SOCIAL AND HEALTH SCIENCES

Governments' Responses to the Coronavirus Pandemic clears the Road for their Responses to the Traffic Pandemic

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ABSTRACT

Governments all over the world have been instrumental in limiting the devastating effects of the highly infectious COVID-19 pandemic. Although the success rate of a plethora of completely novel legislations is still yet unknown, there can be little doubt about the intensity of political will and resources allocated to fight the spread and effects of the pandemic. In this perspective piece, a comparison is made between governmental responses worldwide to COVID-19 and their responses to a much longer-lasting and even more devasting pandemic, the catastrophe of road traffic crashes. Comparing these two pandemics highlights the negligible level of attention road traffic crash prevention has received in the past and the valuable lessons that can be drawn for the future.

Keywords*:* Disability, COVID-19, inclusion, South Africa, healthcare

Never let a good crisis go to waste.

\- Marcus Aurelius

THE CORONAVIRUS PANDEMIC

Towards the end of 2019, the Chinese Government became aware of a number of cases of viral pneumonia of unknown origin and subsequently began investigating these in early January 2020. Initially, the cases seemed to be linked, pointing to the origin of the virus concerned being in the Huanan Seafood Wholesale Market. The virus was suspected to have an animal origin and has since been linked to certain bat and pangolin coronaviruses, as well as to Severe Acute Respiratory Syndrome (SARS) (Huang et al., 2019; World Health Organisation [WHO], 2020a). (See Figure 1).

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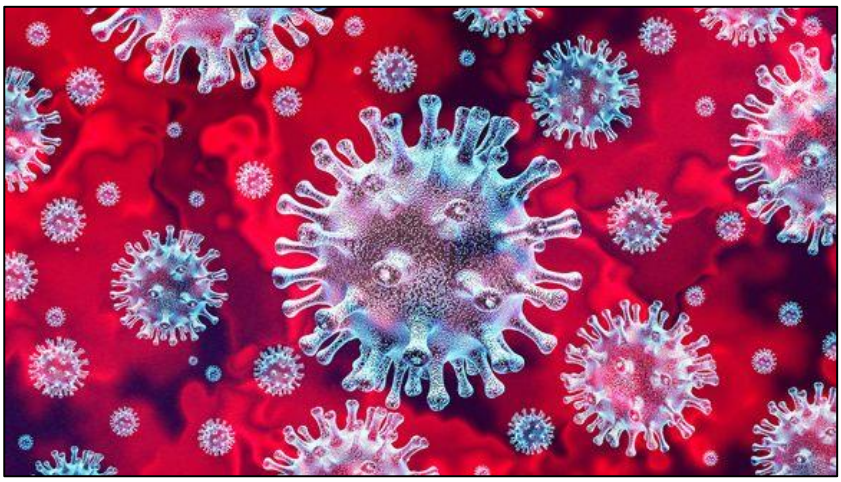

Figure 1: The Coronavirus.

Over a period of a few months, this virus (now identified as a coronavirus – COVID-19) expanded into a global pandemic, causing severe acute respiratory syndrome in its victims, some of whom required mechanical ventilation. On 30 January 2020, the World Health Organization declared the outbreak to be a Public Health Emergency and, on 11 March 2020, announced that the disease was a global pandemic (WHO, 2020b; WHO 2020c). As at 24 July 2020, more than 15 million cases of COVID-19 had been reported in 185 countries, resulting in more than 600,000 deaths. The spread of the pandemic has been fast and devastating, with certain countries much worse affected than others (European Centre for Disease Prevention and Control, 2020) (See Figure 2).

