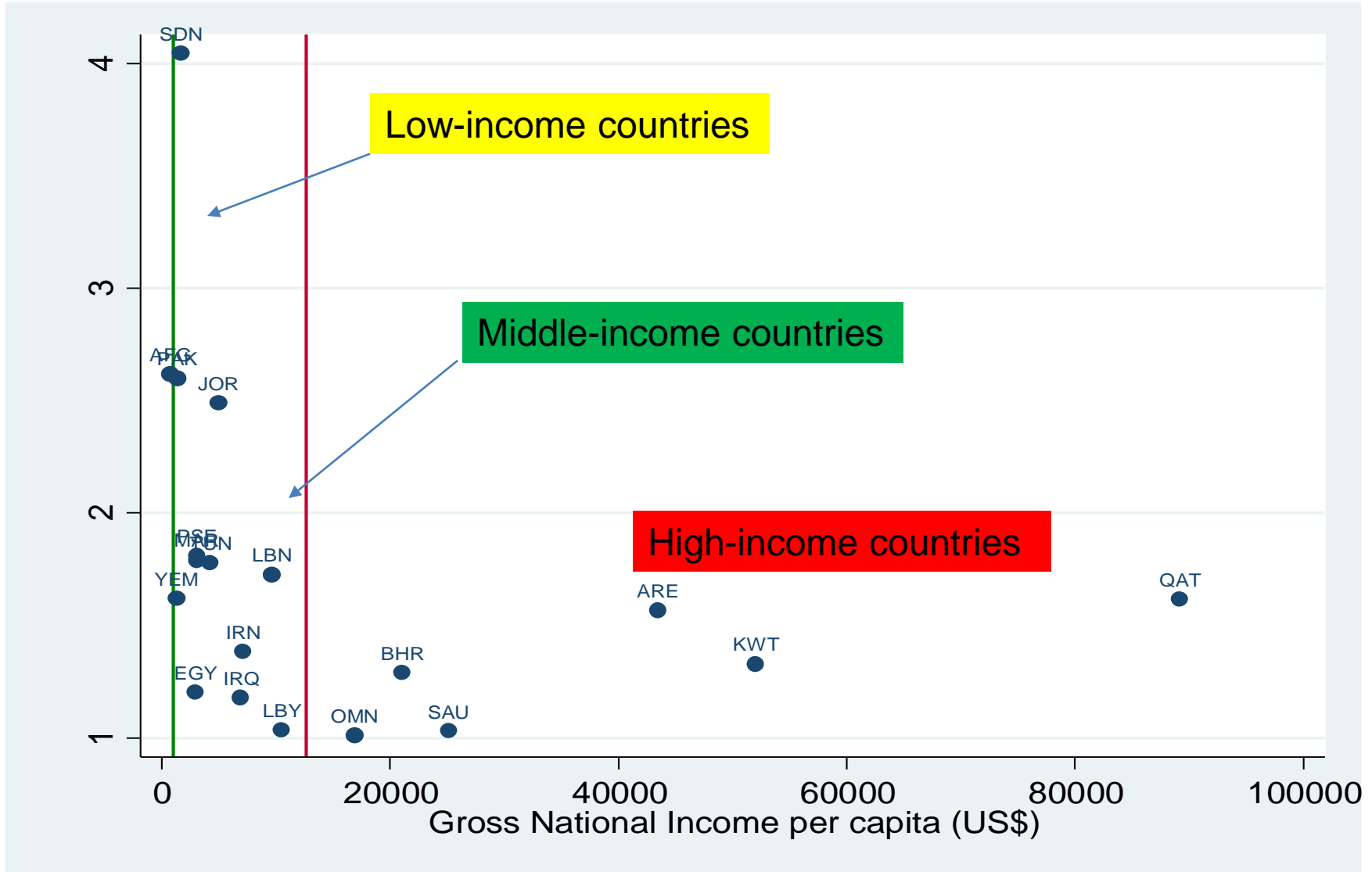
EMRO countries	Income category	Death rate per 100,000	
		GHE 2014	GSRRS 2015
Afghanistan	Low	21.5	15.5
Bahrain	High	7.6	8.0
Djibouti	Middle	11.6	24.7
Egypt	Middle	13.6	12.8
Iran	Middle	41.9	32.1
Iraq	Middle	30.2	20.2
Jordan	Middle	19.9	26.3
Kuwait	High	12.3	18.7
Lebanon	Middle	17.2	22.6
Libya	Middle	32.5	73.4
Morocco	Middle	18.5	20.8
Oman	High	27.2	25.4
Pakistan	Middle	16.9	14.2
Qatar	High	9.8	15.2
Saudi Arabia	High	18.4	27.4
Somalia	Low	17.7	25.4
Sudan	Middle	25.0	24.3
Tunisia	Middle	18.4	24.4
United Arab Emirates	High	9.8	10.9
West Bank/Gaza	Middle	-	5.6
Yemen	Middle	25.9	21.5

