FACTS

Childhood Falls

- Falls are the fourth leading cause of child injury deaths in the European region for children aged 0-19[1]. Where hospitalisation and emergency department data are available, we see that falls for children are the leading cause of admissions and emergency visits[2].

- A fall is defined as an event that results in a person coming to rest inadvertently on the ground or floor or other lower level[3].

- Younger children are at greatest risk of falling because their urge to explore their surroundings, usually does not match their capacity to assess or react to risk[4].

- In Greece falls are a common cause of serious injuries in infants with an estimated 4,400 infant fall injuries annually[8]. One out of ten infants requires hospitalisation, often due to concussions or fractures. More than 36% of these falls involved nursery equipment.

- In the United Kingdom in 2002 an estimated 390,800 children under 15 were taken to hospital with injuries resulting from a fall at home. Falls in the home and garden accounted for nearly half of all home accidental injuries and almost 60% of children who went to hospital after falling at home were under five years of age. Boys were also more likely to be injured than girls, making up 56% of children under five injured due to falls[2].

- Adolescents are also at greater risk as they often undertake more challenging or risky actions, which can involve not only more demanding physical movement but also more dangerous settings such as abandoned work sites[5].

- A Hungarian survey, examining children and young people aged 11-17 year in 2006, found that falls were more prevalent in younger age groups and that they accounted for 42% of the most serious medically treated injuries; they occurred in sport halls, streets and roads, the home and school[6].

- Falls resulting in severe or fatal injuries are usually due to falls from second story or higher windows, balconies and stairs. The most common type of fall leading to hospitalisation is from one level to another, such as from change tables, stairs, chairs, beds/bunk beds, windows, balconies and playground equipment[7].

- The majority of falls to a lower level causing injuries among young children are related to manufactured products, such as ordinary household furniture[8]. These fall injuries require medical attention and even admission to hospitals. The majority of the furniture involved in causing a fall is of seemingly insignificant height, such as ordinary beds, chairs and sofas[9].

- Baby walkers are also common causes of fall injuries in young children due to the extra mobility and speed, causing children in walkers to fall down stairs[10]. Efforts have been made to redesign walkers, but all attempts to date still leave a product on the market that is very dangerous to children. Elimination of baby walkers is being promoted as the safest strategy at present[11].

Prevention Effectiveness

As the leading cause of children's hospitalisations, more effort should be made throughout Europe to reduce fall injuries. The following measures have been proven to reduce the risk of a fall happening or to reduce the severity of injury in the event of a fall:

- **Stair gates** – have been shown to assist in the reduction of falls down stairs to young children when fitted securely at the top and bottom of stairs[12].

- **Stair design** – estimates from the United Kingdom indicate that increasing the depth of stair treads in new dwellings would prevent over 1250 falls and probably 2 deaths within the first five years of enacting a new standard[13].

- **Window restrictors** – a 96% reduction in fall admissions occurred after implementation of a regulation requiring window bars[7].

- **Voluntary product standards** – a voluntary baby walker standard introduced in 1997 in the United States to make walkers wider than doorframes, to stop at the top of the stairs without falling over, and to change the number and design of the caster wheels resulted in a 63% decrease in emergency department visits due to

EUROPEAN child SAFETY ALLIANCE

EuroSafe

Johnson & Johnson

walker injuries[15]. As well, removing the wheels from or applying brake mechanisms to baby walkers may prevent falls[9].

Recommended Policy Actions

Legislation

- For Member States to amend building codes for new dwellings to require window stoppers and child resistant safety catches that limit the opening to less than 100mm on all second story or higher windows.
- For EU harmonised building codes for new dwellings to require all steps and staircases to have a rise not exceeding 170mm and a tread depth of at least 250mm, as well as barriers on balconies, stairs and galleries to prevent falling (including underneath the railing).
- For the European Commission to ban baby walkers, except for 'stationary walkers' that allow no mobility.

EU Collaboration

- For the European Commission to support a European-wide campaign on the topic of falls from heights in children.

References

1. The global burden of disease: 2004 update. Geneva, World Health Organization, 2008 (http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html, accessed 10 November 2008).
2. Vincenten J. Priorities for Child Safety in the European Union: Agenda for Action. Amsterdam, ECOSA, 2004.
3. Peden M et al. World report on child injury prevention. Geneva, World Health Organization (in press).
4. Jordan J, Valdes-Lazo F. Education on safety and risk. In: Manciaux M, Romer C, eds. Accidents in childhood and adolescence: the role of research. Geneva, World Health Organization, 1991.
5. Morrison A, Stone D. Unintentional childhood injury mortality in Europe 1984-93: a report from the WHO Regional Office for EuropeRISC Working Group. Injury Prevention, 1999,5:171-176.
6. Pall G, ed. Injuries, accidents. Health and lifestyle of adolescents. National Research Report of Health Behaviour in School-aged children 2006 survey. Budapest, National Institute of Childe Health, 2007.
7. Child Accident Prevention Trust, Factsheet: Falls in the Home. Accessed November 30, 2004. http://www.capt.org.uk/FAQ/default.htm
8. Dedoukou X, Spyridopoulos T, Kedikoglou S, Alexe DM, Dessypris N, Petridou E. Incidence and risk factors of fall injuries among infants: a study in Greece. Arch Pediatr Adolesc Med. 2004 Oct;158(10):1002-6.
9. Harbourview Injury Prevention and Research Center / Cochrane Collaboration, Systematic Review Database. Seattle, University of Washington, 2001.
10. Nordin H. Falls among Young Children in Five European Countries: Injuries requiring medical attention following falls to a lower level among 0-4-year-olds. A study of EHLASS data from Austria, Denmark, Greece, the Netherlands and Sweden. Stockholm, Swedish Consumer Agency, 2004.
11. Sabir 2008; Claudet 2006; AAP 2001; Emanuelson 2003; ANEC 2008; Al-Nouri 2005.
12. Macgregor D. Injuries associated with falls from beds. Injury Prevention. 2000 Dec;6 (4):291-2.
13. Coats T, Allen M. Baby walker related injuries – a continuing problem. Archives of Emergency Medicine, 1991;8: 52-55.
14. Gunatilaka A, Clapperton A, Cassell E. Preventing home fall injuries: structural and design issues and solutions. Hazard (Edition No. 59), Summer. Victoria, Victorian Injury Surveillance & Applied Research System (VISAR) at the Monash University Accident Research Centre, 2005.
15. Roys M. Serious stair injuries can be prevented by improved stair design. Appl Ergon. 2001 Apr;32(2):135-9.

(Printed October 2009)

PO Box 75169 1070 AD Amsterdam The Netherlands Tel. +31 20 511 45 13 Fax +31 20 511 45 10
secretariat@childsafetyeurope.org http://www.childsafetyeurope.org