

Drink-driving and alcolocks in Sweden – international challenges

BUILDING CAPACITY FOR ACTION
European Alcohol Policy Conference
Barcelona 3-5 April 2008

Åke Lindgren

1. SOME FACTS ABOUT SWEDEN

- . 2000 KM SOUTHY TO NORTH
- . 500 KM WEST TO EAST
- . 9 MILLION INHABITANTS
- . 5 MILLION DRIVING LICENCES
- . 4 MILLION PRIVATE CARS
- . 300.000 TRAFFIC ACCIDENTS /YEAR
- . 38.000 TRAFFIC PERSONAL INJURIES
- . 450 TRAFFIC FATALITIES/YEAR

.

2.1 BAC-LAWS IN SWEDEN

History 1925-1999

- 1925 *finer* for DUI motor vehicle or tractor
- 1934 *imprisonment, blood analysis*
- 1941 *per mill law 0,8 (g/l) and 1,5 (g/l) BAC*
 - * Norway already 1936 0.5 BAC law
- 1957 lower BAC-limit 0.5
- 1974 *retrospective calculation problem*
- 1990 *the lower BAC-limit decreased to 0,2*
- 1994 *the upper BAC-limit decreased to 1,0*
- 1999 *zero limit other drugs;*
- 1999 *BAC 1,0 pleasure boats;*
- 1999 *Alcolock system law in certain areas*

