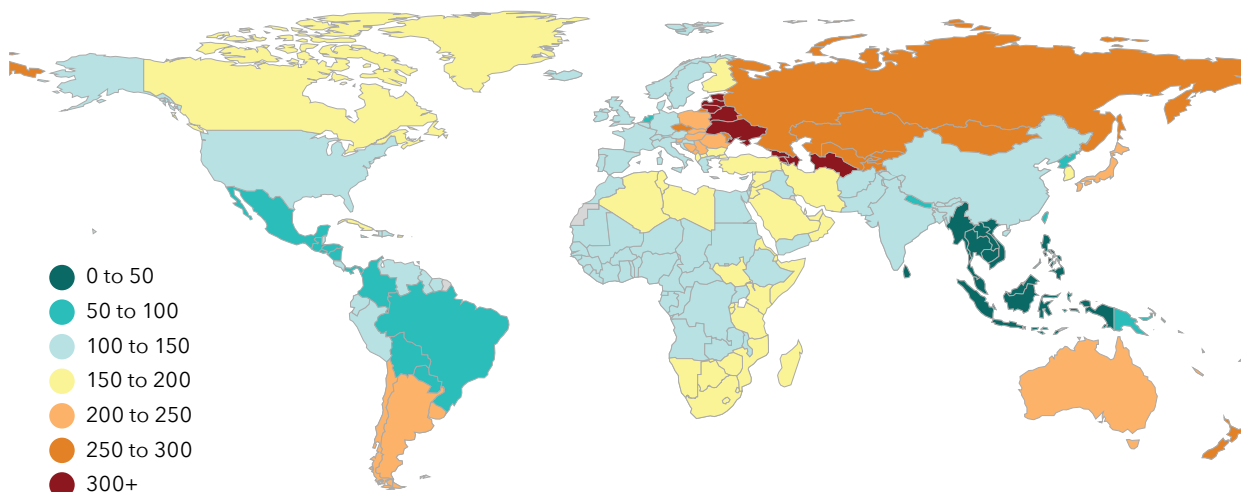


TRENDS IN INJURIES FROM FIRE, HEAT, AND HOT SUBSTANCES, 1990-2017

Burns and other injuries caused by exposure to fire, heat, and hot substances can cause severe disability and death, even when health care services are available. Among the world's regions, substantial variation exists in both the number of cases of these injuries and the rates of death resulting from them.

The burn injuries incidence landscape in 2017 showed **great variability** among regions, as did the change over time

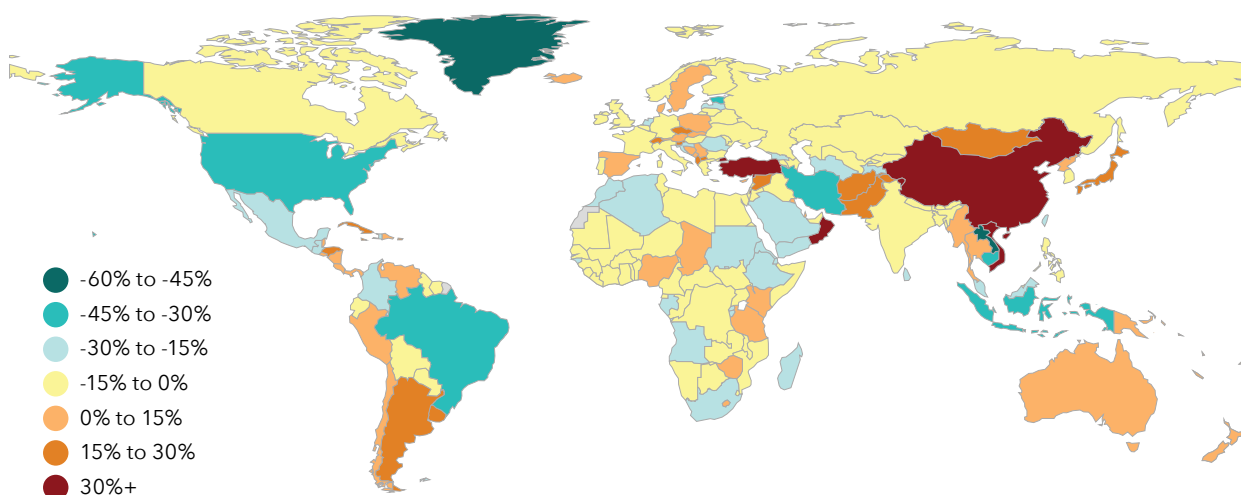
Age-standardized* incidence per 100,000 of injuries from fire, heat, and hot substances in 2017