RTI
 mortality
 data source
 comparisons

Reported Versus Estimated RTI Deaths in the GSRRS 2015

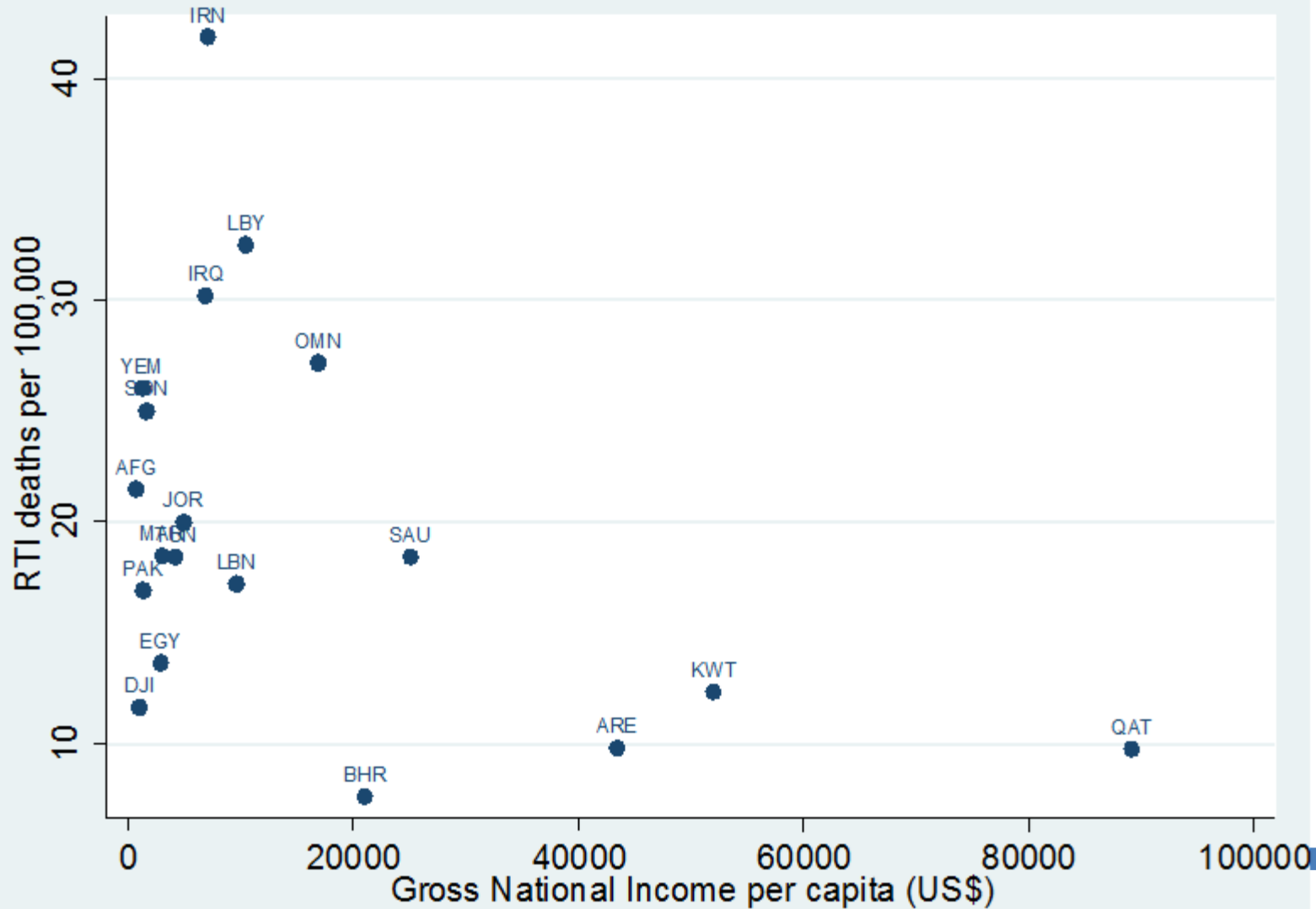


Ratio of Estimated to Reported RTI Deaths by GNI per capita



Source: GSRRS 2015

RTI Death Rate by GNI



Estimated RTI death rate by income group

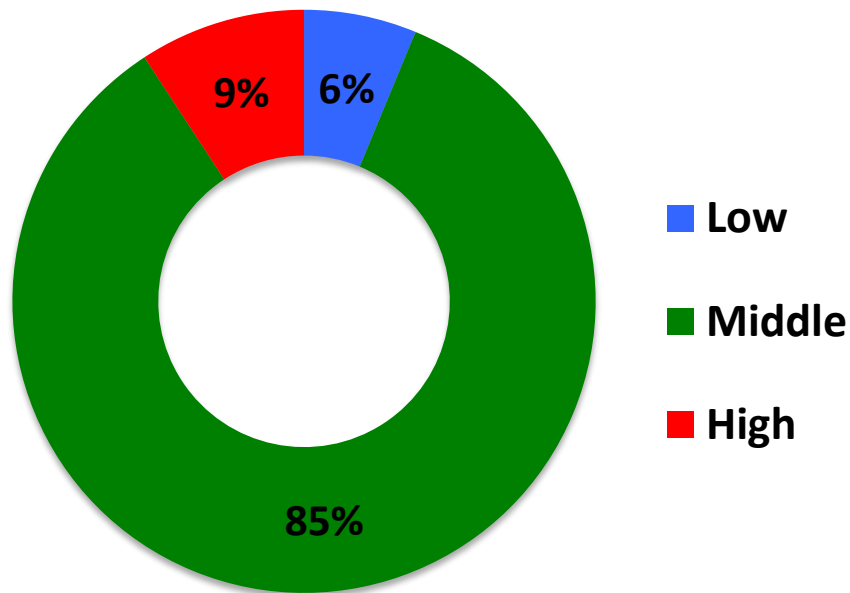
Income level	Number of countries	RTI deaths	Population (million)	RTI death rate (per 100,000)
Low	2	7,398	41	18.02
Middle	13	99,999	505	19.79
High	6	10,909	49	22.41

World Bank 2013:

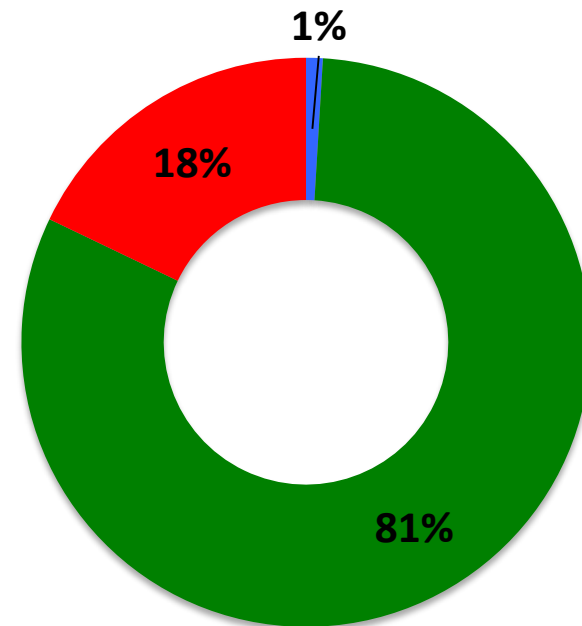
- Low-income = \leq US\$ 1,035 GNI per capita;
- Middle-income = US\$ 1,036 to US\$ 12,615;
- High income \geq US\$ 12,616.

Registered Cars and RTI Deaths by Income Group

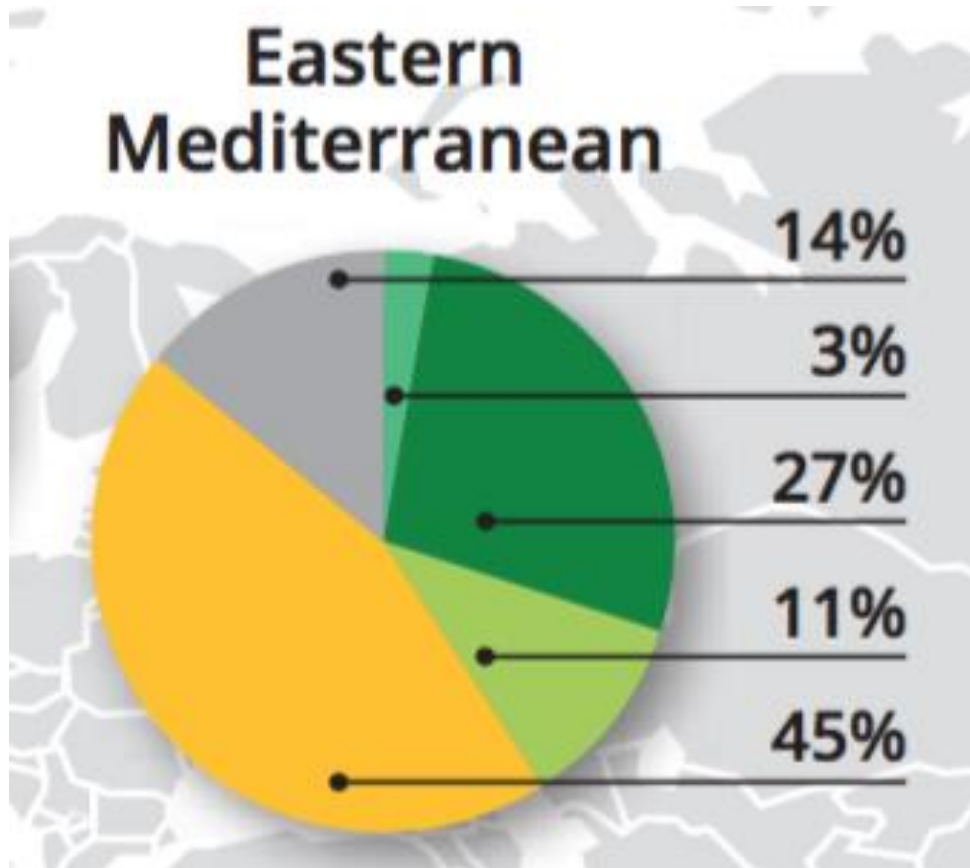
Percentage of Registered Cars



Percentage of RTI Deaths



Road Traffic Deaths by VRUs in EMR



Pause....

- Variations in current sources of data important to understand
 - Reported vs. modelled or GBD vs. GHE vs. GSRRS
 - Higher income in EMR appears to predispose to higher RTI impact
 - Middle income biggest proportion
 - Data on major risk factors missing in the region
 - Need to know prevalence and distribution
 - This information is important for evidence based enforcement
 - Needed to understand impact of laws/changes over time
-

Johns Hopkins International Injury Research Unit

World Health Organization
Collaborating Center
for Injuries, Violence and
Accident Prevention



Road Safety Risk Factors in the EMR

Estimated **Helmet** wearing rates (%)

Countries	GSRRS 2015			Other Studies		
	Drivers	Passengers	All	Drivers	Passengers	All
Iran	35	12	-	13 - 21.5	-	10 - 47
Morocco	43	8	-	-	-	-
Oman	95	-	-	-	-	-
Pakistan	10.4	-	10.4	50.9	5.8	35.5 - 56
United Arab Emirates	-	-	-	-		0 - 13
Yemen	4	0	-	-	-	-

Estimated **seat-belt** wearing rates (%)