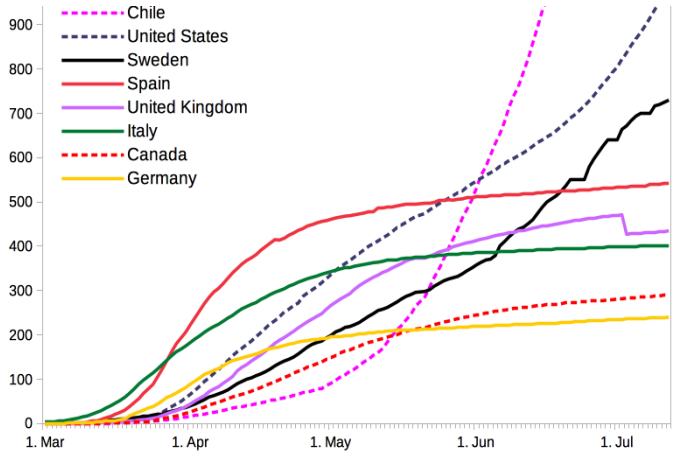

Figure 2: The spread of COVID-19 Cases per 100.000 population per country (European Centre for Disease Prevention and Control. Retrieved 21 May 2020).

The virus is primarily spread between people during close contact, often via small droplets produced by coughing, sneezing, or talking (Bourouiba, 2020; Centers for Disease Control and Prevention, 2020). While these droplets are produced as carriers breathe out, they usually fall to the ground or onto surfaces rather than remaining in the air and travelling over long distances. Recommended preventive measures include:

- *Hand washing*
- *Covering one's mouth when coughing*
- *Maintaining distance from other people*, and
- *Monitoring and self-isolation for people who suspect that they are infected.*

Authorities worldwide have responded rapidly (some more promptly than others) by implementing:

- *Travel restrictions*
- *Quarantines*
- *Curfews*
- *Stay-at-home orders,*
- *Workplace hazard controls, and*
- *Facility closures*

Many places have also worked to increase testing capacity and to trace the contacts of infected persons. The pandemic has led to severe global socioeconomic disruption, the postponement or cancellation of sporting, religious, political and cultural events, and widespread shortages of supplies – the last-mentioned exacerbated by panic buying. The pandemic has led to one of the largest global recessions in history, with more than 3.9 billion people — more than half the world's population —under some form of lockdown by the first week of April (Euronews, 2020; Jones, 2020). Schools, universities and colleges have closed, either on a nationwide or local basis, in 197 countries, affecting approximately 99.9 per cent of the world's student population. The scale of the Corona pandemic is astonishing in its own right, but in order to assess its impact we compare it here to another pandemic, that of road traffic crashes.

THE CORONAVIRUS PANDEMIC IN PERSPECTIVE VERSUS ROAD TRAFFIC CRASHES

The world has grown insensitive towards the enormous number of people who suffer injuries in road traffic crashes. According to the World Health Organization, over 1.4 million people lose their lives

each year as a result of such crashes (Abubakar, Tillmann, & Banerjee, 2015). In addition, over 50 million people suffer non-fatal injuries and many incur permanent disabilities (Global Burden of Disease Study, 2014). Young people (between the ages of five and 30 years old) carry by far the highest risk in this regard. In addition, ninety per cent (90%) of deaths occur in low and middle-income countries, with road traffic injury death rates being the highest in the African region. The causes of road traffic crashes have been identified as either (1) the Driver; (2) the Vehicle; or (3) the Road infrastructure. Reports from all over the globe, however, provide evidence that drivers contribute by far the largest proportion (80–90%.) of these deaths.

There have been numerous recommendations by the WHO to curb this massive onslaught on human health (Peden et al., 2004):

- *Speeding*
- Speed is directly associated with the severity of a crash. For example, every 1% increase in mean speed produces a 4% increase in crash fatality risk, and a 3% increase in the risk of a serious crash occurring. The risk of death for a pedestrian hit by a car rises rapidly with vehicle speed (4.5 times greater from 50 km/h to 65 km/h).

DRIVING UNDER THE INFLUENCE OF ALCOHOL AND OTHER PSYCHOACTIVE SUBSTANCES

Driving under the influence of alcohol and any other psychoactive substance or drug increases the risk of a crash that will result in death or serious injury. In the case of drink-driving, increased risk of a road traffic crash starts at low levels of blood alcohol concentration (BAC) and increases significantly when the driver's BAC is ≥ 0.04 g/dl.

NON-USE OF SAFETY MEASURES SUCH AS MOTORCYCLE HELMETS, SEATBELTS, AND CHILD RESTRAINTS

For motorcyclists, correct helmet use can lead to a 42% reduction in the risk of fatal injuries and a 69% reduction in the risk of head injuries. Wearing a seatbelt reduces the risk of death among drivers and front seat occupants by 45–50%, and the risk of death and serious injuries among rear seat occupants by 25%. The use of child restraints can lead to a 60% reduction in deaths.

