

Call for Action: The Critical Need to Improve Injury Research and Treatment

Injuries are a growing public health problem worldwide; thousands of people are killed, injured, and disabled every day.^[1,2] Those who are killed often leave behind shattered families and communities. Many of those who are injured but not killed will never return to their normal lives because of psychological and physical disabilities. As one of the leading causes of death and disability in the world, trauma and injury disproportionately impacts individuals in low- and middle-income countries (LMICs) in which approximately 90% of injuries occur.

There are many causes of both unintentional injuries, such as road traffic crashes (RTCs), and intentional injuries, such as suicide and interpersonal violence. RTCs are just one important example of the significant and increasing problem of trauma. Death and disabilities from RTCs clearly show the terrible impact of injuries on individuals and societies. According to the World Health Organization (WHO), RTCs worldwide injure up to 50 million individuals and kill approximately 1.35 million people per year.^[3,4] The majority of individuals affected are young adults, especially men, from LMICs. Without appropriate action, it is expected that road traffic deaths will continue to significantly increase during the near future. It is now estimated that the annual cost of RTCs exceeds \$518 billion globally. In Iran, specifically, road traffic fatalities are a leading cause of death. While road traffic mortality is improving in Iran, the WHO still estimates that the rate of motor vehicle deaths was 20.5/100,000 population in 2018.^[5,6]

As an example of intentional injuries, suicide remains an important societal and public health problem. The WHO estimates that over 800,000 individuals die annually from suicide, and for each death, there are another 20 attempted suicides. The global suicide death rate equates to approximately one person dying every 40 s.^[7] While the Eastern Mediterranean Region of the WHO has the lowest estimated suicide rates of any WHO region, this is likely an underestimate as the cultural and family stigmata related to suicide deaths are significant. Intimate partner violence is another example of intentional injuries, but it also has significant social stigma attached and is difficult to quantify in many countries. If the problem is not studied, it cannot be addressed. More research needs to be done to understand the contributing factors to these problems and how best to address them.

While high-quality clinical care is critically important to treat and rehabilitate patients once they are injured, primary prevention is clearly preferable. As scientists and clinicians, we need to increase injury-related research to prevent injuries, improve trauma clinical care, impact public health policy, and decrease

the morbidity and mortality caused by injuries. Three key aspects will help us reduce the devastating impact of the thousands of traumatic injuries and deaths that occur each year in Iran and the Eastern Mediterranean Region. These are (1) scientific and clinical collaboration, (2) increased funding, especially for research, and (3) health care and health policy leadership.

COLLABORATION

There are a number of ways that we can work together to address the devastating global epidemic of injuries. This can be done despite current global and regional political challenges. For example, through appropriate training and education, we can grow a cadre of expert traumatologists and emergency physicians and help them to learn currently available techniques in trauma resuscitation, injury research, and the collection of data about injuries. High-quality-mentored research projects and programs, including joint masters and doctoral degrees, can help develop the next generation of scientists and clinicians. Another way to increase injury research and training capacity is to develop and strengthen regional educational infrastructure with colleagues throughout the Middle East, Southeast Asia, and globally. Innovative efforts, such as online/blended courses, as well as in-country/regional trauma care courses will help develop the necessary human resources. In addition, collaborative research efforts can help build appropriate infrastructure and research networks while identifying innovative solutions that could have widespread impact. This would also help build bridges across the many internal and external political divides we currently face.

FUNDING

While collaborative research and clinical efforts will be one key to increasing our knowledge and understanding of human trauma and injury prevention, without adequate financial support and other resources, it will be difficult to move forward. Both clinical care and research requires adequate financial support to be able to deliver high-quality emergency care and to conduct the necessary research to improve the care we deliver. Each country will have unique solutions based on their research and health-care financing systems and structures, but there has to be a clear and concrete commitment on a societal, academic, and governmental level to address this important and growing problem.

LEADERSHIP

While collaboration and funding are important components for the prevention and treatment of injuries, visionary leadership

is critical to guide the development of needed human capital and knowledge to make a difference. Leadership should be transformational and dynamic, promoting the importance of injury prevention, research, and care, while supporting and protecting those individuals doing the detailed work. Leaders should be driven by values, such as integrity, mutual respect, and purpose. We need this visionary representation at the highest academic and governmental levels to improve scientific understanding by nonscientist leaders of our important work. This will help us to grow the necessary financial and structural support for injury prevention and treatment. This leadership needs to be found both within the political arena as well as within clinical and academic institutions.

Addressing the global injury epidemic is a critical call for action! It is vitally important that we share knowledge, experience, and ideas to decrease the significant individual, family, and societal burden caused by injuries. We know that we face many regional and global challenges slowing efforts to improve health and the human condition. However, teachers, trainees, researchers, and clinicians can successfully work together to publish manuscripts, obtain research funding, teach the next generation of researchers, train clinicians in basic and advanced trauma care, and successfully promote injury research, prevention, and clinical care. Through working together, with adequate resources and leadership, we can and will make a difference in the lives of our friends, our colleagues, and our patients through the prevention and treatment of injuries.

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