Countries	GSRRS 2015				Other Studies			
	Driver	Front-seat	Rear-seat	All	Driver	Front-seat	Rear-seat	All
Bahrain	20	-	-	-	-	-	-	-
Egypt	13-18	3-4	-	-	11-55	3-4.0	-	-
Iran	92	85	10	50	78	44	-	50-71
Jordan	42	-	-	-	-	-	-	-
Kuwait	-	-	-	-	42	31	7	-
Lebanon	13	-	-	-	46	41	-	44
Morocco	50	46	-	-	-	-	-	-
Oman	97	-	-	-	91	81	1	-
Pakistan	-	-	-	-	15-20	-	-	16
Qatar	-	-	-	-	20-77	-	-	-
Saudi Arabia	-	-	-	-	28-87	4-30	2	-
United Arab Em.	-	-	-	-	29-86	14-88	2-11	59

Estimated rates of **child restraint** use (%)

Countries	GSRRS 2015	Other Studies
Egypt	-	1.1 – 3.9
Kuwait	-	26
Oman	-	3.7 – 16.7

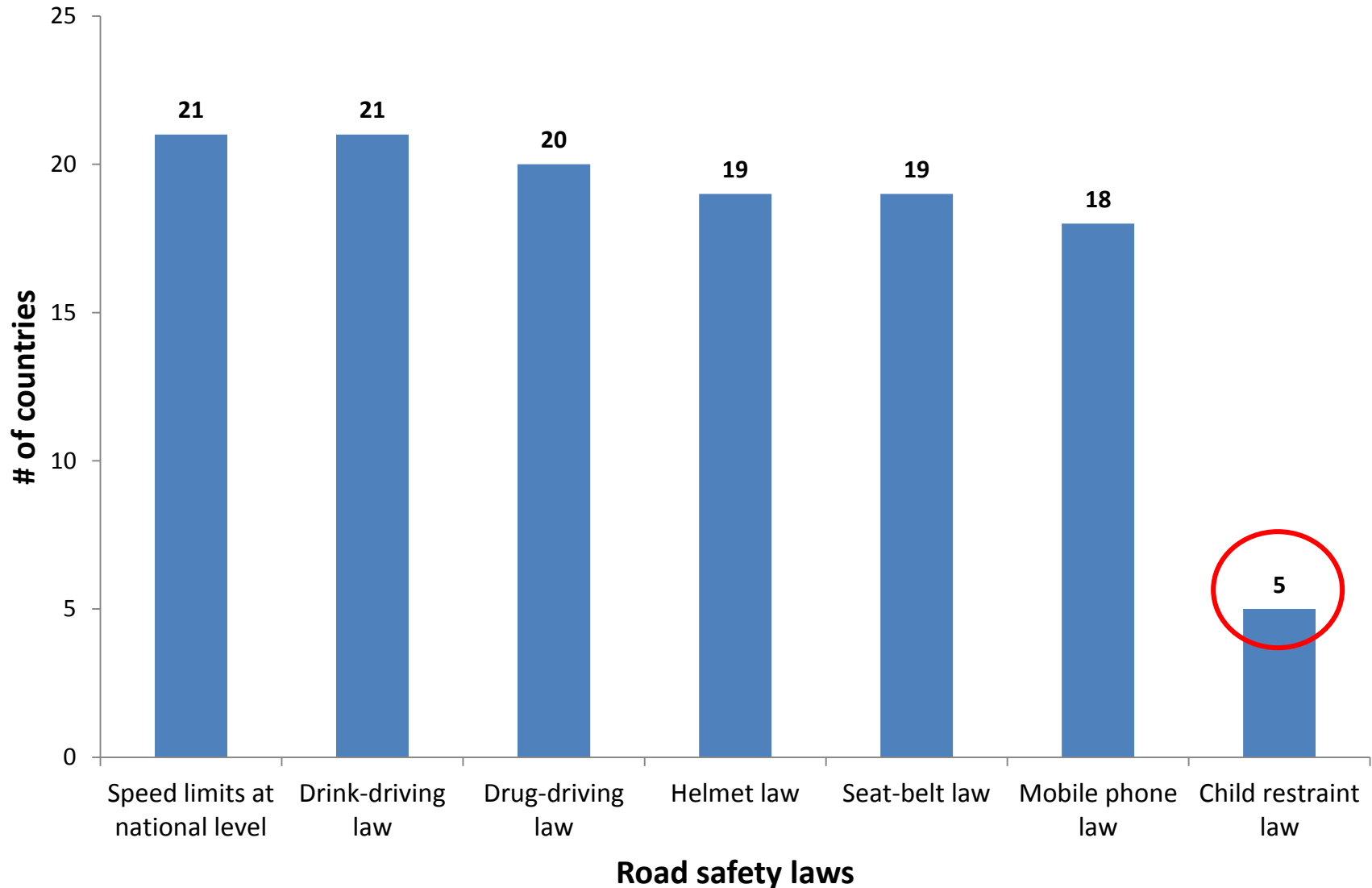
Proportion of RTI deaths attributable to **Alcohol** (%)

Countries	GSRRS 2015	Other Studies
Bahrain	2.9	-
Iran	-	12.3 - 23.5
Jordan	-	4.5
Libya	1.6	-
Morocco	3	-
Oman	0.4	-
Pakistan	-	11
Tunisia	1	-
United Arab Emirates	-	2.1

7 Road Safety Laws Captured in GSRRS, 2015

- Speed limits at national level
 - Drink-driving law
 - Drug-driving law
 - Helmet law
 - Seat-belt law
 - Mobile phone law
 - Child restraint law
-

Overview of Road Safety Laws in the EMR



Summary of number of laws in EMR

Number of laws*	Number of countries	Names of countries
7	5	Bahrain, Lebanon, Oman, Saudi Arabia and West Bank and Gaza Strip
6	13	Egypt, Iran, Iraq, Jordan, Kuwait, Libya, Morocco, Pakistan, Qatar, Sudan, Tunisia, United Arab Emirates and Yemen
5	-	
4	1	Djibouti
3	2	Afghanistan, Somalia
2	-	
1	-	

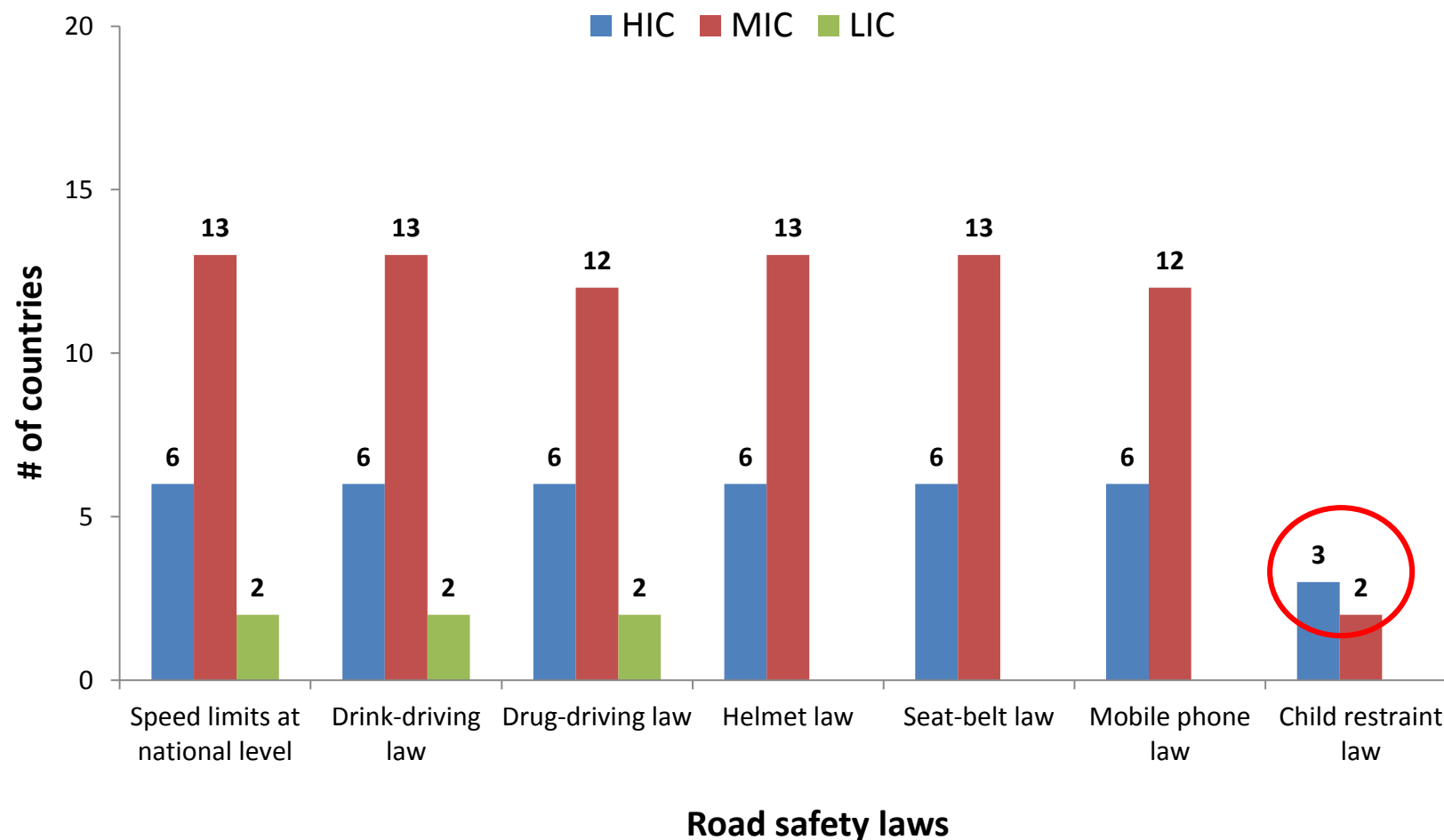
*Speed limits at national level, Drink-driving law, Drug-driving law, Helmet law, Seat-belt law, Mobile phone law and Child restraint law

