



## Case study for the promotion of helmet use on cyclists

### 'THE SWEDISH NATIONAL BICYCLE SAFETY PROGRAMME'

**Reference:** Svanstrom L, Welander G, Ekman R, Schelp L. Development of a Swedish bicycle helmet promotion programme--one decade of experiences. *Health Promot Int.* 2002;17(2):161-9.

Available at:

<http://heapro.oxfordjournals.org/cgi/reprint/17/2/161>

**Population at risk:** cyclists

**Target population:** cyclists in Sweden

**Goals/objectives:** to increase the level of helmet use in Sweden in order to achieve a substantial reduction in the number of head injuries and their medical consequences by the year 2000.

**Program design:** The Karolinska Institute and the National Institute of Public Health adopted the World Health Organization global programme to increase helmet-wearing among two-wheel riders in 1990. An intersectoral approach was used, establishing a Helmet Initiative Group including all agencies involved in safety promotion (e.g. Swedish National Institute of Public Health, Sweden's National Road Administration, National Boards for Consumer Policies and Occupational Safety and Health, the Swedish Road and Traffic Institute, The Child Environmental Council, the National Swedish Police Board, the Swedish National Society of Road Safety, the Swedish Cycling Society and Swedish Cycling Promotion, several research institutes and Universities and regional and local government authorities). This group met at least twice a year and established a number of working and task-force groups. Its principal tasks were to:

- review available literature on the size of the problem and the effectiveness of helmet-wearing initiatives;
- evaluate Swedish initiatives at a local and national level; and
- formulate objectives for different target groups.

These targets that were set by the Helmet Initiative Group in accordance to the National Traffic Safety Programme, were:

- by 2000, helmet use should be at least 85% amongst children aged 12 years and under
- by 2000, helmet use should be at least 75% amongst children and teenagers aged 13-18 years
- by 2000, helmet use should be at least 75% amongst adults aged 19-64 years

- by 2000, helmet use should be at least 85% amongst adults aged 65 years and over
- by 2000, helmet use should be at least 80% overall

The Helmet Initiative Group also set targets relating to the development of positive attitudes towards helmet use and to the study of factors and processes determining helmet wearing behaviour. More specifically, the targets for developing positive attitudes include the improvement of knowledge concerning the severity of head injury consequences and the encouragement of people that these kind of injuries are preventable.

A multi-faceted strategy to achieve the targets was employed including:

- **surveillance of injuries** – use of national mortality data, nationwide hospital-discharge data and local in-patient and emergency out-patient surveillance systems to study trends in bicycle-related injuries before and after the start of the initiative.
- **provision of information and advice** - 1,000,000 brochures with evidence-based facts, posters and videos, mainly designed for families, pre-school and school children, adults and the elderly were distributed, organising conferences and seminars. The design of the materials was initiated by researchers from the Karolinska Institute alongside experts from the communication and media sectors.
- **training** – conferences and seminars were organized, Helmet Initiative Group members lectured to students on undergraduate (e.g. at departments of public health sciences, social medicine, economics, etc.) and postgraduate (e.g. Master of Public Health and PhD courses in public health sciences) university courses in Sweden. The task force on bicycle safety for the elderly organized training events for pensioners' organizations throughout Sweden.
- **monitoring** - helmet use was monitored through the National Road Administration survey of ~4000 households and the Swedish Road and Traffic Research Institute's observation studies of cyclists in 21 municipalities.
- **environment and product improvements** - helmet campaigns were used to complement environmental change by extending the network of safe-cycle lanes and by promoting changes in transport structure. Moreover, because a respectable amount of accidents were caused by technical failures of the bicycles this policy included also the development of safer bicycles by monitoring the technical quality of bicycles.
- **legislation** – advocacy for cycle helmet legislation by establishment of a special task force on legislation which approached the Ministry of Transport, argued for legislation in the press, and organized seminars and conferences. Legislation has now been passed that from 1<sup>st</sup> January 2005, all children under 15 must wear helmets while cycling in traffic in Sweden.

**Duration of the programme:** 1991-2001

**Resources:** 10,000-50,000 Euros; 0.7 FTE staff; 1,000,000 brochures

**Process evaluation:** The precise number of people that were reached throughout the campaign and were provided with material concerning helmet promotion was not estimated. Nevertheless, the interested people came from different sectors including, big organizations, individuals that were reached in conferences, training nurses, university students and master course students.

**Impact evaluation:** Helmet use increased in all groups over the 10 years of the National Bicycle Helmet Initiative, with wearing rates that were much higher amongst children than adults (see Table 1). Nevertheless, the prevalence of helmet use between the years 1998 and 1999 did not increase; in contrast it presented a small decline. A possible reason for that could be that after seeing the large response of the people in helmet use, the intensity of the promotion of this measure by the Road Traffic Administration declined, as it was no longer their first priority.