*Age-standardization is a statistical technique for comparing populations with different age structures, in which the characteristics of the populations are statistically transformed to match those of a reference population.

Between 1990 and 2017, **nine regions had significant decreases** in age-standardized incidence rates and **three regions experienced significant increases****

Percentage change in age-standardized incidence per 100,000 of injuries from fire, heat, and hot substances from 1990 to 2017



**The change in the remaining nine regions was not statistically significant.

The regions with the highest age-standardized incidence rates in 2017:

EASTERN EUROPE
303 cases per 100,000

CENTRAL ASIA
298

SOUTHERN LATIN AMERICA
226

Globally, the age-standardized incidence of injuries from fire, heat, and hot substances in 2017 was **119 per 100,000** in 2017, representing **8,991,468 cases**.

▼ DECREASES

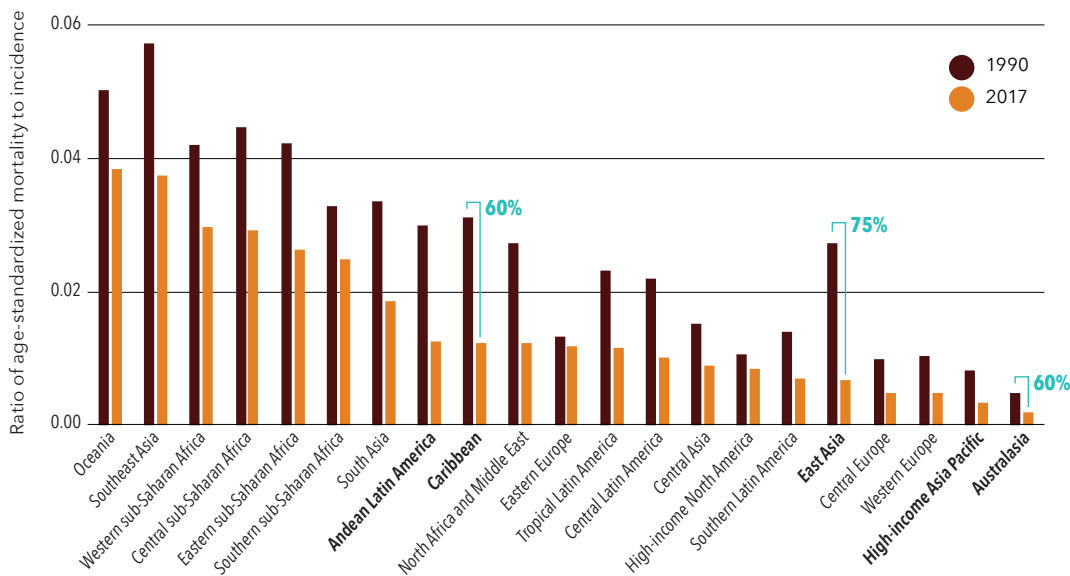
EASTERN EUROPE
EASTERN SUB-SAHARAN AFRICA
NORTH AFRICA AND MIDDLE EAST
CENTRAL ASIA
CENTRAL LATIN AMERICA
SOUTHEAST ASIA
SOUTHERN SUB-SAHARAN AFRICA
TROPICAL LATIN AMERICA
HIGH-INCOME NORTH AMERICA