**No Child restraint law

‡No Drug-driving , Mobile phone law and Child restraint law

¶No Helmet law, Seat-belt law, Mobile phone law and Child restraint law

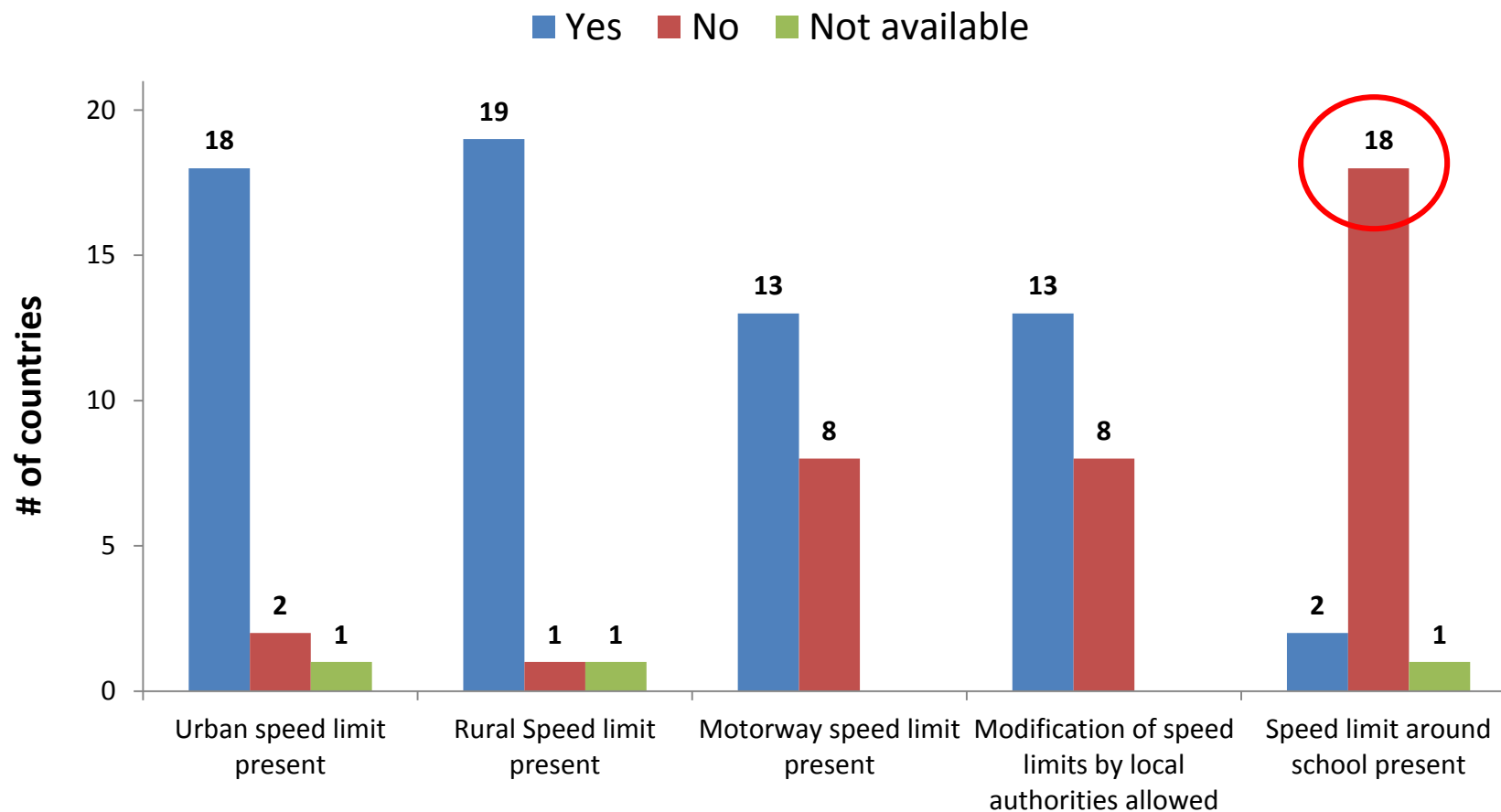
Overview of Road Safety Laws by Income Group



*World Development Indicators database: High income (HIC) is \$12,745 or more, middle income (MICs) is \$1046 to \$12,745 and low income (LICs) is \$1045 or less

