Correspondence

Risk of road traffic injuries and their prevention in Nepal

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When I travel from my workplace in eastern Nepal to my hometown in western Nepal via a passenger night bus, I am always alert on a portion of the highway, about 36 km, from Naranyanghat to Mugling. At one side below the road is the large Trishuli river while in the other side is steep hills prone to landslides, especially during rainy season. Yet, this is one of the busiest road sections with estimated annual average daily traffic of 5,968 vehicles, connecting eastern and western part of Nepal to the two major cities: Kathmandu and Pokhara (1). The Department of Roads of Nepal government has been working to widen and upgrade this portion of road since June, 2015 to be completed by April, 2017. During this upgrade, the condition of road became even worse. I call to my family whenever I cross this portion of the highway and reach the other side to let them that 'a danger' has been passed. My father suggests taking a day bus to travel with the hope that there is less risk compared to the night bus. But day buses are usually not convenient, even older than night buses, stop at many places to take local passengers and goods.

Such danger persists in highways and local roads (to access rural villages) throughout Nepal, especially in hilly areas, because a small mistake, be it human or mechanical, is converted into a large accident. In fact, road traffic injuries (RTI) are reported regularly in the country. A total of 2,006 people were killed and 13,048 injured in the fiscal year 2015/2016 (July 15, 2015 to July 15, 2016), an average daily death of 5. A recent tragedy in 2016 concerned two passenger bus accidents in 10 days interval: one on August 15 killing 42 people and another on August 23 killing 22 people (2). Fatal road traffic crashes, similar in nature, have been repeated; indicating little has been done or implemented to prevent them. Nepal has the highest percentage (6.3%) of GDP loss due to RTI (3). Nepal has borne huge economic (cost of treatment and lost productivity) burden of RTI.

The majority of fatal RTI in Nepal consists of bus only incidents: rollovers off the road (4). Because of hilly and rocky topography, the chances of vehicle crashes are high on highways, especially when old and overloaded vehicles are driven carelessly on earthen or unmaintained roads, and the likelihood of occupants surviving is much lower. In recent years, there has been tremendous expansion in road networks throughout the country. However, these are mostly road constructed of compacted earth and are not of a good quality (5). Roads should be of good quality before permission is granted for operation of vehicles. Otherwise, partially built, maintained or earthen tracks, especially local roads to access rural villages, will remain as dangerous roads in Nepal, and it will be safer to continue using walking trails to access rural villages than to use vehicles.

Causes of road traffic accidents are multifactorial, arising from three sources: driver related (speeding, drinking, overloading, and overworking), vehicle-related (mechanical and old vehicles) and road-related (narrow, steep, gravelled, not repaired). World Health Organisation have prepared preventive guidelines that describe proven strategies to reduce those causes of RTI (6). The government of Nepal has also prepared a road safety strategy [2013–2020] plan that includes a number of activities in the five pillars of road safety: road safety management, safer roads and mobility, safer vehicles, safer road-users and post-crash response (7). The main concern is enforcement of the regulations and implementation of activities identified in these guidelines. For example, it has been found that a one-hour class to modify drunk driving behaviour has helped to decrease road

traffic accidents by 23% in one year in Kathmandu valley (8).

However, in countries of low social development like Nepal, there can be challenges to enforce regulations and implement the strategies. For examples, public buses in Nepal should not be overloaded but in practice, both the passengers and the bus drivers do not seem to obey this, simply because passengers do not want to wait for another bus which could be very late, may be full or may not come at all. On the other hand, bus drivers want as many passengers as possible to make money. Old vehicles should be replaced and maintained. However, when the government attempt to enforce this regulation, powerful private transport organisations, may not want to replace vehicles because it will be costly, nor allow other competitors to run the vehicles; known as the "syndicate system". Hence, the Government should be able to provide a strong stewardship function to manage transport system and enforce traffic laws in the pursuit of general public but is constrained in its efforts.

RTI and deaths are likely to increase in future if proper implementations and monitoring of identified activities in the strategies are not taken. The driving profession needs a more robust system of regulation in terms of testing, licensing, salary, recruitment and periodic monitoring. There should be sufficient accredited driving learning institutions. Long route bus drivers should have working shifts and all new drivers should have sufficient training. Comprehensive legislation which is enforced with appropriate penalties should impact risky behaviour including over speed, intoxication, overload, and non-use of helmet and seat-belts. Since the causes and preventive measures are known, the only thing left is to implement, enforcement and monitor. For that, a traffic force should be institutionally developed in terms of adequacy, resourcing and authority to conduct active monitoring on highways, and long route vehicle drivers, especially passenger bus drivers, should be experienced with reliable entry criteria such as working years, health status, drinking behaviour and maturity.

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Footnote

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