2.2 Law regulations in Sweden

Fines and imprisonments

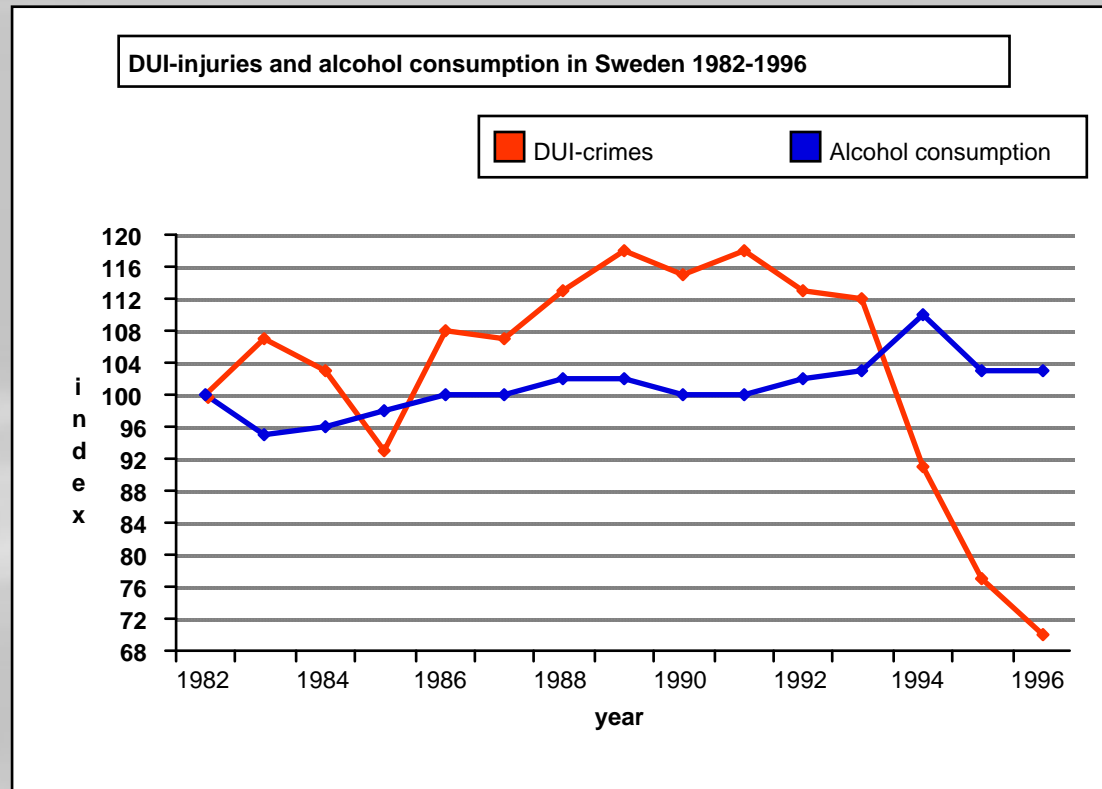
Fines normal, 30-50 days 0.2-1.0 BAC

- *Prison, 1 month (mostly) up to 2 years, BAC 1.0 and higher*
- *Driving license suspended 2-24 months. Table 1 gives details and shows comparisons with Denmark and Norway*

2.3 Suspension of driver's licence in Nordic countries

| ■ BAC‰ | SWEDEN | DENMARK | NORWAY | |
|-------------------------|----------------|----------------|------------------|-------------|
| ■ 0.20-0.30 | warning | | | |
| ■ 0.31-0.36 | susp. 2 months | | | |
| ■ 0.37-0.49 | susp. 4 mths | | | |
| ■ 0.50-0.59 | susp. 6 mths | | susp. 18 mths | |
| ■ 0.60-0.79 | susp. 8 mths | | susp. 18 mths | |
| ■ 0.80-0.99 | susp. 10 mths | cond.susp. | susp. 20 mths | |
| ■ 1.00-1.84 | susp. 12 mths | susp. 12 mths | susp. 24 mths | |
| ■ 1.85-1.99 | susp. 15 mths | susp. 24 mths | susp. 24 mths | |
| ■ 2.00-2.99 | susp. 18 mths | susp. 30 mths | susp. 36-48 mths | |
| ■ 3.00- mths | | susp. 24 mths | susp. 30 mths | susp. 48-60 |

3. DUI-injuries AND ALCOHOL CONSUMPTION in Sweden before and after the BAC-reforms in 1990/1994



3.1 Evaluation of 1990-1994 BAC-laws

- After adjusting for other factors the residual effects of the BAC-reforms on DUI-accidents are:
 - ***DUI accidents total*** - ***13% after 1990***
 - ***“ “ “*** - ***18 % after 1994***
 - ***DUI fatal accidents*** - ***10 % after 1990***
 - ***“ “*** - ***13 % after 1994***
 - ***DUI severe injuries*** - ***10 % after 1990***
 - ***“ “*** - ***6 % after 1994***

4.1 DUI-drivers' characteristics

1991 study

Characteristics of drunken drivers 1991:

- 40 % men 15-29 years of age**
- 66 % unmarried**
- 20 % had indication of alcohol problems; Of those above BAC 1.0 had 50 % indication of alcohol problems**

4.2 DUI-drivers characteristics

1996-1997 KAPUBRA-project study

- Many were registered for other crimes than only DUI**
- 40 % had not a driver's licence when arrested for DUI**
- 65 % had been drinking at a restaurant or party before stopped by the police suspected for DUI**
- The KAPUBRA- project in 1996-1997 has shown that 56 % of DUI drivers scored for alcohol problems in the AUDIT test**

