DOI: https://doi.org/10.35845/kmuj.2021.21475

EDITORIAL

ROAD SAFETY: A MAJOR PUBLIC HEALTH ISSUE

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THIS ARTICLE MAY BE CITED AS: Sherin A. Road safety: a major public health issue. Khyber Med Univ J 2021;13(1):1-3. DOI: https://doi.org/10.35845/kmuj.2021.21475.

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Road traffic crashes (RTCs) represent the 8th leading cause of global mortality. Worldwide, about 3,700 people lose their lives daily and 1.35 million people die annually due to RTCs. Majority of these deaths occur among children and young adults and almost 93% deaths are from low- and middle-income countries (LMIC). Every year, around 50 million people are disabled due to non-fatal injuries during RTCs, posing serious threats to the global public health.[1,2]

In 2004, on the recommendations of United Nations (UN) General Assembly, World Health Organization (WHO) established UN Road Safety Collaboration to address the road safety issues across the world. In March 2010, UN General Assembly proclaimed 2011-2020 as the "*Decade of Action for road safety*" to reduce the RTCs related deaths through safe system approach at national, regional and global levels.[3] UN *Sustainable Development Goals* (SDG) target 3.6 was aimed to halve the number of global deaths and injuries due to RTCs by the year 2020.[4] Decade 2011-2020 partially succeeded in making road safety as a global priority by its inclusion in global health and development agenda, developing technical guidance and global partnership along with political and resources mobilization. However, WHO global status report on road safety 2018 showed that with current road traffic deaths rate, SDG target 3.6 will not be met till 2020.[2] The projected number of global deaths and injuries related to RTCs is up to 500 million between 2020 and 2030.[5] In August 2020, UN General assembly resolution set a new time frame for at least 50% reduction in RTCs related deaths and injuries by 2030 through proclaiming "*Decade of Action for Road Safety 2021-2030*". Proposed plan of action is focused on various road safety measures including transport system planning, public transport, infrastructure improvements, vehicle safety measures, improvements and implementation of road safety laws, protection of most vulnerable road users, post crash life-saving emergency care and data collection etc.[6]

Pakistan is the fifth most populous country in the world[7] with 268,935 kilometer roads and rapidly growing number of vehicles on road.[8] As per Pakistan Bureau of Statistics data for 2018, total registered vehicles in Pakistan were 18,352,500 including 3,638,833 cars and 4-wheeled light vehicles, 19,743,066 motor cycles (2 wheels) and 847,187 motorcycles/ motor rickshaws. During 2017-2018, 111,21 reported cases of RTCs included 4829 fatal and 6292 non-fatal crashes involving 13,134 vehicles. During these RTCs, 5948 persons lost their lives and 14,489 got injured.[8] However, the actual figures may be much higher due to under-reporting and poor data record as previously documented.[9]

This huge burden of fatal & nonfatal injuries due to road trauma is adversely affecting on the national economy of Pakistan. According to World Bank estimates, Pakistan expenditure on RTCs related deaths and injuries amounted to 4.7% of its gross domestic product, costing about 13.23 billion dollars in 2016.[10] In order to address the long term effects of RTCs, Pakistan has taken several steps regarding road safety like establishing *National Highways Authority* (NHA) in 1991, *National Road Safety Database*" and "*National Road Safety Fund* through *Road Safety Act 2020*.[11] Government of Pakistan has already launched the "*National Road Safety Strategy 2018-2030*" [12], based on the principles of safe system approach. Main features of safe system approach include safe roads and roadsides, safe vehicles, safe speeds, safe road use (behavior) and post-crash response.[13]

Regarding safe roads and roadsides, NHA is doing excellent job in improving the infrastructural standards of new and existing roads. Main focus is on the engineering aspects like road widths, curves, fencing, barriers and barrier terminals, signage, pavement marking, cat eyes and shoulder sealing etc. However, the safety standards of roads vary significantly from motorways to highways and from urban areas to rural areas. Design standards for the safety of most vulnerable road-users like pedestrians, cyclists and motorcyclists are not meeting the international standards and need special attention.[2,10]

Majority of the RTCs related fatalities are due to poor structural and safety standards of the vehicles on the roads.[10] International vehicle safety standards include frontal and side impact protection, electronic stability control, seat belts & anchorages, child restraints, motorcycle anti-lock braking system, intelligent speed adaptation and pedestrian protection. Like other LMICs, compliance of Pakistan regarding vehicle safety standards is very poor, especially in case of locally manufactured vehicles.[2,10,12] Apart from inadequate vehicle safety regulations, poor implementation of the rules and regulations like periodic inspection of old vehicles, imported used vehicles and heavy vehicles by the law enforcing authorities is a critical issue in Pakistan.

Safe speed reflects the behaviour of the road users. High speed not only escalates the risk of RTCs but increases the fatality rate and severity of nonfatal injuries as well. Pakistan has a maximum speed limit of 90 km/h for urban road, 110 km/h for rural road & 130 km/h for motorway.[2] Pakistan needs to reduce the speed limit to 50km/h for urban

arterial roads and 30km/h in city centres to protect the most vulnerable road users. Enforcement of speed limits through fixed speed camera systems, special speed checking squads or traffic police with license penalty points system for drivers will help in achieving the desired safe speed targets. Special public campaigns should be regularly arranged to change the behavior of all road users including drivers, motorcyclists, passengers and pedestrians regarding responsible road use. Special emphasis should be laid to educate people regarding road safety measures like motorcycle helmet wearing, seat-belt use, avoidance of drink-driving, mobile phone use during driving and over speeding.

Post-crash response is vital to prevent the death and disability through emergency care provision to the injured persons. Recently, Pakistan has developed the "*National Guidelines for Post-Crash Response*" in 2019.[14] Although, *rescue 1122* services are accessible in majority of areas in Pakistan, but optimal pre-hospital emergency care is not widely available to cover to 268,935 kilometer roads across the country. Former certification is not available for pre-hospital care-providers and trauma registry is not up to the mark. Accident and emergency departments of majority of roadside hospitals are not well-equipped with neurosurgical & orthopaedic emergency services including radiology services like CT scan. Federal and provincial governments need to develop a comprehensive plan for establishing emergency medical services to reduce the post-crash morbidity and mortality.

Reliable and high quality data collection and local research regarding the burden and magnitude of RTCs is crucial for short and long term planning of road safety. Unfortunately, accident data collection in Pakistan is highly inadequate and not consistent with international standards.[2,14,15] Although local research on road safety has been previously conducted in Pakistan,[9,15-17] however the extent and gravity of situation demands extensive research on RTCs by involving all stake holders including academic and research institutes to achieve SDG target 3.6 by the year 2030.

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CONFLICT OF INTEREST

Author declared no conflict of interest

GRANT SUPPORT AND FINANCIAL DISCLOSURE

Author have declared no specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors

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