



Alcohol intoxications and alcohol related injuries at Emergency Departments in the Netherlands

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Research questions & Methods

Two research questions:

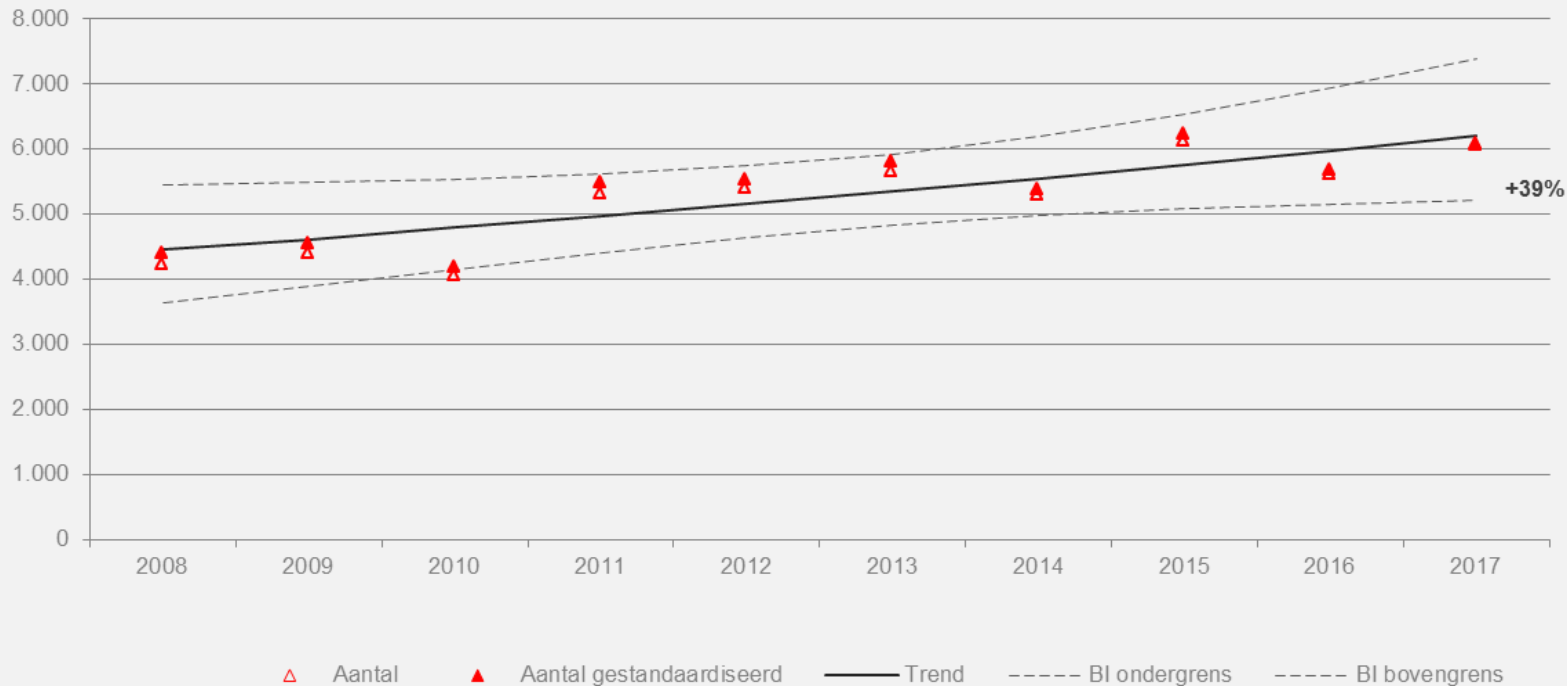
- Have prevalence rates of alcohol intoxications and alcohol related accidents increased over the last ten years?
- Is clinical judgement a valid method to establish the prevalence of alcohol related injuries?