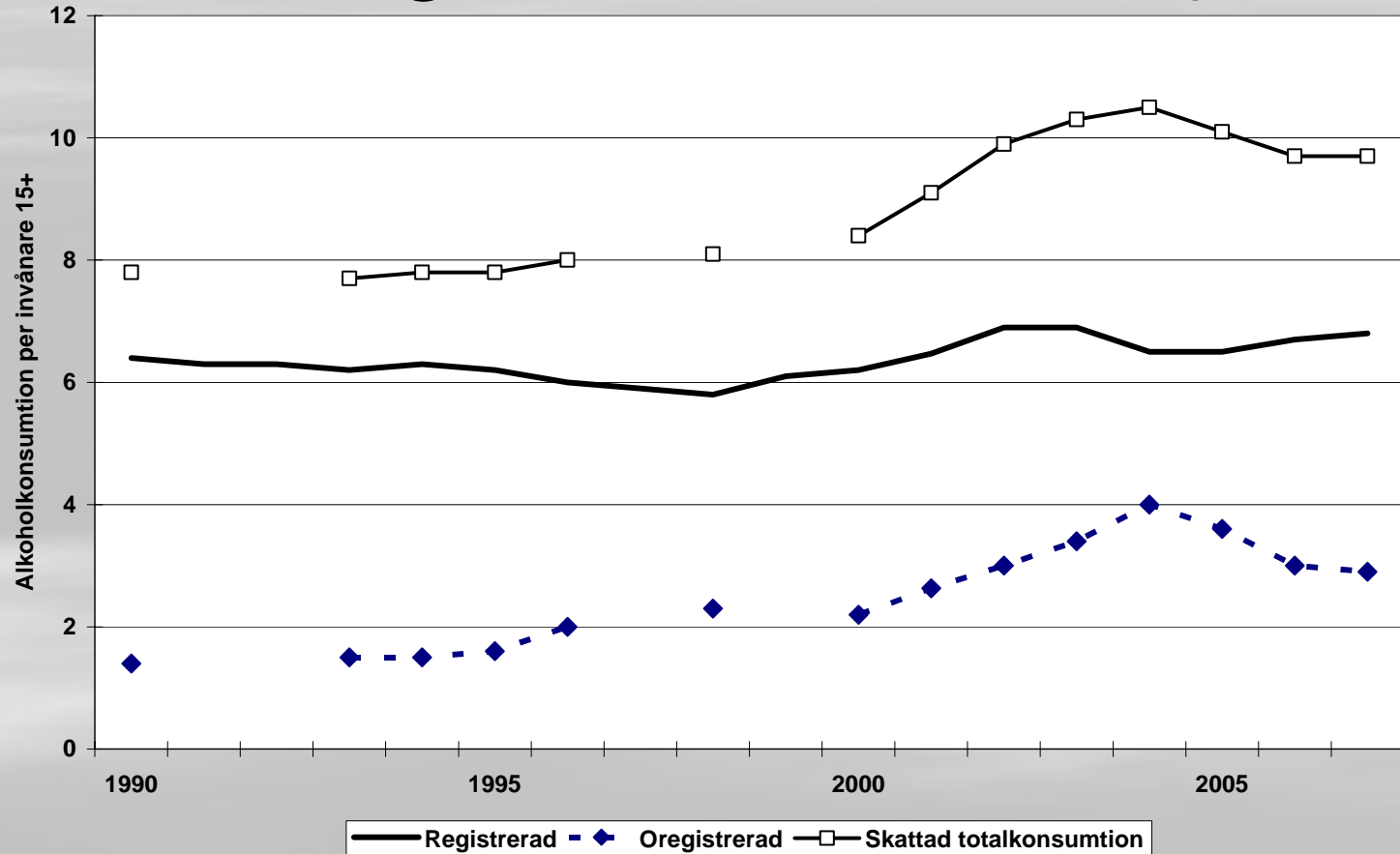
5. Development 1995-2007

- 1995 Sweden became a member of EU.
- "The integration has been devastating for the alcohol policy"
- Earlier restrictive regulations of import of alcohol have been changed. Sweden has been forced to liberalise the alcohol policy and the flow of alcohol over the borders has increased substantially
- The alcohol consumption has increased as well as DUI-accidents