▲ INCREASES

EAST ASIA
SOUTHERN LATIN AMERICA
HIGH-INCOME ASIA PACIFIC

The risk of dying from burn injuries **decreased in all regions** from 1990 to 2017

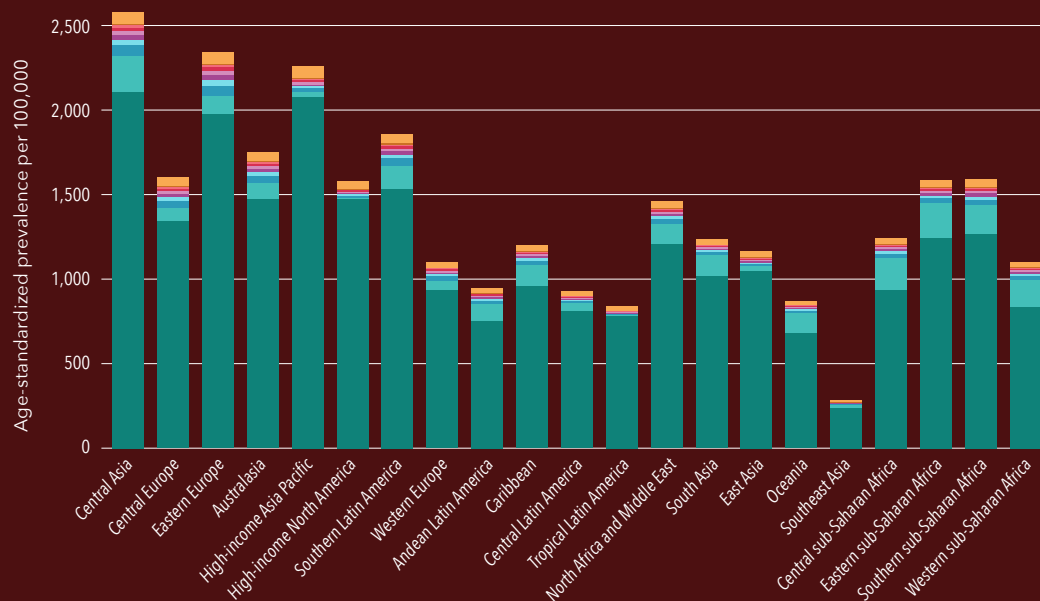
Mortality-to-incidence ratios for 1990 and 2017 by GBD region



Mortality-to-incidence ratios (MIR) reflect the **risk of dying** after suffering a burn injury. Oceania had the **highest MIR** in 2017, while Australasia had the **lowest**. While MIR varied greatly across regions, it also **declined in every region** from 1990 to 2017. The biggest declines were in East Asia, Australasia, and the Caribbean.

Burns covering **<20% of the body** made up the bulk of injuries from exposure to fire, heat, and hot substances

Age-standardized prevalence of burn injuries by category in 2017



- Burns <20%[†]
- Burns ≥20%[‡]
- Amputation of fingers (excluding thumb)
- Open wound(s)
- Fracture of patella, tibia or fibula, or ankle
- Amputation of thumb
- Amputation of toe(s)
- Muscle and tendon injuries
- Effect of different environmental factors
- Other

[†] Burns affecting <20% of the body's surface area (excluding lower airway burns)

[‡] Burns affecting ≥20% of the body's surface area OR ≥10% of the body's surface area if the head/neck or hands/wrist are involved (excluding lower airway burns)

In 2017, the average person suffering from a fire, heat, and hot substances injury **lost 3.2% of their full health** as a result. The leading cause of disability for victims was **burns affecting less than 20%** of the body's surface area (excluding lower airway burns).



These findings highlight the importance of injury prevention methods that focus on safety in consumer products, residential dwellings, and workplaces, as well as the need for universal access to care services (especially burn treatment centers) that can reduce disability and avert deaths from these injuries.