Table 1. Observation studies of bicycle helmet usage in Sweden (1988, 1998 and 1999)

	Usage (%)		
	1988	1998	1999
Children aged $\leq$ 10 years	20.2	52.8	49.6
Children at compulsory school	5.0	35.6	32.9
Adults (at place of work)	1.7	13.8	12.5
Cycle lanes	2.9	13.5	11.2
Adults aged 65 years or over	–	14.2	11.6

Source: Svanstrom et al, 2002

**Outcome evaluation:** The incidence of head injuries requiring admission to hospital among children aged 14 years and under significantly decreased (by 3.4% per year) over the 10 year period of the National Bicycle Helmet Initiative, but increased (by 4.6% per year) significantly for adults aged 15-64 years, amongst whom helmet wearing rates were much lower. Figure 1 illustrates the increase of helmet use between the years 1991 and 2001 (implementation of the national bicycle safety program) and the significant increase in the years 2005 and 2006 because of the existence of legislation that the use of helmets is compulsory for children under 15 years old.

## Bicycle helmet use in Sweden (1988-2006)

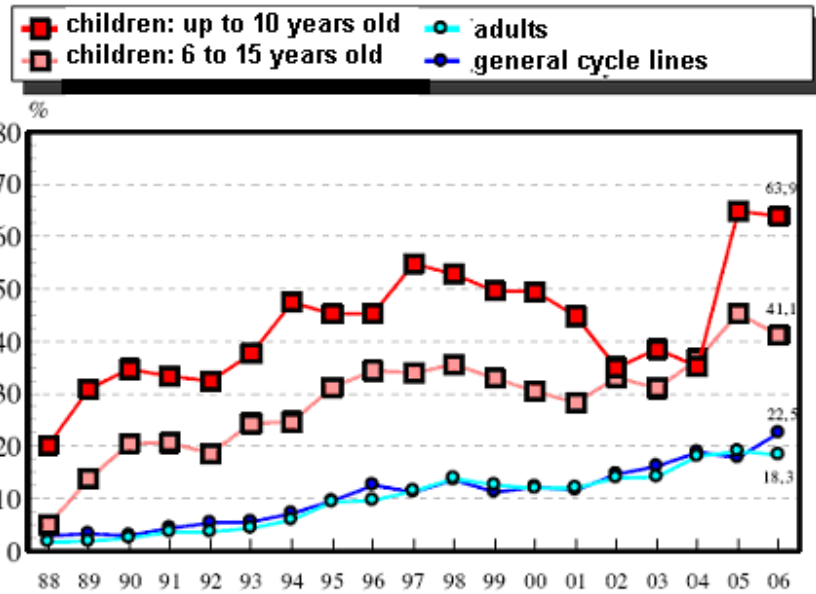


figure 1: Diagram of bicycle helmet use in Sweden between 1988-2006. Significant change 2005 and 2006. (Preliminary report VTI, Swedish National Road and Transport Research Institute, Linköping, 2007)

**Leading agency:** The leading agency that took the initiative to set up the campaign in Sweden in 1990 was the Department of Public Health Sciences, Division of social Medicine of the Karolinska Institute in collaboration with the Swedish National Injury Prevention Program at the National Institute of Public Health. This however was part of the international initiative taken by WHO.

**Other supportive agencies:** The National Road Administration sponsored the Swedish secretariat with a part budget.

### ***Factors that helped in implementing the National Bicycle Helmet Initiative***

A large range of factors were considered to be important in implementation. These included:

- (a) financial support from the National Road Administration and the Public Health Institute;
- (b) the use of multiple contacts with community stakeholders, national agencies, County and Municipal Governments, insurance companies and non governmental organisations who disseminated information, ran national educational campaigns and sponsored national conferences so helping increase public support for helmet wearing;
- (c) inclusion of researchers and local journalists on the Helmet Initiative Group;
- (d) the availability of information on injuries, which could be quickly disseminated from the local injury surveillance system or national data, to interested parties and use of associated unforeseen events (e.g. child deaths due to inadequate helmet locking mechanisms) to further promote helmet use with safer locking mechanisms.

- (e) the development of effective public service messages which were popular with the media;
- (f) the positive response of the media (e.g. radio, TV and press) to promote these messages;

The key factor that made the public-service messages popular was that the majority of the messages were stories from real life events which were voluntarily narrated by victims of bicycle related injuries. An example of these messages was: "If I had had a helmet when I crashed, I could have avoided being handicapped for the rest of my life".

### **Factors that hindered in implementing the National Bicycle Helmet Initiative**

Several factors were found which hindered implementation of the National Bicycle Helmet Initiative. The lack of political support in a national level and the manufacturers' reluctance to develop new products such as safer locking mechanisms due to fear of litigation if it was found that their products had been responsible for injury. Potential obstacles to implementing a National Bicycle Helmet Initiative in other countries identified by the authors include the difficulty of promoting cycle helmets consistently across a range of public health agencies and organisations when there is no legislation to support this policy. Finally, there is a difficulty to promote helmets when individuals may perceive this as a threat to personal freedom or a decision which should be left to personal choice. Nevertheless, this threat can be overcome by using a sustained approach that will gradually change the behaviour of the majority of people thus the new habit will be perceived as a part of a natural behaviour.

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