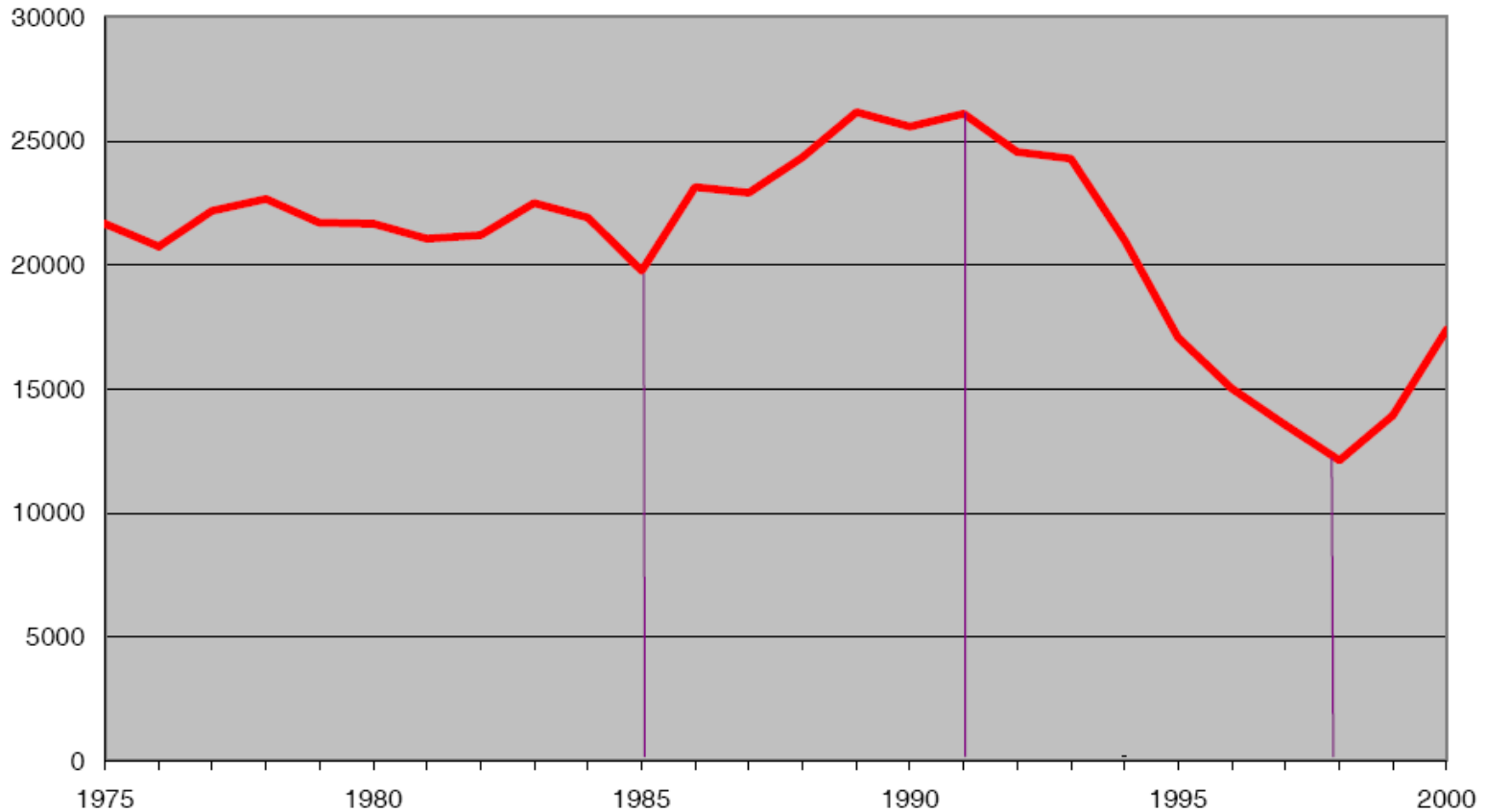
5.1 Correlation DUI- accidents and alcohol consumption

- It is known from international research that it is a *correlation between the change in total alcohol consumption and the number of DUI-injuries.*
- During a 30 years period calculations (Norström) show a correlation coefficient 0.6 (e.g. 10 % increase in consumption means 6 % increase in DUI- accidents)

