

Policy Brief

How can Nepal get helmets on the heads to reduce deaths and disabilities among motorcycle riders?

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Motorcycle Transport and Road Crashes

Motorcycles are a rapidly growing means of transport, particularly among young people in Nepal. Of nearly four million registered vehicles in the Fiscal Year 2020/2021, more than three million were two-wheeler vehicles [1]. Motorcycle taxi services were introduced in September 2018 and at least 15 000 motorcycle taxis are in service in the country [2]. Mobility and ride sharing apps such as Pathao, Tootle and inDrive are popularly used in Kathmandu for taxi services including for motorcycle rides.

In 2021, an average of eight deaths occurred per day due to road crashes in Nepal. Motorcycle riders are particularly vulnerable to injury or death in a road crash. According to the Police record, motorcycle crashes contributed to more than 50% (i.e, 19 974 motorcycle crashes) of the total crashes reported in the Fiscal Year 2021/2022 [3]. Two wheeler deaths contributed to nearly 40% of total road crash deaths in Fiscal Year 2018/2019) [4].

Although several factors such as speeding, drink driving, poor road infrastructure and design, and low vehicle safety standards determine outcomes of road traffic crash, helmet use is an important personal safety intervention that impact the safety among motorcycle riders. Motorcyclists who do not wear helmets are at a much higher risk of sustaining head injuries and dying from these injuries [5]. Use of high-quality helmet can lead up to a 42% reduction in the risk of fatal injuries and a

69% reduction in risk of head injuries during a motorcycle road crash [6]. Therefore, helmet use remains a key recommendation of the World Health Organization (WHO) and central to United Nations Global plan: decade of action for road safety 2021–2030 [7].

Inconsistent Helmet Use in Nepal

The Global Road Safety Performance Target 7 calls for countries to increase the proportion of motorcycle riders correctly using standard helmets to close to 100% by 2030. The Motor Vehicles and Transport Management Act, 2049 (1993)- provision 130 (2) mandates helmet use by driver and the pillion rider of two wheelers [8]. Unfortunately, helmet use for pillion riders is currently not enforced. In a recent study in seven sites, self-reported helmet use by motorcycle passengers were expectedly low, and in Pokhara and Tikapur, none of the motorcycle pillion riders used helmet [9]. This remains a critical practice gap in road safety action in Nepal and requires urgent steps to reinforce the mandatory helmet use for all motorcycle riders. Furthermore, current law does not stipulate the need for helmet quality that meets best practice. Experiences in Cambodia and elsewhere showed that while it is possible to increase helmet use, if the law does not require good quality standard helmets, it can result in many people wearing helmets that do not actually protect them [10].

A Story of Prakash



Prakash Karki, a 26-year-old resident of Kanchanpur district, is living a life with physical disability due to a head injury caused by a motorcycle crash in 2020. He was sharing a motorcycle journey with a friend, without using a helmet. Riding under the influence of alcohol, his friend accelerated the bike on the highway when another bike suddenly crossed an intersection. To avoid collision, his friend abruptly applied the brakes, which thrust Prakash forward and he landed on his head. An unconscious Prakash was rushed to the local hospital. His family requested for a helicopter rescue for treatment in a higher center in Kathmandu with a hope to save his life.

Prakash was placed in an intensive care unit on ventilator support for 45 days, another 97 days in the hospital ward, which was followed by four months of rehabilitative management in Kathmandu. The crash had paralyzed his left part of his body.

Prakash is gradually recovering and learning to perform his daily activities of with the help of assistive mobility aids.

In the course of saving his life, the middle-class family spent 70 lakh rupees (USD 55 000) which was borrowed from friends and relatives. The medical expenses pushed his family into financial hardship. During the incident, Prakash was in grade 12, where he used to earn and support the study expenses of his younger brother in Kathmandu. Both brothers had a plan to operate a business in their hometown after their college education.