**There are six HICs, 13 MICs and two LICs

Speed-limit Laws in the EMR



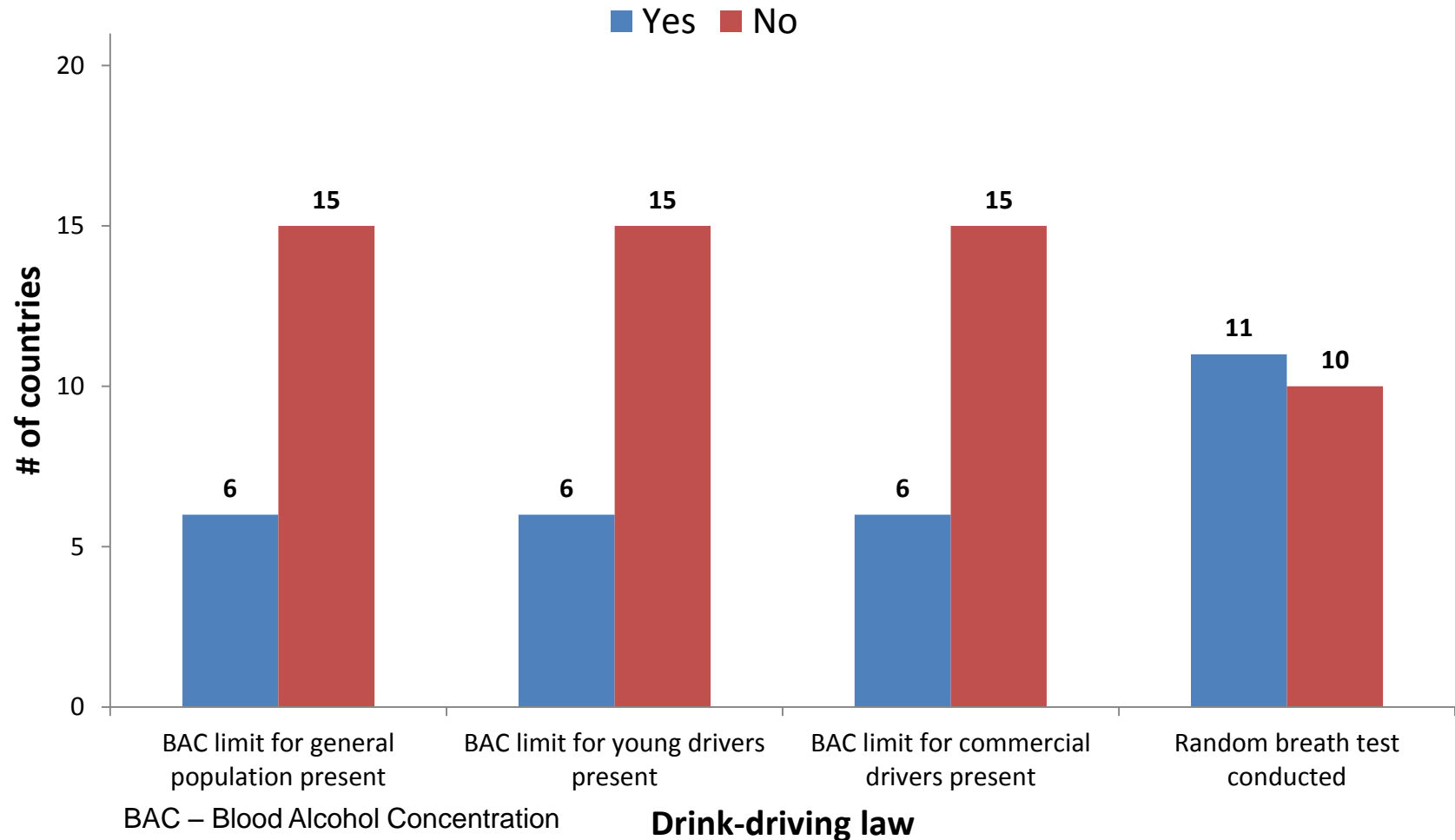
Speed limit laws

Enforcement of speed limit law → 1 - 10

Speed-limit Overview in the EMR

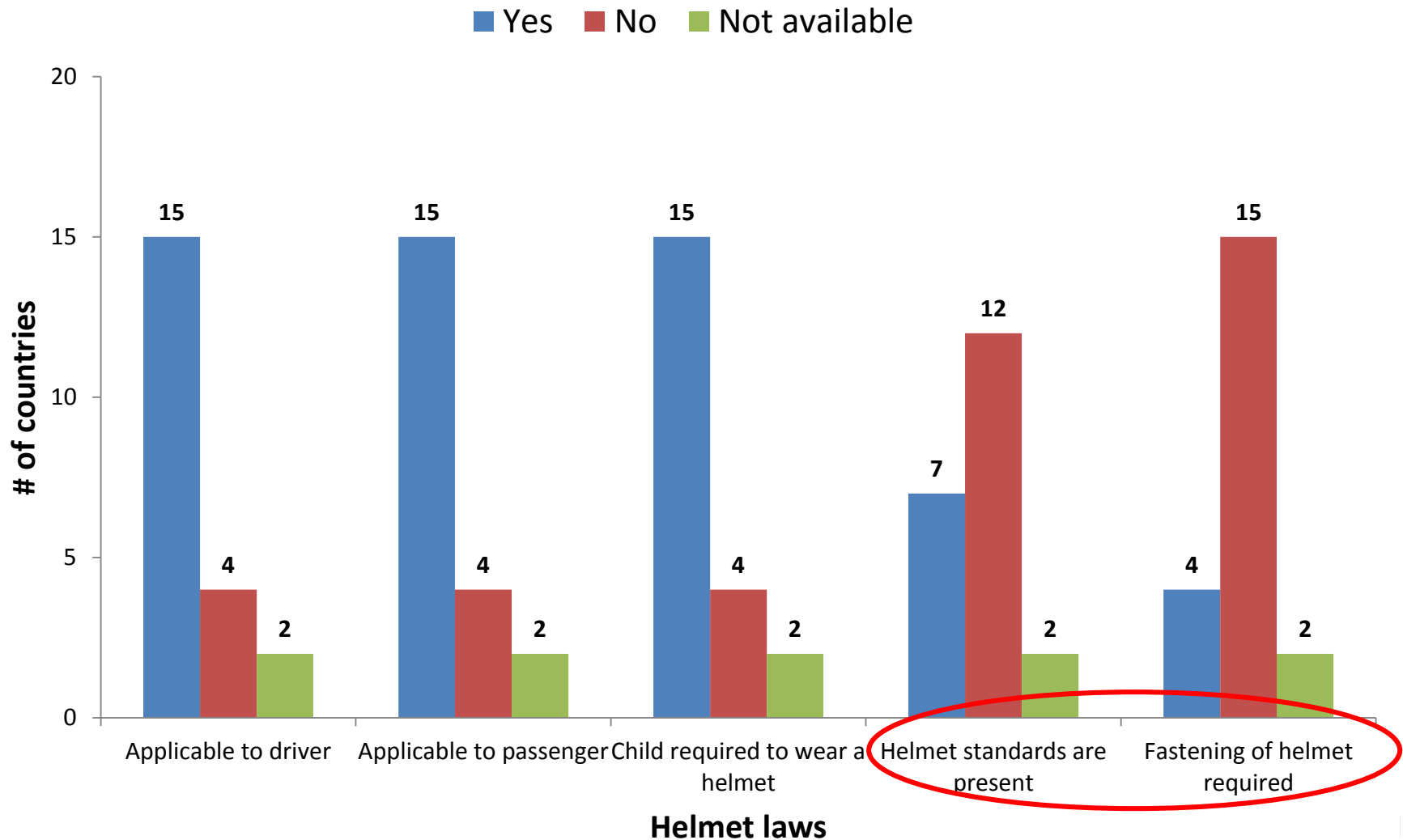
Road type	Average speed limit (km/hr)	Range of speed limit (km/hr)
Urban (18 countries)	63	40 - 100
Rural (19 countries)	95	60 - 120
Motorway (13 countries)	112	80 - 130
Around school (2 countries)	35	30 - 40

Drink-driving laws in the EMR



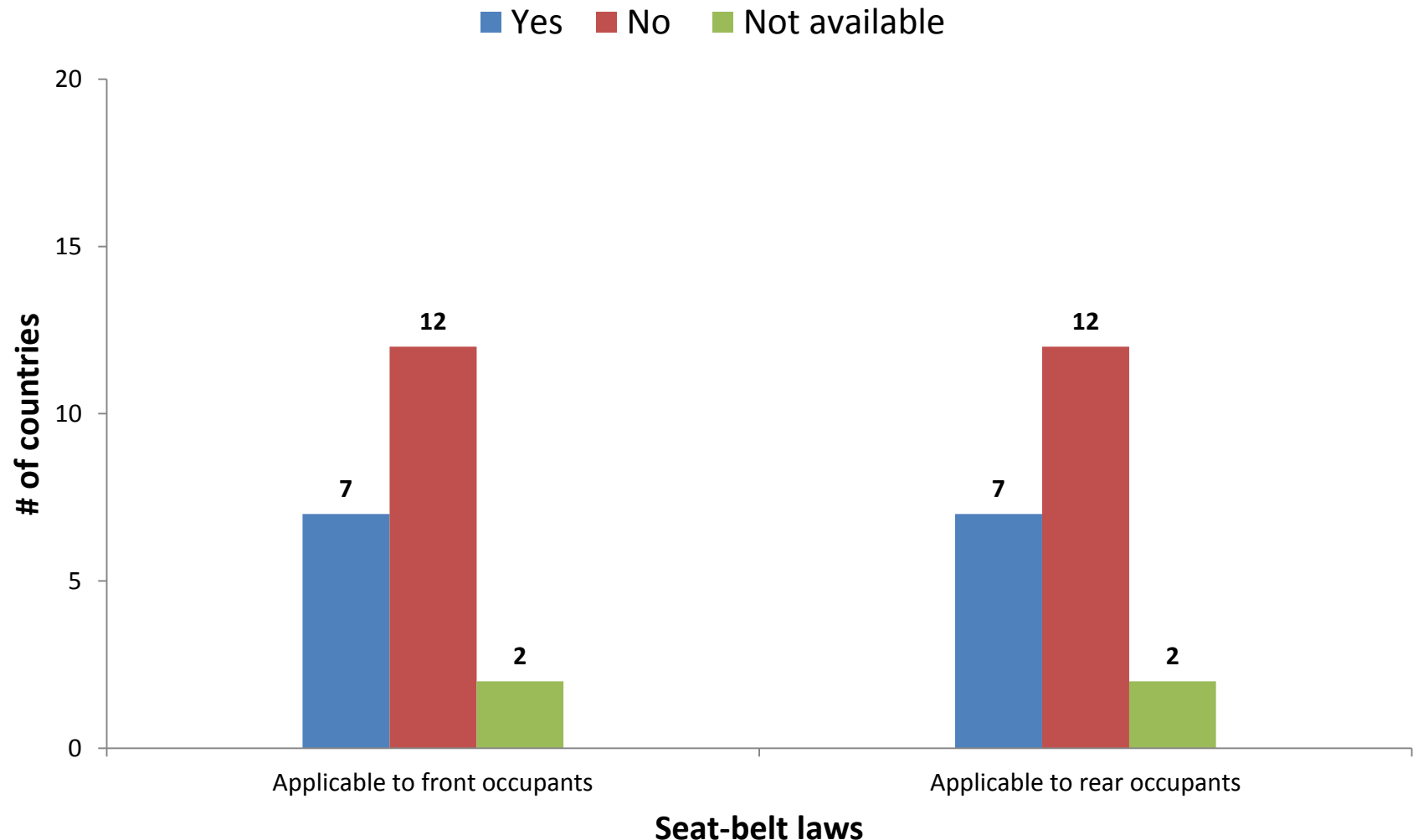
Enforcement of drink driving law → 1 - 10

