EDITORIAL

# New frontiers in the battle against the burden of musculoskeletal trauma from motor vehicle accidents

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Trauma continues to be a major epidemic in our country. Our hospital emergency departments are overflowing with trauma patients. A large part of this trauma involves the musculoskeletal system.

This has a negative effect on orthopaedic service delivery, especially elective orthopaedics. Time and again we have to turn away patients we have booked for elective hip replacement, because all the beds are occupied by the weekend's trauma admissions. Injuries in general are the major cause of death all over the world. In 2010 there were 5.1 million deaths from injuries, which was much greater than the number of deaths from HIV-Aids, tuberculosis and malaria combined (3.8 million).[1]

Motor vehicle accidents are the major cause of the injuries.[2] The Road Transport Management Corporation (RTMC) reported 12 944 road fatalities in 2015. This figure increased by 22% in 2016, and is continuing to rise.[3] The RTMC reports that it is committed to improving these figures by making roads and roadsides safer, strengthening traffic enforcement, setting appropriate speed limits, and encouraging road users to behave in a more responsible manner.

Despite these commitments, our annual road deaths remain high at 25 per 100 000 population. This figure is much higher than Australia's at 5/100 000, and a very populous India, with figures of 12/100 000.[3]

The problem with figures from traffic authorities is that they mainly report on deaths at the scene of the accident or soon thereafter, and not on those who die in hospital from the injuries.[4] The figures also do not report on the number of patients that come to our emergency departments, which is our main concern as clinicians treating these patients. Figures from the trauma unit in Cape Town show road traffic accidents accounting for 18.8% of the patients they treat, second to assault by sharp objects at 20.9%.[5] Parkinson *et al.* in Pietermaritzburg calculated the cost of treating motor vehicle accident victims admitted over a ten-week period to be 698 850 USD.[6]

There is no publication that talks to the burden of orthopaedic trauma in our country that I could find. At Steve Biko Academic Hospital in Pretoria, statistics for 2017 show that of the 3 968 operations performed by the orthopaedic department, 69.9% were for trauma. This leaves very little room for us to do non-trauma orthopaedics.

Various methods have been tried by orthopaedic units to make it easier to manage this trauma load. We have divided the orthopaedic departments into various units, trauma being one of them. Unfortunately, because of the sheer number of patients, the trauma patients overflow to the non-trauma beds. And so does theatre time – the patient coming into hospital for a knee arthroscopy following an old sports injury simply cannot compete for theatre time with a patient with a Grade III open fracture of the tibia from a motor vehicle accident.

The next thing we could do is to have separate hospitals for trauma. This would ensure that trauma is managed without interfering with the non-trauma orthopaedics. This, however, will take a long time to implement. Commissioning of new hospitals is a complex process. The idea of separate hospitals for trauma would happen much quicker in situations where there are already two hospitals in close proximity to each other, where one of the two could be converted to a trauma-only hospital. There are quite a few towns in the country where there are two hospitals nearby each other.

Knowing the challenges we currently experience in the Department of Health, it might be better to look at tackling the problem of the burden of trauma from motor vehicle accidents from other fronts.

A lot has been done in South Africa (SA) to control HIV and malaria. The successes in these two diseases have involved dedicated work outside the hospitals. Public awareness of the disease through programmes like Love Life and Khomanani in the case of HIV, and involvement of other government departments in the case of malaria, have helped in reducing the burden of these diseases on the health system.

Paniker *et al.* support the idea that the response to the burden of road traffic injuries should be a multipronged one.[7] This response should include:

- Increasing awareness and improving trauma data collection
- Involvement of international organisations and governments
- Individual and small-scale responses

Transferring these three points to our SA situation, this is how we could approach the problem of managing road traffic accidents.

## Increasing awareness with improved data collection

Improving data collection is already underway in the main trauma units. We need to make it more uniform, as currently they are collecting different sets of data. We also need to expand it to all the emergency medicine departments in the country.

The major impact we need to be making is on public awareness of the effect of motor vehicle accidents on health care delivery. The public knows that road accidents kill, but we have not stressed enough how they prevent us from delivering health services. To this end, we as the orthopaedic fraternity through our association, could approach the Departments of Transport or Health to flight, for example, a TV advert of an elderly patient who is being turned

away from hospital admissions for a total hip replacement because a young man caught driving recklessly over the weekend is occupying the bed that was reserved for the old man.

## Involvement of international organisations and governments

The World Health Organisation (WHO) has declared 2011 to 2020 as the Decade of Action for Road Safety. SA is a signatory to this accord. The WHO hopes that by 2020 their action will have decreased road accident deaths by 5 million lives.[8] Currently, low- and middle-income countries account for 90% of the deaths from road traffic accidents.[9] SA is classified as a middle-income country by the World Bank.

Unfortunately, as people at the forefront this trauma epidemic, we have not seen any changes as yet in the number of road trauma patients that reach our emergency departments. Yes, there are new legislations that have been promulgated in the last few years aimed at reducing road fatalities, but their effect has yet to be seen.

What we need to do, as the orthopaedic community, is to approach the Department of Transport about a need for tougher sanctions for transgressions of the rules of the road.

This does not mean increasing the severity of the penalties, but ensuring there is a specific penalty for all types of motor vehicle offences. The Department of Transport should ensure that for each traffic offence, there is a consequence. Emphasis can be just on the common offences, like exceeding the speed limit, beating a red robot, not stopping at a stop sign, and driving above the legal alcohol limit.

We have to impress on the Department of Transport to adopt the attitude of the former mayor of New York, Rudolph Guiliani, in reducing crime in that city, by getting tough on minor crimes, in a policy referred to as 'broken window' policy.[10]

This is one way of making sure that outside the hospitals, we are taking action that will prevent the filling up of our wards with road accident trauma patients.

## Individual and small-scale responses

In the UK, the Global Health Partnership was set up to assist with health care in developing countries. An example is the training they provide, and the support they give, to the College of Surgeons of Eastern, Central and Southern Africa (COSECSA) in training health workers in these countries in trauma management.[7]

Through our own outreach committee at the SAOA, we could do the same, where those of us who work in the 'medium-income' SA could reach out to the 'low-income' SA, thus reducing the effect of the debilitation caused by the neglected trauma in the outlying hospitals.

To reduce the burden of trauma from motor vehicle accidents in our public hospitals, we have to look beyond the confines of our hospitals and look at other frontiers for solutions.

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