Prakash reiterates that helmet use must be made compulsory for every rider “Had this been implemented before, I would have saved my head”, he asserts. Prakash has faced the deadly consequences of the road traffic crash. He is upset to read about the frequent news of such incidents, which mostly affects age-group like his. Prakash wants to advocate on road safety.

There are several fallouts due to non-enforcement of a highly effective public health law. Firstly, road crashes puts burden on the national economy. The World Bank has estimated that in 2016 the cost of fatalities and serious injuries in Nepal is USD 1.12 Billion. The cost of road injuries in Nepal was estimated at US\$ 123 million in the year 2017 [11].

Secondly, injuries incur costs at an individual, family (or carer), and societal level. Most of victims of road crashes are young people and breadwinners of households and families. For example, in 2019, 56% of road crash deaths were between ages 15-55 years and 30% deaths among 15 years and younger [12].

Nepal Can Join the League of Helmet-using Countries

Helmet use is a straightforward public health intervention that can save thousands of lives and prevent disabilities in Nepal. Although national data is not available, lifesaving benefits of helmet use is a well-established fact globally. For example, Thailand's experience in Khon Kaen showed that within 12 months of government introducing helmet-wearing legislation combined with public education and police enforcement, helmet use

Patients with even minor head injuries require specialised care and often end up in hospital for long periods of time. A study in Kathmandu estimated the cost of care of NRs 32 100 for slight injuries and NRs 121 600 for serious injuries [13].

Thirdly, non-enforcement of important legislations such as the helmet law can affect the uptake of the similar legislations passed by the Parliament. It can also damage the image of enforcement bodies and road safety agencies such as the Nepal Traffic Police and Road Safety Council, who on the other hand, is known for stellar performance in countering drink driving through roadside breath checks of drivers.

increased to over 90%, reduced head injury by 40%, and motorcycle crash mortality reduced by 24% [14].

Enforcement of comprehensive helmet use has become a safety norm in neighbouring countries of Bangladesh, Bhutan, India, Maldives, Myanmar, Sri Lanka and Thailand. Nepal can swiftly act to join the league of countries by enforcing comprehensive helmet use law.

Strategies for Helmet Use in Nepal

Like many countries, Nepal has missed on its commitment in curbing deaths and disabilities during the First Decade of Road Safety Action despite having a plan. Nepal plans to achieve a 50% reduction of road traffic deaths and serious injuries by 2030 in the Second Decade of Action of Road Safety, in alignment with the SDG Target 3.6 and the global action plan for road safety. Enforcement of a comprehensive helmet law is critical for the country to achieve the 2030 targets. The following actions should be adopted for immediate implementation.

1. Seek political commitment and support for the enforcement agency, ie, Nepal Traffic Police for stringent enforcement of country's helmet law.
2. Invest in strong road policing capacity building of Nepal Traffic Police and road safety inspectors for effective integrated enforcement along with helmet use inspection with enforcement for speeding, drink driving, and seat belts.
3. Make high-quality helmets accessible and affordable and enhance the infrastructure for monitoring and testing of helmet quality.
4. Institute a widespread government driven public education campaign on the benefits, correct use and helmet quality to increase riders helmet literacy and compliance.
5. Engage media including journalists for responsible road crash reporting, mobilize citizen's voices and NGOs for supporting helmet use laws and road safety promotion.
6. Engage two-wheeler taxis and mobilize them into helmet champions adopting responsible driving and riding by promoting helmet use for pillion riders.

A Perfect Moment for Action

Some hurdles may be anticipated during the initial phase of the enforcement of helmet laws. These could result from ambiguities in the current law such as arguing against helmet use for children, helmet quality, and spread of misinformation by some interest groups. None of these should be a reason for distraction. Implementation and enforcement of helmet law is a progressive and dynamic process [15] [16] and course adjustments can be made along the way. As scores of

productive citizens are killed or disabled in road crashes by each passing day, any deferral of enforcement of comprehensive helmet law in Nepal is a national loss with children getting orphaned, families and house holds impoverished. Now, is moment to let every motorcycle rider use helmets and to make every ride a safer ride for a stronger and healthier Nepal.

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