Helmet laws in the EMR



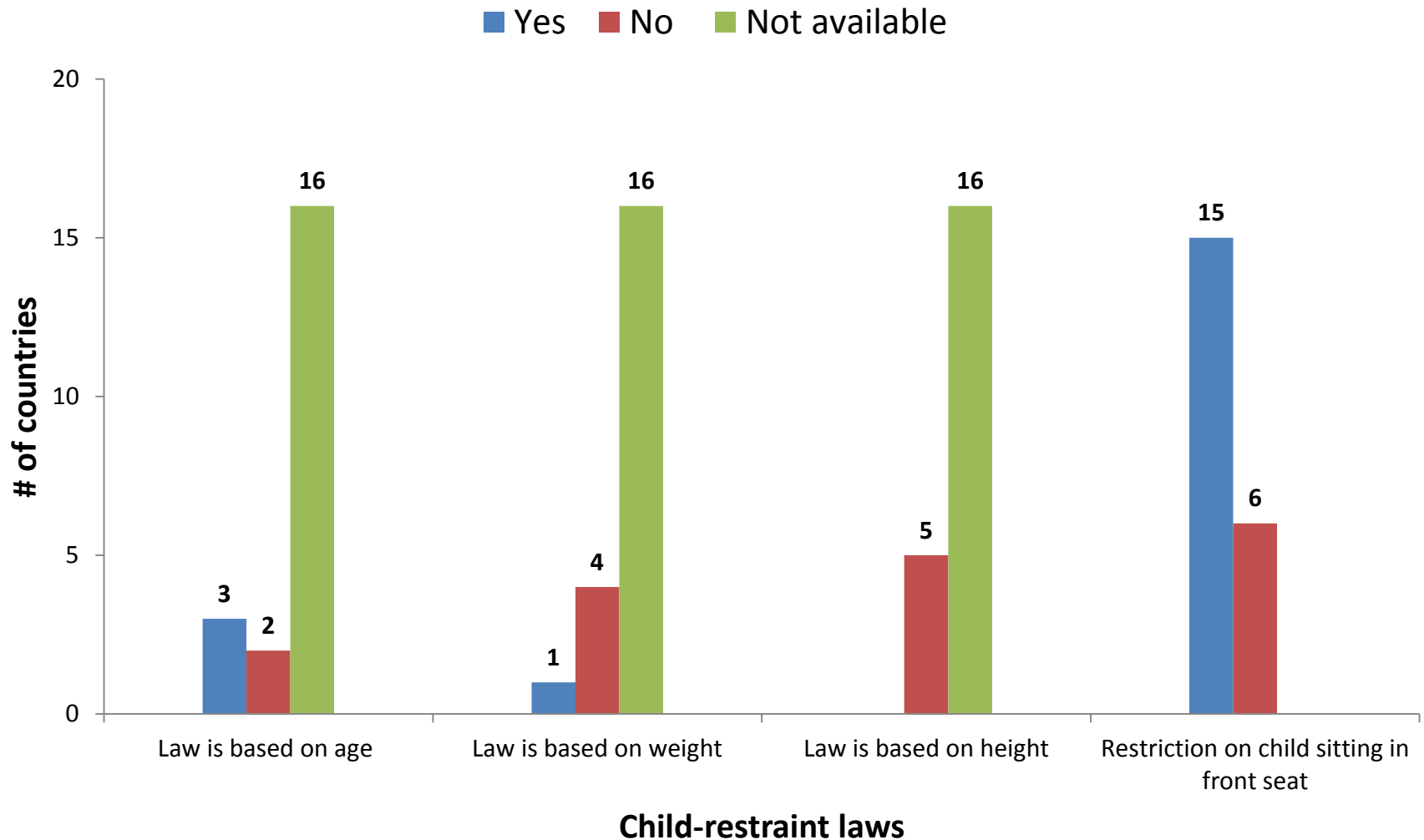
Enforcement of helmet law → 1 - 10

Seat-belt laws in the EMR



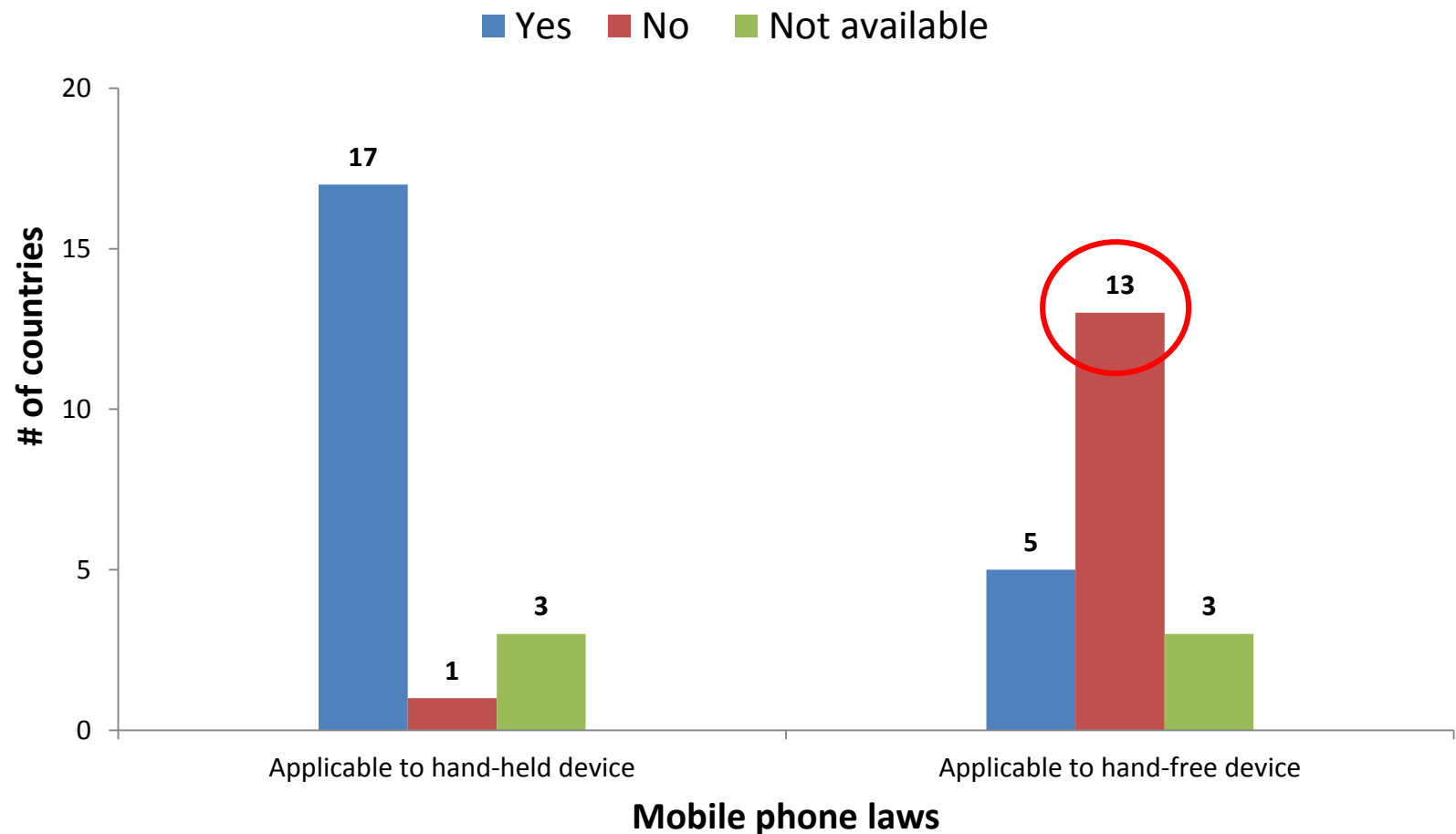
Enforcement of seat-belt law → 2 - 10

Child-restraint laws in the EMR



Enforcement of child-restraint law → 0 - 6

Mobile phone laws in the EMR



Enforcement of mobile phone law → Not available

Drug-driving laws in the EMR

- There is no data on enforcement of the law

Road safety targets in the EMR



Pause...

