

## COMMENTARY

## Maxillofacial defects following road traffic accidents should be included in the disability spectrum

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**Abstract**

*In India, 21.20% of annual road traffic accidents (RTA) result in maxillofacial injuries, with most victims being young adults aged 18-45 years. Such RTAs cause personal losses to individuals and families and adversely impact the country's health system facilities. These losses result from the expenses for medical care, lost wages for individuals who are rendered unable to work, and lost productivity for family members who must miss work or school in order to care for the injured. Most nations lose 3% of their gross domestic product to road accidents. RTA injuries, often associated with severe morbidity, cause functional impairments and have immense psychological impact. Rehabilitating these patients and their future treatment needs constitute an economic burden to themselves and their families, more so in a developing country like India, where a majority of the population cannot afford the treatment costs and lack health insurance coverage.*

*These injuries therefore, as defined by the International Classification of Functioning, Disability and Health 2001, fall within the ambit of impairment and disability. However, Indian law does not identify maxillofacial injuries and the ensuing trauma as disabilities. Addressing this could be an important step towards improvement in the care and compensation provided to survivors of such life changing accidents.*

**Keywords:** maxillofacial injury; disability; impairment.

**Background**

The face, including both soft tissue and bones, is often the first point of contact in road traffic accidents (RTAs). The resultant injuries may cause serious functional psychological and cosmetic disabilities. Maxillofacial trauma is hence

challenging, both in terms of treatment and rehabilitation. Unfortunately, India ranks third in the world for number of RTAs occurring per day. That amounts to approximately 47 accidents every hour, every day, in the last five years [1], contributing to 45-50% of all maxillofacial injuries [2], with most victims being young adults aged 18-45 years (69.6%) [1].

The impact of maxillofacial accidents results in interruption of a number of integral functions such as vision, olfaction, auditory perception, speech, breathing and eating, and therefore negatively influences the victim's quality of life due to incapacitating outcomes [3]. These patients also report a lower quality of life, besides stigmatisation, stress disorders, dejection and dissatisfaction with life [4].

**How is disability defined?**

The International Classification of Functioning, Disability and Health (ICF) 2001, defines disability as an all-encompassing "term for impairments, limitations of activity and participation restrictions" [5], which may be temporary or permanent in nature. Secondly, disability represents deviation from "certain generally accepted population standards in the biomedical status of the body and its functions" both physical and mental.

The 29th World Health Assembly in 1976 [6] provided valuable insights into, and relevant terms with regard to, maxillofacial disability as described by International Classification of Diseases (ICD), and placed maxillofacial disabilities in the following categories [7]:

1. skeletal: mechanical/motor impairment of jaws and face;
2. disfigurement: classified as deficiency/ structural deformity in head region and other disfigurements of head, and
3. sensory.

Post maxillofacial RTA, patients have many common concerns which include challenges in social functioning, body image adaptation, and possible mental deterioration [4]. Apart from these psychological aspects, functional loss associated with hard or soft tissues of the face can be substantial. These could be loss of teeth, difficulty in opening the mouth, difficulty in chewing/swallowing, trauma to the temporomandibular joint, severe disfigurement, all of which are detrimental to the normal active life of patients [8].

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Hence, maxillofacial injuries following RTAs do fall, by definition, into the realm of disability.

### The Indian scenario

Though a common affliction in Indian society, maxillofacial injuries are usually excluded from the purview of morbidity and disabilities. Road traffic accidents are responsible for 42.2% of maxillofacial fractures [5].

The Rights of Persons with Disabilities Act, 2016, gives legal expression to the United Nations Convention on the Rights of Persons with Disabilities, ratified by India. Under the amended Act, a table of fourteen disabilities has been added to the seven listed earlier in 2006, constituting a formidable core set of disabilities recognised by the Indian law. Although locomotor disability and acid-attack survivors have found mention in these listed disabilities, acquired disability due to motor accidents remains excluded [9]. That a country like ours, with high rates of RTA mortality and morbidity, has no such guidelines is alarming.

Although the Indian judiciary has decided cases for compensation to people with maxillofacial injuries, no protocol exists to define it as a disability and measure outcomes in terms of loss of function [10]. The lack of a uniform disability assessment tool across the nation is a major obstacle in providing prompt and fair redress to the victim of a traumatic life event such as maxillofacial injury and has alarming legal implications. The Supreme Court, in cases like *Master Ayush vs Branch Manager, Reliance General Insurance Co. Ltd* [11], and in others, has stressed that “it is not easy to convert the physical and mental loss into monetary terms. There has to be a measure of calculated guesswork and conjecture” in assessing compensation for physical and mental injury. This casts the burden of computing damage on the treating surgeon, who faces challenges in identifying the precise grade of disability or classifying it or even merely quantifying it, due to lack of clear guidelines for the same [12].