DRIVER DISTRACTION

There are many types of distractions that can lead to impaired driving and the level of distraction caused by mobile phones in particular is a growing concern for road safety. Drivers using mobile phones are approximately four times more likely to be involved in a crash than drivers not using a mobile phone. Using a phone while driving slows reaction times (notably braking reaction time and also reaction to traffic signals) and makes it difficult for the driver to remain in the correct lane and to keep the correct following distances. Hands-free phones are not much safer than hand-held phone sets, and texting considerably increases the risk of a crash.

In summary, very effective strategies have been identified but, unfortunately, in spite of the vast scope of scientific research on the pandemic of Road Traffic Crashes (which, in the past has been referred to as "Carmageddon") and its massive impact on global health and the world economy, local, regional and national echelons of government have been extremely sluggish as regards appropriately implementing effective measures and promoting road safety. Children remain vulnerable and their rights have been, and continue to be significantly violated, since they are exposed daily to unacceptable levels of environmental dangers. by its Judging by the absence of the issue from the broader political agenda, road traffic deaths appear to have been marginalised by politicians and other social actors globally.

WHAT CAN WE LEARN FROM THE CORONAVIRUS PANDEMIC TO REDUCE THE ROAD TRAFFIC CRASH PANDEMIC?

The Coronavirus Pandemic has been thrust into the very centre of everyone's attention since the beginning of 2020 and the response by governments around the globe has been unprecedented. Extensive media coverage has been produced and far-ranging lockdowns have been implemented by governments along with widespread advocacy for the mandatory use of Personal Protection Equipment (PPE) by all frontline workers. The general public, primed with fear and precautions, have been quick to adopt a wide range of behavioural changes, the wearing of face masks in numerous countries in particular. It is interesting to note that some of the measures implemented (such as wearing various types of face-masks and social distancing) have not been sufficiently scientifically researched so as to be proven effective.

The challenge for health policymakers is to capitalise on the learning that has taken place as well as the effects of this phenomenon and to adapt and contextualise it to promote behavioural changes among road users.

Driver behaviour remains the key impediment to any progress in bringing down road traffic crash numbers. Unlike with the Coronavirus, infection with which may, at some stage, be preventable with a vaccine, the problem of road traffic crashes cannot be controlled by introducing a vaccine-like technology. In the same way that the Coronavirus can be prevented from spreading by paying heed to behavioural safety guidelines, reducing road traffic crash numbers will also require the adoption of safety-oriented behaviour. Strategies directed at behavioural changes have been shown to be successful in reducing both injury-risk behaviours and injury outcomes (Sleet, Hollenbach, & Hovell, 1986). It is interesting that, in several countries where an alcohol-ban was introduced as one of the strategies to fight the spread of the Coronavirus, a decrease in the number of road traffic crash fatalities has been noted, although the exact effects of the alcohol ban on road traffic fatalities still requires scientific research. The most successful strategies to reduce road traffic crashes have been planned and implemented with applied behaviour analysis. This methodology uses contingency management through various forms of rewards and incentives, behavioural shaping, and modifying environmental cues and conditions to affect not only driver behaviour, but also that of occupants and even pedestrians. At the societal level, laws and enforcement strategies that discourage or punish risky behaviours are a form of contingency management.

Behavioural modelling, demonstration, and skill building, can all be used to modify risky behaviours, particularly among young people, in order to address the recommendations made above in respect of decreasing the major risk factors (Fylan & Stradling, 2014). Social support, feedback, reinforcement, and the real threat of punishment should all be used to modify problematic behaviour. Application of these strategies, and others that rely on legislative and enforcement strategies to change behaviours, has been found to be effective (Sleet et al., 1986). Road safety is a result of safe behaviour by all road participants, including those responsible for road design and the maintenance of the road networks, and, most importantly, governments who must support stringent research, surveillance, monitoring and evaluation, as well as implement and enforce policy. There is no doubt that political will, and changing traffic and pedestrian behaviour globally, holds promise for the future.

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