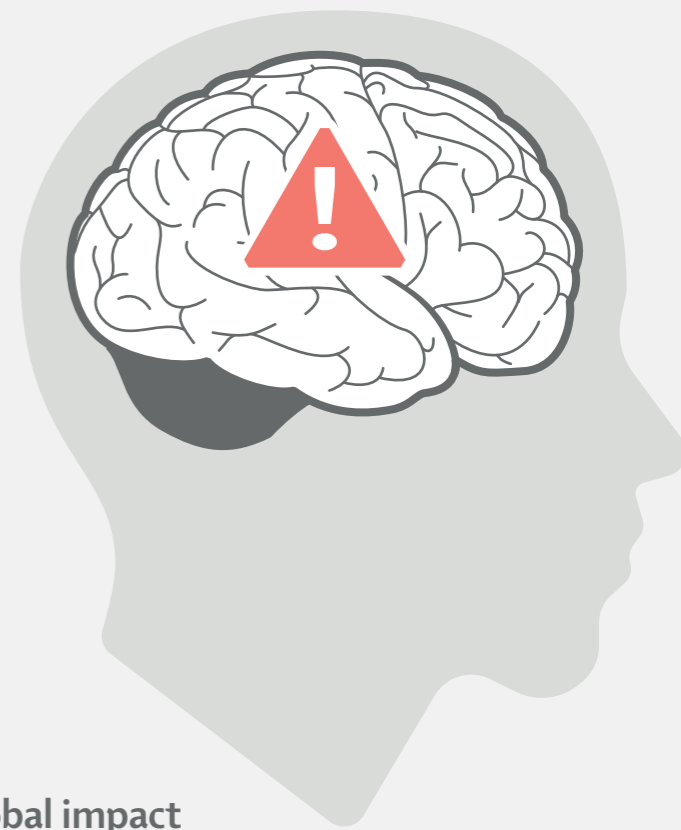


# Traumatic brain injury: improving prevention, access to care, and clinical research

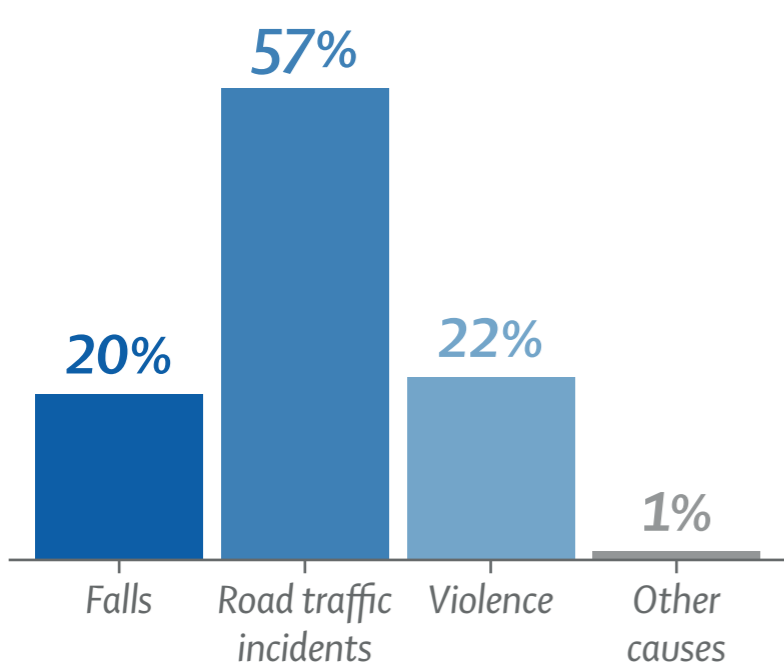


Traumatic brain injury (TBI) is a leading cause of injury-related death and disability worldwide