5.2 Alcohol consumption per capita 1990-2007 in Sweden (registered unregistered and total)

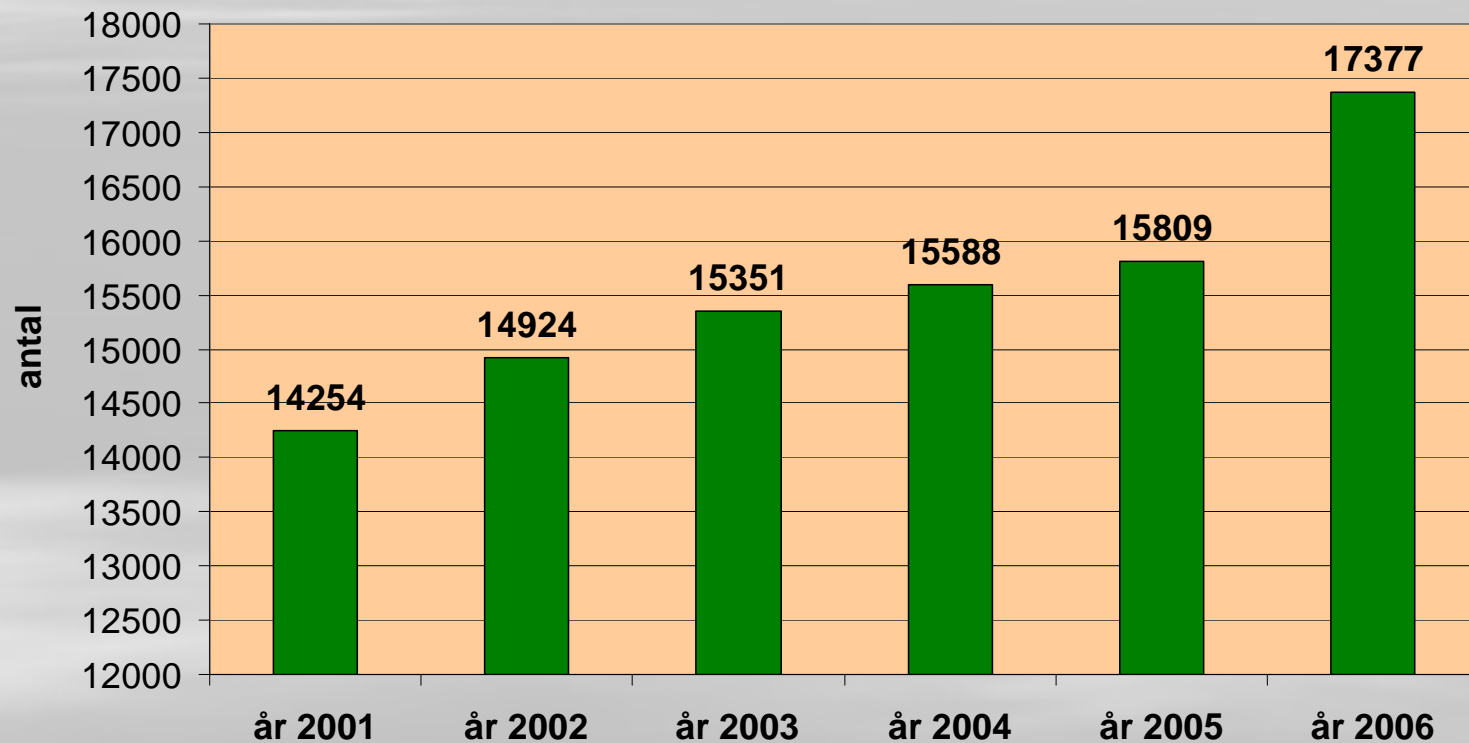


