

Product related head injuries among infants and toddlers in Europe – a public health topic?

Gabriele Ellsaesser¹, Frank Gries¹, Samantha Turner², Ronan A Lyons^{2,3}

¹*Brandenburg State Office of Environment, Health and Consumer Protection, Germany;*

²*Farr Institute Swansea, University, Medical School, UK;*

³*Public Health Wales NHS Trust*

Content

- Background
- Method
- Product related head injuries by age group
- Conclusion

Background

- Children under 5 are most at risk among the under 18 year-olds of being hospitalised because of a head injury (Dunning et al. 2004)*.
- Despite the high incidence in this age group little is known on European level of the importance of products triggering head injuries in young children.
- In answering such questions The European Injury Data Base (IDB) provides a valuable source of information, in particular its full data set (FDS) which is used in 18 of the EU countries for collecting information on the product involvement.

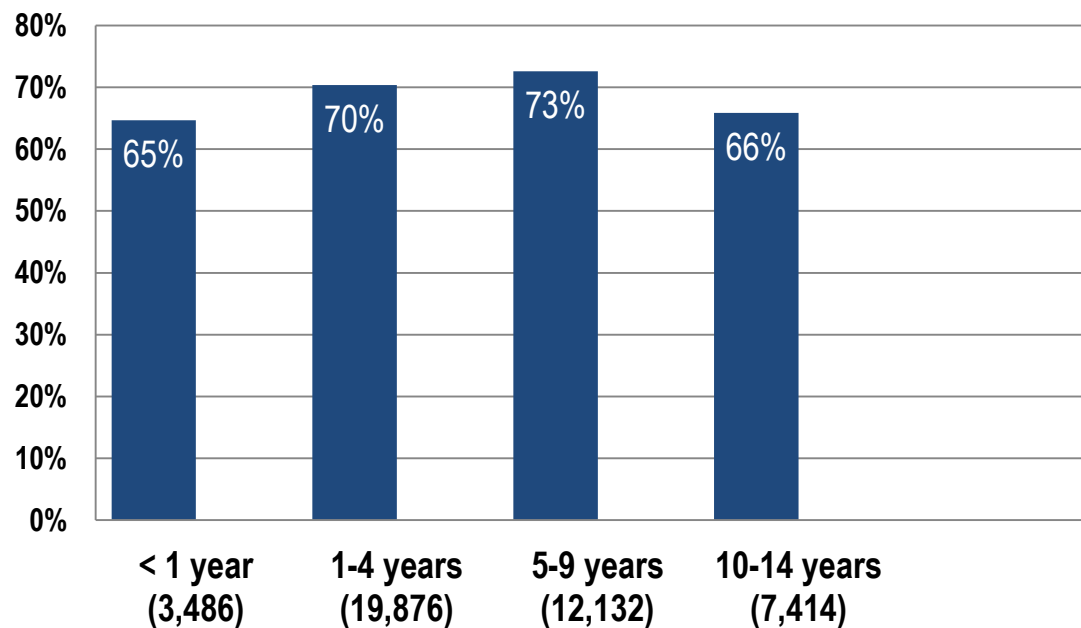
* J Dunning, J P Daly, R Malhotra, P Stratford-Smith, J-P Lomas, F Lecky, J Batchelor, K Mackway-Jones, for the Children's Head injury Algorithm for the Identification of significant Clinical Events Study (CHALICE Study) (2004) The implications of NICE guidelines on the management of children presenting with head injury. Arch Dis Child 2004;89:763-767. doi: 10.1136/adc.2003.042523

Method

- Case analysis of a total of 54,001 injuries collected during a 2-year period (2013-2014) in the under five year-olds treated in 115 hospitals (either ward or emergency) in 18 European countries.
- An injury was counted as "head injury" if:
 - the **injured body part** was documented as "**head**"**and** one of the following injury types was registered:
 - contusion, open wound, abrasion, fracture, concussion or other specified brain injury.
- An injury has been counted as a product related injury if a product was registered as "**triggering**" the injury.

Europe: Product related head injuries by age group

Product related head injuries,
in % head injuries



In the under 15 year-olds product related head injuries made up 70 %

Europe: Head injuries and products in < 1 year- olds



- Head injuries in infants (< 1 year) make up 63% (3,486) of all injuries (5,538) in the age group.
- 65% (2,255) of head injuries were triggered by products.



Europe: Most frequent 3 products triggering head injuries in < 1 year-olds

| < 1 (n=2,255) | | |
|---------------------|------------|--------------|
| | Cases | Rate |
| Beds | 459 | 20,4% |
| Changing table | 226 | 10,0% |
| Buggy and strollers | 150 | 6,7% |
| Total 3 | 835 | 37,0% |

Among infants a mere 3 products are responsible for 37 % of all product related head injuries

Europe: Head injuries and products in 1 – 4 year-olds

- Head injuries in toddlers (1-4 years) make up 41 % (19,876) of all injuries (48,463) in this age group
- 70,4 % (13,991) of head injuries were triggered by products

Europe: Most frequent products

triggering head injuries in 1 – 4 year-olds

| 1-4 years (n=13,991) | | |
|--------------------------|--------------|--------------|
| | Cases | Rate |
| Furniture (e.g. couches) | 1,048 | 7,5% |
| Stairs, steps | 963 | 6,9% |
| Beds | 653 | 4,7% |
| Total top 3 | 2,664 | 19,0% |

Due to the increasing growth and mobility of young children, more products become involved as triggering factors of head injuries.

Conclusion

- Product related head injuries among young children are a crucial public health issue on European level
- New parents should be given early advice about typical injury circumstances and specific product related injury prevention measures

Thank you for your kind attention

Gabriele Ellsaesser
gabriele.ellsaesser@lavg.brandenburg.de