

## Injuries among children and adolescents in the home environment – epidemiological analysis based on the European Injury Data Base

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In 2007, the EU Commission pointed out in its council recommendation “On the prevention of injury and the promotion of safety” that injuries in Europe are a considerable burden on the health and social systems. In contrast to other causes of illness, injuries can be effectively prevented. The Commissions calls for the Member States to use the available data more efficiently and to observe the efficacy of the preventive measures (1).

Since 2007, the Injury Data Base (IDB) has been implemented in the land of Brandenburg as well as in 5 other places led by the Brandenburg Public Health Office. The IDB is a hospital based injury surveillance system and collects data (based on 18 core variables) on all injured patients coming through the accident and emergency department (2).

The following epidemiological analysis relates to 5,080 injuries in the home environment of a total of 10,660 injured children under the age of 18 years (N= 81,248) in the cities of Cottbus and Leipzig. The average injury rate in the home environment is 6.3 % and a quarter of the injured sustained severe injuries (e.g. head injuries, fractures and scalds among infants).

The following results identify risk groups, injuries by intent and the products involved.

The figure shows that infants and toddlers are most at risk of injuries in the home environment (120.7 and 125.8 per 1,000 respectively) and decrease with age to a rate of 18.2 per 1,000 among adolescents.

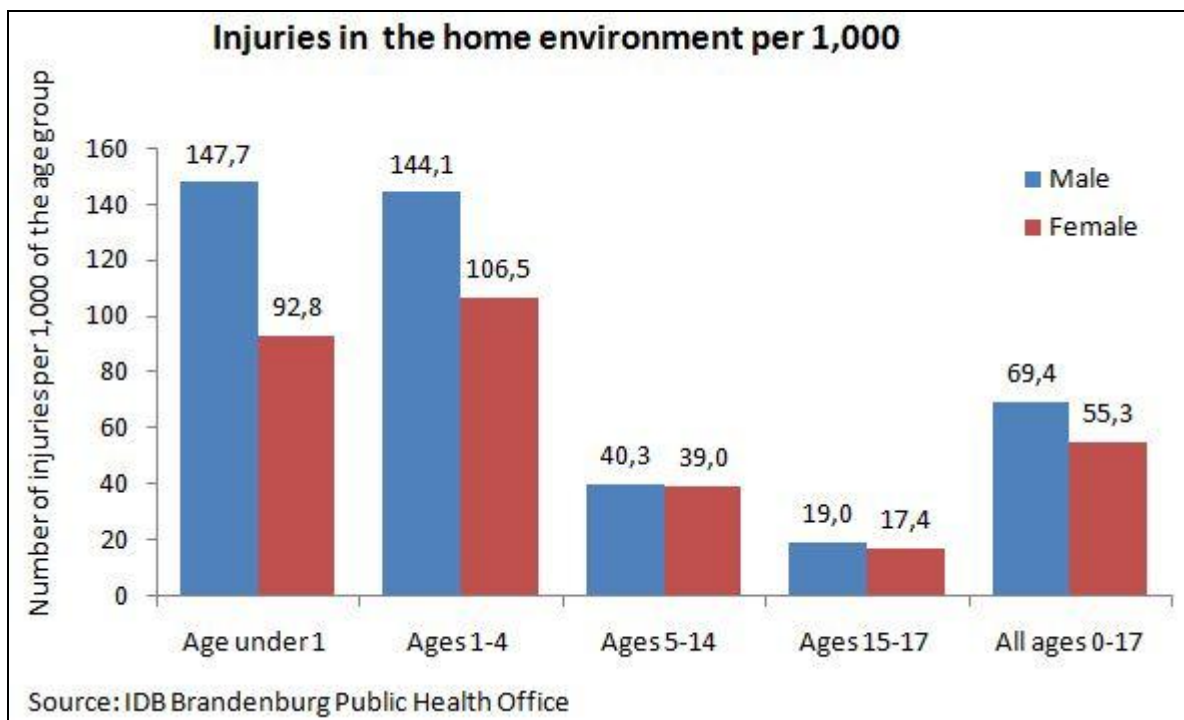


Figure: Rate of injuries in the home environment per 1,000 of the age group

Differentiating injuries by intent (accidents, violence, self harm) makes evident that infants and toddlers are most at risk in the home environment (97.9 % of all home injuries), whereas adolescents are at lowest risk (71.4 %). The 15- to 18-year olds additionally suffer from self harm. The rate of self harm among females (15–17 y) is three times as high as among boys (5.9 vs. 1.6 per 1,000) and represents a third of all injuries in the home environment. Violence shows to be a rare event in comparison to accidents. Infants, again, are most at risk (2.5 per

1,000). With respect to infants, parents are identified to be the offenders, whereas interpersonal violence is more common among school children and adolescents (3). On the basis of a standardized documentation and assessment of the injury event by intent, 5 additional suspicious cases can be identified.

According to international studies showing an age specific injury profile, the following results refer to the age specific injury mechanism and to the products involved (4).

The major causes of falls are related to baby changing tables, high chairs, seats, beds and stairs. Already in infancy, boys are most at risk of accidents in the home environment. According to doctors' reports, around 40 % of accidents in the home could have been prevented by the use of safety products or an altered behaviour. Products are less frequently the cause of accidents in adolescents. The most frequent injury mechanisms are: contact with objects, with people and falls on the same level.

**Conclusions:** The IDB is beneficial in giving useful information on risk groups and risk factors. Infants are most at risk of product related accidents in the home environment and of violence from parents.

#### Sources

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