5.3 Number of police reported DUI-crimes in Sweden 1975-2000



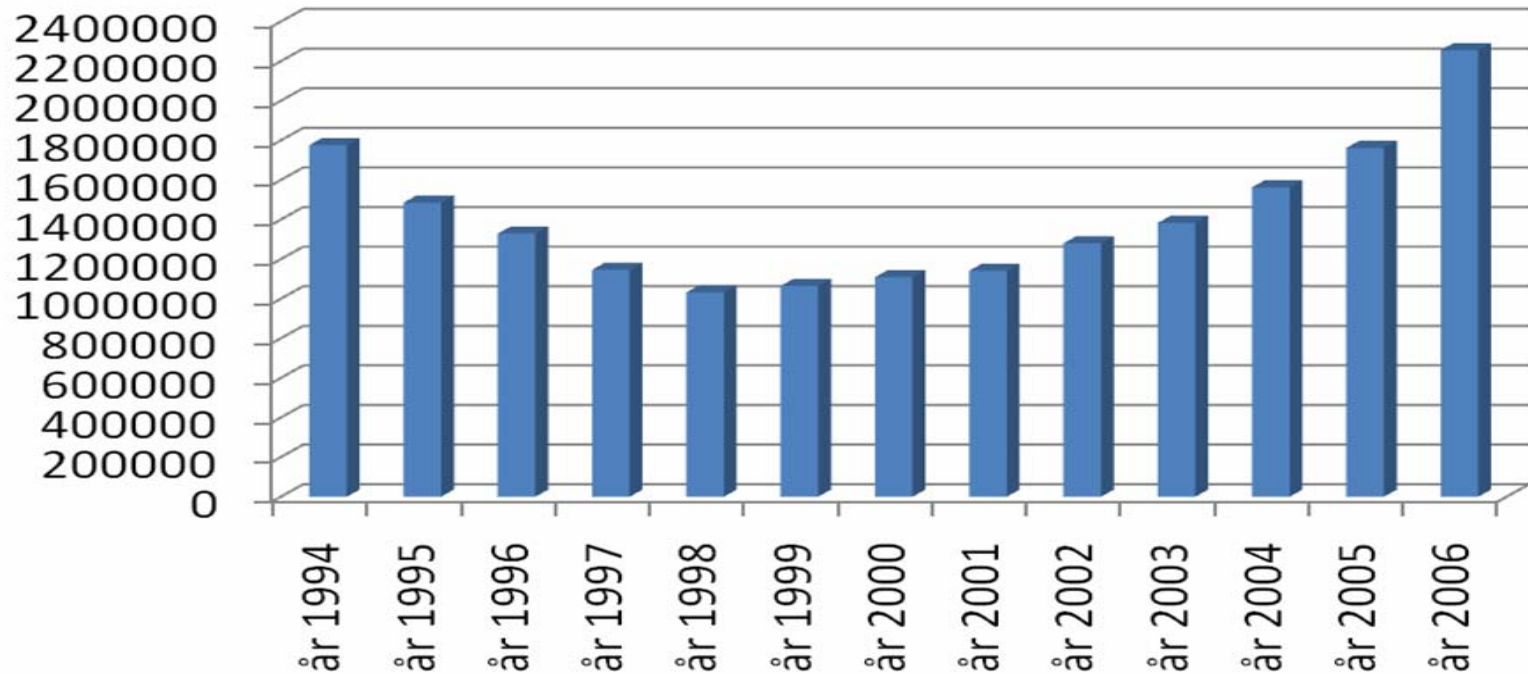
5.4 Number of police reported DUI-crimes in Sweden 2001-2006

