

The fifth most prevalent disease is being neglected by public health organisations

The progress towards reduction of global mortality has produced an epidemiological transition towards non-fatal diseases, which challenge the ability of the world's population to live in full health. Although traumatic dental injuries are not lethal, their treatment is more expensive (US\$2 000 000–5 000 000 per million inhabitants) and time-consuming than that of all the other bodily injuries,¹ making dental rehabilitation less likely among disadvantaged individuals.² Since untreated traumatic dental injuries have a negative social, functional, and emotional effect in children and adolescents, differences in treatment of these injuries between children from different countries and social classes produce disparities in their quality of life.³

According to our meta-analysis,⁴ performed and validated through the Global Burden of Disease (GBD) Study criteria for injuries, there are 900 000 000–1 250 000 000 people who live with traumatic dental injury,

with non-significant differences in prevalence between the six WHO regions. Traumatic dental injuries would therefore be the fifth most prevalent disease or injury after permanent caries, tension-type headache, iron-deficiency anaemia, and age-related and other hearing loss, preceding migraine and genital herpes. The use of the conditional tense is due to the fact that, paradoxically, the GBD Study did not consider traumatic dental injuries among the 300 most prevalent diseases and injuries.⁵

Some traumatic dental injuries (infracture [incomplete fracture of tooth without substance loss], concussion [injury to the tooth-supporting structures without loosening or displacement], and subluxation [injury to the tooth-supporting structures with abnormal loosening, without displacement]) cannot even be classified according to the newly released WHO International Classification of Diseases (ICD-11; panel)⁶ nor the ICD application to dentistry, which dates back to 1995.⁷ Traumatic dental injuries also are neglected by the oral health sections of the US Centers for Disease Control and Prevention (CDC)⁸ and WHO.⁹ Indeed,

dental caries, gingival or periodontal diseases, and oral cancer were the only oral diseases considered by the oral health sections of the CDC⁸ and WHO.⁹ Consequently, no information regarding traumatic dental injuries was reported by the US National Health and Nutrition Examination Survey, the National Health Interview Survey, or by the Country Oral Health Profiles of WHO.

We believe that this lack of awareness by international public health organisations has important consequences for increasing the disparities in oral health status between privileged and underprivileged children and adolescents, with consequent differences in social, emotional, and psychological wellbeing. Indeed, unawareness of traumatic dental injuries causes diagnostic confusion, misclassification, and even non-classification, with subsequent underestimation of burden and inadequate control policies for traumatic dental injuries.

To bridge this gap, we urge that traumatic dental injuries be acknowledged by the main international public health organisations, that they be included in the GBD Study, and that a unique, comprehensive traumatic dental-injury-related block be created in chapter 22 of ICD-11, using the acknowledged Andreasen classification system (panel).

We declare no competing interests.

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1 Borum MK, Andreasen JO. Therapeutic and economic implications of traumatic dental injuries in Denmark: an estimate based on 7549 patients treated at a major trauma centre. *Int J Paediatr Dent* 2001; **11**: 249–58.

Panel: Proposed codification of traumatic dental injuries, within the WHO International Classification of Diseases (ICD)

01—Injuries to the hard dental tissues and the pulp

- 01.1 Enamel infracture*
- 01.2 Enamel fracture
- 01.3 Enamel-dentin fracture
- 01.4 Complicated crown fracture
- 01.5 Uncomplicated crown-root fracture
- 01.6 Complicated crown-root fracture
- 01.7 Root fracture

02—Injuries to the periodontal tissues

- 02.1 Concussion*
- 02.2 Subluxation*
- 02.3 Extrusive luxation
- 02.4 Lateral luxation
- 02.5 Intrusive luxation
- 02.6 Avulsion

Codification is according to the Andreasen classification. *Currently not classifiable with ICD-11.

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- 4 Petti S, Glendor U, Andersson L. World traumatic dental injury prevalence and incidence, a meta-analysis—one billion living people have had traumatic dental injuries. *Dent Traumatol* 2018; **34**: 71–86.
- 5 GBD 2015 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet* 2016; **388**: 1545–602.
- 6 WHO. ICD-11 for mortality and morbidity statistics. <https://icd.who.int/browse11/l-m/en> (accessed Aug 31, 2018).
- 7 WHO. ICD-DA. Application of the Internal Classification of Diseases to dentistry and stomatology, 3rd edn. Geneva: World Health Organization, 1995.
- 8 US Centers for Disease Control and Prevention. Oral health. <https://www.cdc.gov/oralhealth/index.html> (accessed Aug 31, 2018).
- 9 WHO. Oral health. http://www.who.int/oral_health/databases/en/ (accessed Aug 31, 2018).