- Number (quantity) of laws appears to be satisfactory in most of EMR
 - Some MIC and LIC need review
 - Child restraint laws exception
 - However, details of the content & loopholes need review in many cases
 - E.g. front & rear seat, helmet standard, school speeds
 - But there is no data on enforcement (quantity and quality) of the laws
 - Critical component to implement & measure
 - Evidence based policing
-

Potential Interventions

Dr. Margie Peden
Coordinator
Unintentional Injury Prevention
WHO

Implementing prevention & control programmes

- Safe systems approach
- Political support & using the economic argument
- Promoting effective interventions (best buys and some EMR case studies)
- Building capacity
- Monitoring and evaluation

The Safe Systems approach

The systems approach to road safety



National activities

Pillar 1 Road safety management	Pillar 2 Safer roads and mobility	Pillar 3 Safer vehicles	Pillar 4 Safer road users	Pillar 5 Post-crash response
--	--	-----------------------------------	-------------------------------------	---

Getting political buy-in



SUSTAINABLE
DEVELOPMENT

GOALS



Draft Brasilia Declaration

Second Global High-level Conference on Road Safety: Time for Results
Brasilia, 18-19 November 2015

PP1. We, Ministers and heads of delegations gathered in Brasilia, Brazil, on November 18 and 19, 2015, for the Second Global High-level Conference on Road Safety, in coordination with representatives of international, regional and sub-regional organizations and non-governmental organizations, academic institutions and the private sector, including philanthropic and corporate donors;

PP2. Acknowledging the leadership of the Government of the Federative Republic of Brazil in preparing and hosting this Second Global High-level Conference on Road Safety and the leadership of the Governments of the Russian Federation and the Sultanate of Oman in leading the process for adoption of related United Nations General Assembly resolutions;

PP3. Concerned that, in light of the World Health road safety 2015, road traffic continues to represent a major problem and leading cause of death and injury million people and injure as many as 50 million developing countries;¹

PP4. Underlining the important role of public health in preventing road traffic injuries and improving health outcomes, as well as through universal health coverage;

PP5. Also concerned that road crashes are the leading cause of death and injury for children and youth aged 15-29 years and noting that victims are males²;

PP6. Recognizing that human suffering, combine billion³ a year, turns reducing road traffic deaths a priority, and that investment in road safety has a high return;

PP7. Recalling the Moscow Declaration recommending that the next High-level Conference on Road Safety in 2009;

PP8. Convinced that appropriate multisectoral international action are necessary to realize the objective of the 2011-2020 to "stabilize and then reduce the global road traffic deaths and injuries world";

PP9. Welcoming the inclusion of a target, within Sustainable Development Goal SDG 3 of the 2030 Agenda for Sustainable Development, to "by 2020, halve the number of global deaths and injuries from road traffic accidents";

¹ WHO, Global status report on road safety 2015.

² WHO, Global status report on road safety 2015.

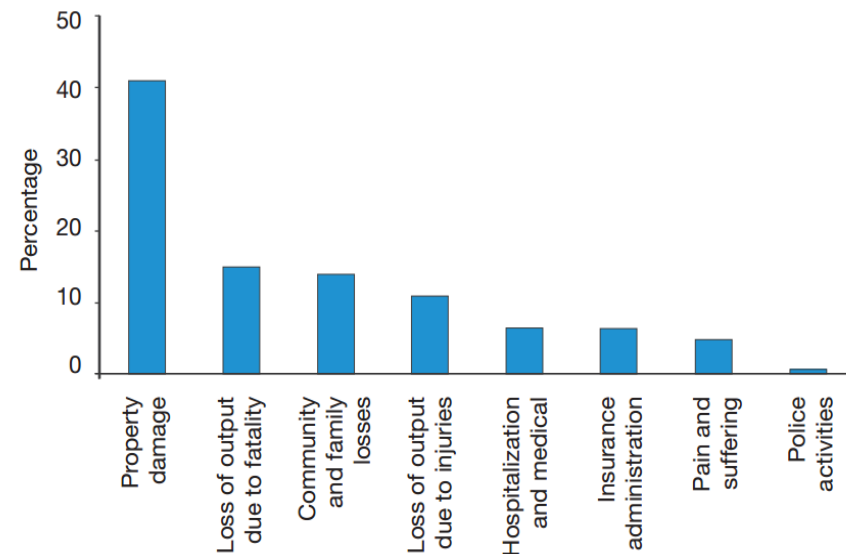
³ IRAP, The Global Cost of Road Crashes, 2013.



World Health
Organization

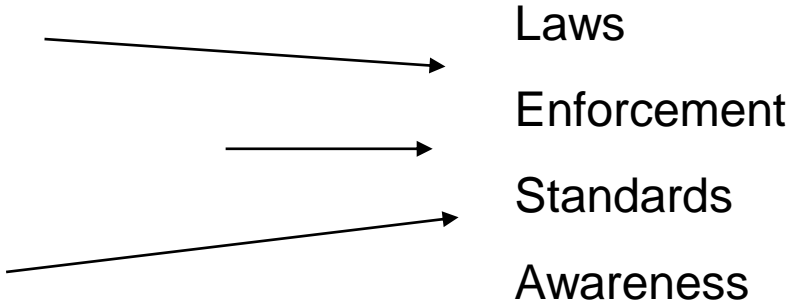
Cost of road traffic crashes in Jordan

- Conducted in 1996
- Unit cost per traffic fatality = JD 46,520 (USD 57,000)
- Mostly due to lost property damage & productivity
- JD 103 million lost per year
- 2% GNP



Elements of traffic crash cost in Jordan

Best buys in road safety?

- Speed reduction
 - Seat-belts
 - Child-restraints
 - Helmets
 - Drinking and driving
 - Low cost engineering measures
 - Safer vehicles
 - Pre-hospital and trauma care
- 
- Laws
Enforcement
Standards
Awareness

Child restraint use in Qatar

- Young Kids in Safe Seats Project, Qatar Foundation
- 2232 observations
 - 41% properly restrained
 - 21% improperly restrained
 - 38% unrestrained
 - 10.9% on adult lap
- 1 in 9 children illegally seated in front row
- Recommend: enforcement, education of restraint use

Malik et al, Roadside observational surveys of restraint use by young children in Qatar: Initial results and recommendations, 2015
<http://www.qscience.com/doi/pdf/10.5339/jlghs.2015.itma.40>

Improving road user behaviour in Iran

- Risk factors: seat-belt, helmets, speed
- Law + enforcement + public campaign about law
- Helmets:
 - 2% in 2003; 60% in 2004; 95% in 2005
- Death rate ↓ from 38.2/100,000 population in 2004 to 31.8 in 2007
- Injury rate ↓ from 361.4/100,000 population in 2004 to 345.7 in 2007



Keeping children safe in Morocco

- To reduce the speed of vehicles on roads around the school where children are walking and/or riding bicycles.
- To improve safety for children crossing roads near the school or on preferred safer routes.
- To encourage children who are walking or riding a bicycle to use safer routes when travelling to and from school.
- To improve safety around the school entrance so children can be safely dropped off and picked up.
- To improve safety for children being driven to school by increasing helmet wearing and/or seat belt use.