### Global scenario

Most developed western countries have their own disability assessment scales for maxillofacial injuries. The American Association of Oral and Maxillofacial Surgeons (AAOMS) recognises the need to institute a standardised protocol for evaluating impairments of the maxillofacial region. The AAOMS inducted methods of measuring and allocating values for permanent impairment of the maxillofacial area, in tandem with the American Medical Association protocol, to meticulously evaluate disability [13]. This has also set a precedent in other developed countries of the world which have established and are following their respective protocols in measuring and awarding compensation for maxillofacial disability, thereby ensuring substantial compensation. This void in India, where the occurrence of such mishaps is ever increasing, is agonising and needs to be addressed.

### Conclusion

Maxillofacial impairments caused by RTA, though recognised as deviations from the normal, are not included under “disability” in India. The need of the hour is to recognise these injuries and their effects as debilitating disabilities and to implement policies accordingly to develop unified guidelines/protocols, unanimous grading, just compensation and ample rehabilitation thereby benefiting the patient community.

**Conflict of interest:** None

### References

1. Ministry of Road Transport and Highway Research Wing. *Road accidents in India*. New Delhi: Govt. of India 2018 [Cited 2022 Jun 26]. Available from: [https://morth.nic.in/sites/default/files/RA\\_2021\\_Compressed.pdf](https://morth.nic.in/sites/default/files/RA_2021_Compressed.pdf)
2. Kumar BP, Devi VV, Bandyopadhyay TK, Hussaini SM. Factors influencing road traffic accidents causing maxillofacial injuries in Nalgonda District: prospective survey of 366 cases. *J Inj Violence Res*. 2023 Jan;15(1):27. <https://doi.org/10.5249%2Fjivr.v15i1.1789>
3. Giriyan K, Kamath R, D'Souza B, Kamath S, Bhat SR. Implications of Maxillofacial Injuries on Quality of Life in Trauma Victims. *Medico-legal Update*. 2019 Jan;19(1):70-5. <http://dx.doi.org/10.5958/0974-1283.2019.00016.1>
4. Sahni V. Psychological impact of facial trauma. *Craniomaxillofac Trauma Reconstr* 2018 Mar;11(1):015-20. <https://doi.org/10.1055/s-0037-1603464>
5. Gupta A, Babu AK, Bansal P, Sharma R, Sharma SD. Changing trends in maxillofacial trauma: A 15 years retrospective study in the Southern Part of Haryana, India. *Indian Journal of Dental Research*. 2018 Mar 1;29(2):190.
6. World Health Organization. International classification of impairments, disabilities, and handicaps: a manual of classification relating to the consequences of disease, published in accordance with resolution WHA 29.35 of the Twenty-ninth World Health Assembly, May 1976. World Health Organization; 1980.
7. De Kleijn-De Vrankrijker MW. The long way from the international classification of impairments, disabilities and handicaps (ICIDH) to the international classification of functioning, disability and health (ICF). *Disabil Rehabil*. 2003 Jan 1;25(11-12):561-4. <https://doi.org/10.1080/09638280110110879>
8. Morris LM, Kellman RM. Complications in facial trauma. *Facial Plast Surg Clin North Am*. 2013 Nov 1;21(4):605-17. <https://doi.org/10.1016/j.fsc.2013.07.005>
9. Ministry of Social Justice and Empowerment, Govt of India. Notification no. 16-18/97-NI, Annexure 2. 2002 Feb 18. [Cited 2023 Nov 30]. Available from: [https://upload.indiacode.nic.in/showfile?actid=AC\\_CEN\\_25\\_54\\_00002\\_201649\\_1517807328299&type=notification&filename=Guidelines%20notification\\_04.01.2018.pdf](https://upload.indiacode.nic.in/showfile?actid=AC_CEN_25_54_00002_201649_1517807328299&type=notification&filename=Guidelines%20notification_04.01.2018.pdf)
10. Shah N, Palan S, Mahajan A, Shah P, Shah R, Kumar P. Why and how maxillofacial disability and impairment due to trauma should be quantified for compensation: a need for nationwide guidelines. *J. Maxillofac. Oral Surg*. 2014 Dec;13(4):425-430. <https://doi.org/10.1007/s12663-013-0527-2>
11. Supreme Court of India. *Master Ayush vs Branch Manager, Reliance General Insurance and Ors*. Civil Appeal No. 2205-2206 of 2022. 2022 Mar 29 [Cited 2022 Jun 26]. Available from: [https://main.sci.gov.in/supremecourt/2021/3047/3047\\_2021\\_11\\_1502\\_34504\\_Judgement\\_29-Mar-2022.pdf](https://main.sci.gov.in/supremecourt/2021/3047/3047_2021_11_1502_34504_Judgement_29-Mar-2022.pdf)
12. Singh R, Singh H, Gupta SC, Kumar Y. Pattern, severity and circumstances of injuries sustained in road traffic accidents: a tertiary care hospital-based study. *Indian J Community Med*. 2014 Jan;39(1):30-34. <https://doi.org/10.4103/0970-0218.126353>
13. Lieblich SE, Kleiman MA, Zak MJ J. Parameters of care: clinical practice. Guidelines for oral and maxillofacial surgery. (AAOMS ParCare 2012). *J. Oral Maxillofac. Surg*. 2012;70(e50). <https://doi.org/10.1016/j.joms.2023.06.020>