Antal anmälda brott: rattfylleri, grovt rattfylleri

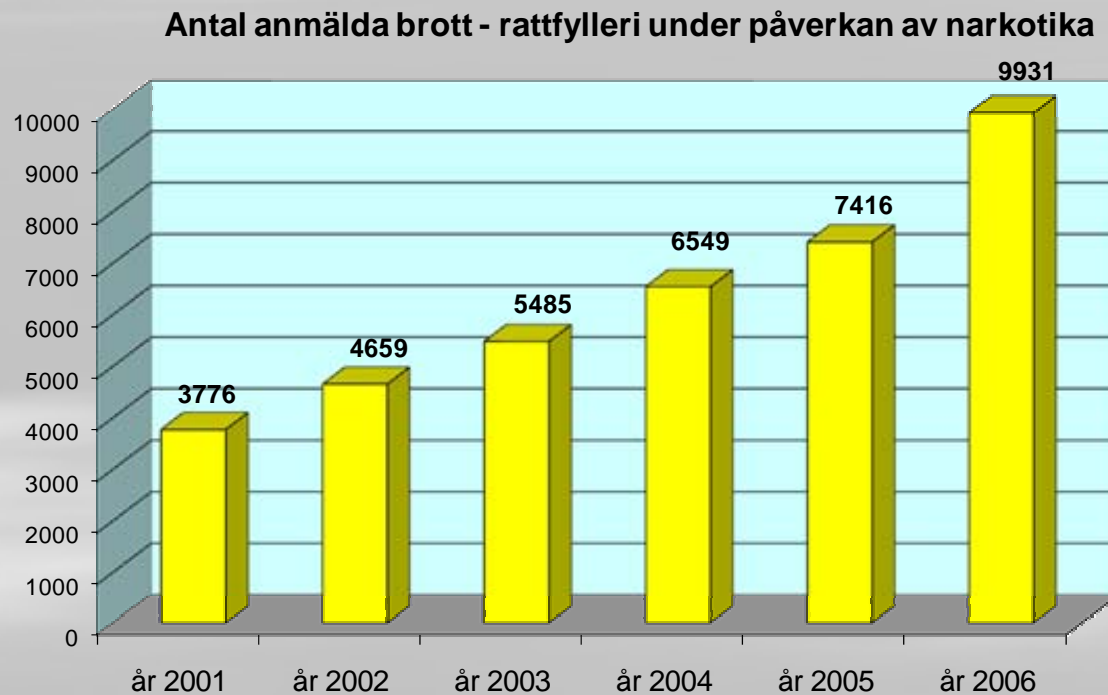


5.5 Number of random alcohol breath tests 1994-2006

Antal utandningsprov 1994-2006 i Sverige



5.6 Number of reported narcotic DUI-crimes 2001-2006



6. Countermeasures' strategies

- Limit availability of alcohol: state-controlled company for the sale of spirits, wines and strong beer
- Higher alcohol prices
- Community alcohol programmes
- More random breath testing in traffic
- NGOs opinion work
- Public Zero vision for accidents
- Alcolock programmes

7. Alcolock programmes in Sweden

- 1997/1998 law admitting convicted driver to drive with provisional licence if using alcolock. Test in different geographical areas. In 2003 in all areas
- Every third month medical control.
- Installed Alcolock controlled every second month.
- The alcolock programme extends over 2 years including treatment for alcohol problems
- 60 % of the convicted had alcohol problems
- Relapses in new DUI crimes almost eliminated
- Health status much better

Products



Today there are some twenty alcolock products on the market.

Possibilities

- *Alcolock technique development similar to mobile phones and computers
- *Experimental work using infrared technique
- *Development of technique for detecting other drugs than alcohol
- *Discounts on vehicle insurance premiums

Threats

- High prices (..but lower prices on way)
- Inferior products
- Handling difficulties
- Functional trouble
- Insufficient network of services
- Products poor design
- Technical shortcomings

Possibilities

- *Alcolock technique development similar to mobile phones and computers
- *Experimental work using infrared technique
- *Development of technique for detecting other drugs than alcohol
- *Discounts on vehicle insurance premiums

Threats

- High prices (..but lower prices on way)
- Inferior products
- Handling difficulties
- Functional trouble
- Insufficient network of services
- Products poor design
- Technical shortcomings