GLOBAL
ROAD SAFETY
PARTNERSHIP



Global Example: Graduated Licensing System—Australia

- New drivers are among the most vulnerable to car crashes.
- Graduated licensing system (GLS) introduce a series of requirements and restrictions on new drivers in a series of stages as they begin to drive.
- Australia was one of the first countries to implement a full GLS in the 1990s.
 - Three-stage structure: learner phase, intermediate license phase, and full license phase.
- An evaluation of the Australian model found a clear association with crash reduction for:
 - Increasing the minimum learner period; Night-time driving restrictions
 - Passenger restrictions; Zero BAC limit for both learner and intermediate-licensed drivers
 - Mandating seat-belt use at all times for both learner and intermediate-licensed drivers

Infrastructural improvements in Abu Dhabi

- Pedestrians prioritized in Abu Dhabi to create more liveable / walkable communities.
- Salam Street was redesigned in 2011.
 - Wider pedestrian refuge islands
 - Median barriers
 - Raised crossings and traffic controls
- Combined with enforcement, awareness, etc.
- Resulted in 4-10km/hr slowing of speed.



Separating road users in Tunisia

- EIB provided EUR163m between 2011-14 to Tunisian Ministry of Transport & Equipment
- Improve road infrastructure in urban and rural areas
- Improve road safety by tackling high incident areas or "black spots"
- Through a partnership approach including EU



Regional NCAP needed in EMR

	Road Map for Safer Vehicles 2020 UN Regulations* for:	All New Vehicles Produced or Imported	All Vehicles Produced or Imported
CRASH TESTS 	Frontal Impact (No.94) Side Impact (No.95)	2016	2018
SEAT BELTS 	Seat Belt & Anchorages (No.14 & 16)	2016	2018
ELECTRONIC STABILITY CONTROL 	Electronic Stability Control (No. 13H / GTR. 9)	2018	2020
PEDESTRIAN SAFETY 	Pedestrian Protection (No.127 / GTR. 8)	2018	2020
ANTI-LOCK BRAKES 	Motorcycle Anti-Lock Brakes (No. 78 / GTR. 3)	2016	2018
AUTONOMOUS EMERGENCY BRAKING 	Autonomous Emergency Braking Systems	Highly Recommended	Highly Recommended

*or equivalent national standards such as US FMVSSs



Building capacity

Johns Hopkins International Injury Research Unit

A World Health Organization Collaborating Center for Injuries, Violence and Accident Prevention

Search GO

SHARE

HOME ABOUT US RESEARCH TRAINING RESOURCES NEWS CONTACT US

Capacity Development

Learning by Doing

Workshops

Courses in Injury Prevention

Road Traffic Injury Prevention and Control in Low- and Middle-Income Countries (RTIP)

International Symposium on Road Safety in Low- and Middle-Income Countries

Road Traffic Injury Prevention and Control in Low- and Middle-Income Countries

The Johns Hopkins International Injury Research Unit (JH-IIRU) is pleased to offer a free, online training certificate program on *Road Traffic Injury Prevention and Control in Low- and Middle-Income Countries (RTIP)*, hosted via the platform TRAMS. Comprised of six required multimedia educational modules, and one optional advanced module, this comprehensive program covers a wide range of topics, from the basics of road traffic injury prevention to setting up injury surveillance systems, evaluating road safety interventions and influencing policy on road traffic injuries (RTIs). The lectures are taught by a variety of instructors, including JH-IIRU faculty as well as experts in the field of injury prevention control and trauma care from around the world.

Click [here](#) to learn more about our experts.



GLOBAL
ROAD SAFETY
PARTNERSHIP

The Global Road Safety Partnership is hosted by:
 International Federation
of Red Cross and Red Crescent Societies

Working for a world free of road crash death and injury.

ABOUT US WHAT WE DO WHERE WE WORK OUR MEMBERS WHAT'S GOING ON

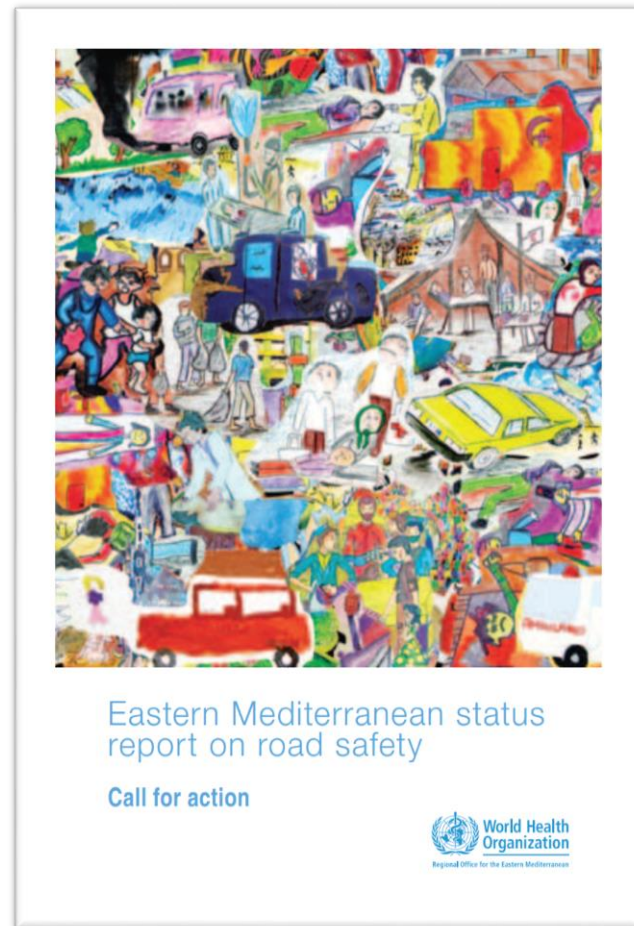
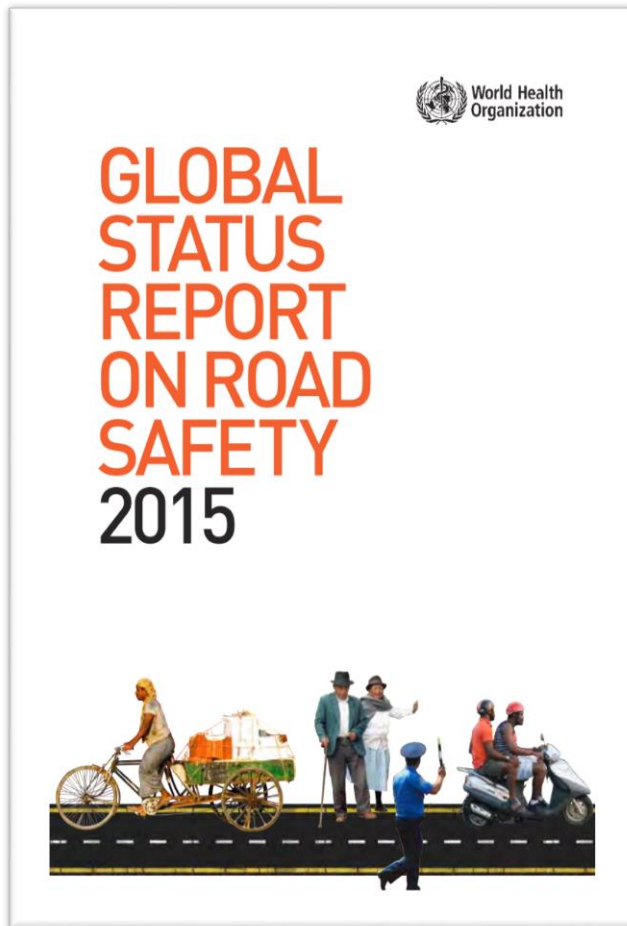
[Home](#) » [What We Do](#) » [Global Programmes](#)

Road Safety Grants Programme

The Road Safety Grants Programme is managed by the Global Road Safety Partnership, one of the eight implementing partners of the [Bloomberg Initiative for Global Road Safety \(BIGRS\)](#). Initiated in 2012, the grants programme supports projects to develop and deliver high-impact, evidence-based interventions designed to strengthen road safety policies and their implementation.



Monitoring progress



Thank you

Contact: pedenm@who.int

www.who.int

www.who.int/roadsafety