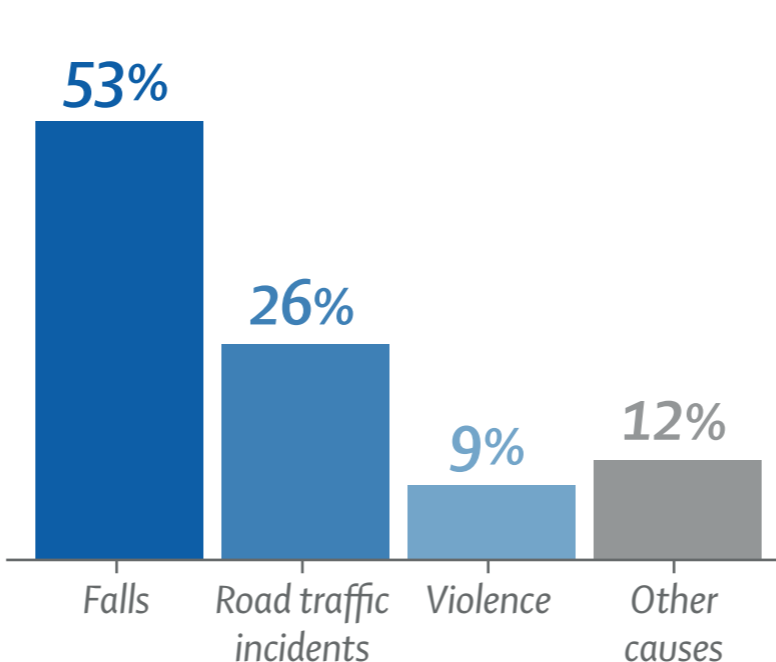
## The main causes of TBI



In low-income and middle-income countries (LMICs)



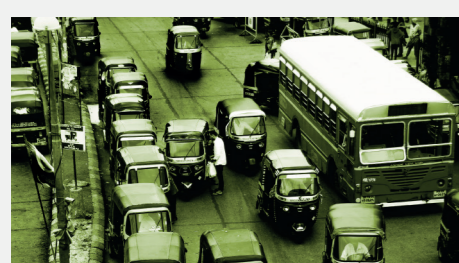
In high-income countries (HICs)



## Global impact

<b>346</b>	Worldwide incidence rate per 100 000 people, 2019
<b>50–60m</b>	Number of people who have a TBI worldwide each year
<b>8.1m</b>	Years lived with a disability worldwide due to TBI
<b>90%</b>	Proportion of TBIs that are categorised as mild

## Key targets for TBI prevention



### Road traffic safety

In LMICs, most injuries are caused by road traffic incidents



### Older people

30–40% of hospital presentations in HICs are patients aged  $\geq 65$  years



### Children and adolescents

Deaths in under-18s account for 200 000 years of life lost



### Violence and crime

The third most common cause of TBI globally is violence



### Sport

Linked with risk for TBI; individual sports result in most hospitalisations

Improved access to care will require close collaboration between policy makers and clinicians



### In LMICs

Improve access to emergency pre-hospital care, and develop infrastructure for post-acute care, including rehabilitation



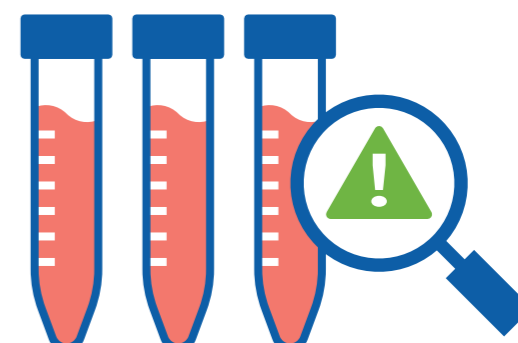
### In HICs

Improve access to rehabilitation for patients with all severities of TBI



### Worldwide

Blood-based biomarkers are on the verge of a breakthrough for diagnostic and prognostic use, but require the development, validation, and approval of clinical-use platforms



## Key areas for future research



### Understanding mild TBI

- » Half of hospitalised patients with mild TBI do not fully recover
- » Better evidence is needed to inform treatment
- » Expand knowledge on the natural history and outcomes of sports-related concussion



### Better classification

- » Current schemes are insensitive
- » Improvement is needed for both initial severity and outcome
- » Better identification of meaningful subgroups can lead to improved and individualised treatments



### Ensuring future research

- » Strengthen international collaborations
- » Promote the use of common data elements in research to maximise use for analysis
- » Streamline regulatory frameworks

### Other areas of research

- » Expanding available evidence to inform treatments for older patients, especially those with comorbidities
- » Increasing understanding of the relationship between TBI and late-onset neurodegeneration
- » Increasing understanding of why outcomes for women are poorer than outcomes for men

Read the full *Lancet Neurology* Commission for more details