7.4 The Swedish alcolock commission – proposals 2005

- Alcolock in all new cars in 2012.
- Alcolock in lorries and school buses in 2010.
- Proposes measures to increase use of alcolocks.
- Proposes research and development for new techniques.
- standards, law rules, international hamonising
- Influence on EU
- Proposal that Sweden should be a test area for alcolock in EU

7.5 Alcolock programmes in Sweden – enterprises, municipalities

- MHF:s MD Tom Bjerver notes (March 2008).. “it has been a dramatic increase of the traffic safety during the last years: in every second municipality have the administrations equipped vehicles with alcolock within institutional and non institutional care, garbage collection and other areas. The highest breakthrough for alcolocks is in buses in the municipalities for transporting children to school with **53 %** of the vehicles equipped with alcolocks.”
- MHF has in 2007-2008 published an investigation of the use of alcolocks. **Every second** municipality uses alcolocks.

.

7.6 Alcolocks in other countries

- 1970: alcolocks proposed by Robert B. Voas to be used to increase traffic safety in the US
- 1985: alcolocks in use in programmes in California, Oregon and Washington
- 1990: first alcolock programme introduced in Albereta, Canada
- 2002: 41 states in the US and in the Columbia district had laws for alcolock
- In Australia (2000) , France, Belgium, tests with alcolocks
- In Finland from July 2005 3 years test programme with alcolocks

8. Effectiveness ratings for drink-driving

countermeasures (due to evidence based research,

Anderson, Baumberg: *Alcohol in Europe A public health perspective*)

Summary of effectiveness (scale 1-5)

| | |
|----------------------------------|----|
| – Lowered BAC levels | 3 |
| – Random breath testing (RBT) | 3 |
| – Licence suspension | 3 |
| – Alcohol locks | 1* |
| – Low BAC for youth | 3 |
| – Graduated licensing | 2 |
| – Server training | 1 |
| – Designated drivers | 0 |
| – School based education courses | ?0 |
| – Community programmes | 2 |

(*the authors have not noted results from Sweden)

9. NGOs in Sweden working for traffic safety

- NGOs (Non-profit organisations) - an important part of the Swedish society.
- Many motor- and traffic safety organizations was founded 1900-1940
- KAK ,The Royal Swedish Automobile Club 1903,
- M, The Swedish Automobile Association 1922,
- MHF, The Swedish Abstaining Motorists' Association 1926,
NTF, The National Society for Road Safety 1934,
- SKBR, The National Federation of Swedish Women's Voluntary Motor Transport Corps, 1942
- A continuous dialogue and cooperation with public authorities, government and parliament



- **In the field of alcohol and traffic MHF is an important opinion leader:**
- **works... by lobbying towards government and parliament, authorities as well as other organizations and decision-makers.**
- **works... by organizing campaigns, seminars and encouraging research on road safety and drugs.**
- **works... with arranging traffic safety seminars for decision-makers.**
- **works... with youth projects in order to avoid the dramatic consequences of the combination of young/alcohol/driving.**
- **works... with supporting and helping those affected by traffic accidents caused by drunken driving.**
- **works... to promote legislation on alcolocks in all cars.**

9.2 MHF:s Opinion work

- MHF, The Swedish Abstaining Motorists' Association, campaign for a zero limit BAC important for the 0,2 law 1990
- Traffic Safety Board's zero-vision for motor vehicle accidents from the mid-1990's
- MHF and the insurance company SalusAnsvar's program for alcolock system 2003- with discount on compulsory third party car insurance for cars equipped with alcolock.

10. Zero vision

- In 1997 the Swedish Parliament decided on the Zero Vision, proposed by the traffic safety authority
- 1997 732 fatalities, thereof 50 % suspected DUI alcohol
- 2005 561 fatalities, thereof 27 % suspected DUI alcohol
- Zero Vision goal for 2007: Max. 270 fatalities
- This goal has not been reached and the traffic safety authority has been criticised for not being active enough.