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## Letter to the Editor

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**Dear Editor**

The report by Naghavi et al. entitled 'Adverse Health Outcomes of Road Traffic Injuries in Iran after Rapid Motorization' in your May 2009 issue of Archives of Iranian Medicine (AIM) discusses the increasing rate of deaths and injuries following road traffic accidents (RTAs) in Iran.<sup>1</sup> The authors have tried to implicate the poor quality and low-safety standards of the cars and motorcycles manufactured in Iran as well as the low price of petrol and the decreasing ratio of travel by public transportation as compared with privately owned cars as the main causes for this increasing rate of death and disability from RTAs in Iran.

Their figures show Iran to be at the unfortunate position of having the highest RTA fatalities in the world per capita and by a far margin compared with countries in the developed world. The causes of this sharp rise in Iranian mortality and morbidity rates due to RTAs which is in stark contrast to the lowering of these injuries in developed nations in recent years is a serious cause for concern for the Iranian authorities.

The contributing factors that the authors mention for this disaster, although a major factor in the high rate of urban air pollution, yet are of relatively minor significance compared with some other factors of paramount importance in this tragic cause of loss of life and limb.

In my opinion, who has witnessed the consequences of such injuries as a neurosurgeon as well as a terrified driver and passenger on Iranian roads, the main causes lie elsewhere.

The major cause of this tragedy is a disrespect for the law and a total disregard for the highway code by the majority of the drivers in Iran, unless these are enforced by truncheon, heavy fines, or imprisonment which requires the omnipresence of the officers of the law on every street corner and the bends of every road which in itself is a minor impossibility.<sup>2</sup> It is also a matter of sheer volume of offence that makes this task of law enforcement almost impossible under the circumstances. Although the wearing of seat belts in cars and helmets by motorcyclists have been mandated by law, yet drivers only fasten their seat belts where they know police officers are stationed and motorcyclists rarely drive with their helmets on their heads, which is commonly a nonstandard

motorcycle helmet anyway, but let it dangle from the handlebars or their elbows and certainly their passengers, which often exceed two including a child or more, are without one. This disregard for the wearing of helmets notwithstanding, the motorcyclists often drive on the pavements to avoid the traffic which is a major contributing factor to the high rate of pedestrian morbidity and mortality, or else, they drive on the wrong side of the road dodging in between the onrushing traffic. In those countries, where mortality and morbidity caused by RTAs have been dramatically reduced in recent years, this has been achieved through strict law enforcement with severe penalties including confiscation of the offenders' driving licenses for one or more years, heavy fines, and even imprisonment for traffic offences. Furthermore, this law enforcement is comprehensive without regard to the offender's political rank or personal wealth.

The second major cause of RTAs is the Iranian youth's misplaced belief in their superior driving abilities, especially if inebriated or under the influence of mood-enhancing drugs, including 'ice' (methamphetamine) or 'crack heroine'.<sup>3</sup> A confounding problem with drug abuse is not just being on a 'high' while driving but many accidents are caused by drug users who have come down from that 'high' and are speeding home for their next 'fix'. The problem of speeding has never been seriously addressed in Iran, and far fewer drivers have been persecuted for speeding compared to those for parking offences, yet speed is a major cause of RTAs throughout the world, and although recently a few traffic cameras have been installed on some highways in Tehran, but their deterrent effectiveness leaves much to be desired.

The above two causes that I have enumerated are certainly not exhaustive, but they do convey the fact that the major cause of accidents on Iranian roads have a social and cultural root and the only method of stemming this tide is by massive presence of more advanced camera systems at all times and on all roads with strict enforcement of speed limits and the highway code for motorcyclists as well as cars and the implementation of heavy fines which in itself would help finance the increase of trained personnel needed for this enforcement.

## Reference

- 1 Naghavi M, Shahraz S, Bhalla K, Jafari N, Pourmalek F, Bartles D, et al. Adverse health outcomes of road traffic injuries in Iran after rapid motorization. *Arch Iran Med.* 2009; **12**: 284 – 294.
- 2 Editorial; Etelaat Newspaper. 15 April 2008.
- 3 Mokri A. Iranian National Center for Addiction Studies (INCAS). Personal communication.

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## Authors' Reply

We were asked by the Editor of AIM to provide comments on the letter written by Dr. Touraj Nayernouri in response to our paper 'Adverse Health Outcomes of Road Traffic Injuries in Iran after Rapid Motorization' in the May 2009 issue of the journal. Dr. Touraj Nayernouri criticized our paper because we underlined the importance of the massive production of unsafe vehicles along with some other factors as potential causes of recent increase in the number of road traffic injuries and deaths in Iran. He believes that compared with "disrespect for the law and a total disregard for the highway code by the majority of the drivers in Iran" the mass production of unsafe vehicles is of minor importance to serve as a cause for road injuries and deaths.

Our paper illustrates that the rates of road traffic injuries and deaths closely follow the number of manufactured vehicles over a certain period of time. However, we never claimed to know the relative importance of a host of other potential factors that may play a role in producing such substantial numbers. In fact, and as far as we know, none of the researchers in the past could

provide strong evidence to show that one factor plays a more important role than another.

We all know that disregard for driving codes is an immense problem in our country and we have no doubt that this can be a potential reason for the high number of road injuries and mortality in Iran. As far as we know, publicly available numerical evidence through which we could examine the theory of the importance of such a factor does not exist. Even if these types of data exist and their quality is favorable, we do not know as of now how to access the information. It would be extremely illuminating that researchers could put together quantitative evidence on and analyze such varied factors that are hypothesized to affect the health outcomes of road injuries in Iran. While an array of putative influencing factors do exist in narrative terms, and yet anecdotal, we eagerly welcome quantitative results of such hypotheses testing.

In summary, we tried to use evidence to show how a series of factors that are potentially reversible could affect the huge burden of road injuries and deaths in Iran. We maintain that it is not fair to put all the blames on the drivers. One must not ignore the fact that a majority of road accidents could be either harmless or lead to less harm if, for example, the vehicles were equipped with standard safety measures.

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