Dutch Injury Surveillance System (DISS)

- Registration of injuries at EDs
- Representative, 14 of 87 EDs, 11% of visits
- Extrapolation to national figures
- Injuries/intoxications:
cause (home and leisure, work, sport, traffic, violence, self-harm) + reasons
- Annual upload to European Injury Database (IDB)

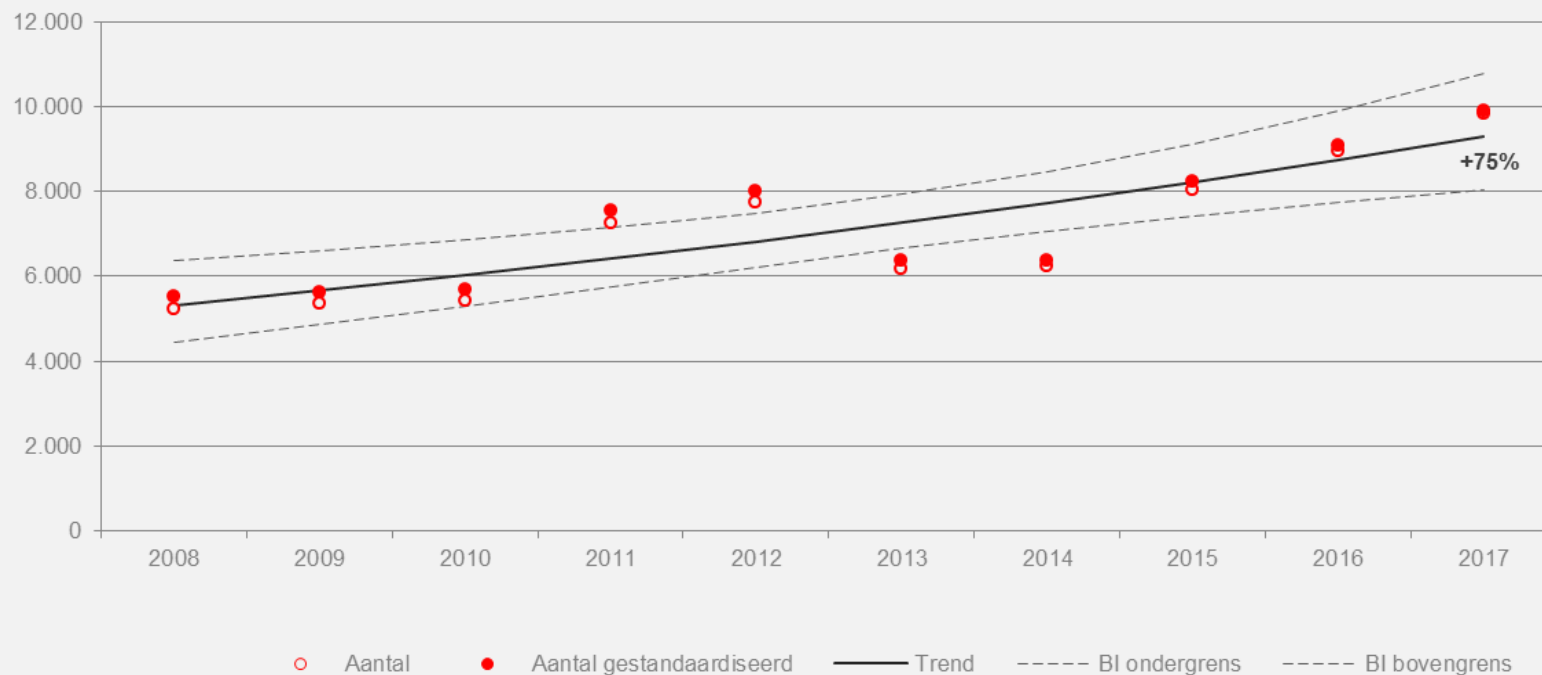


Alcohol intoxications in the Netherlands



- 6.000 ED treatments in 2017, an increase of 39% in the last ten years
- Significant increase of 54% in the age group 25-54 years
- No significant increases in other age groups (12-17 years, 18-24 years, 55+ years)
- Significant increase of 42% among males

Alcohol related (severe) injuries in the Netherlands



- 17.800 ED treatments in 2017, an increase of 75% in the last ten years
- Significant increases in age groups 25-54 years (47%) en 55+ years (142%)
- Significant increases among females (119%) and males (62%)

Definitions & value of outcome

Definition alcohol intoxications:

- If intoxication is mentioned in text field diagnosis
- If use of alcohol is the only reason for visiting the ED
- If self harm is ruled out



Quality is good, always registered

Definition alcohol related injuries:

- All injury related visits to the ED where the use of alcohol is mentioned in the cause of the accident or in the diagnosis, but an intoxication is ruled out

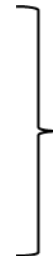


Only when obvious

Only when medically relevant

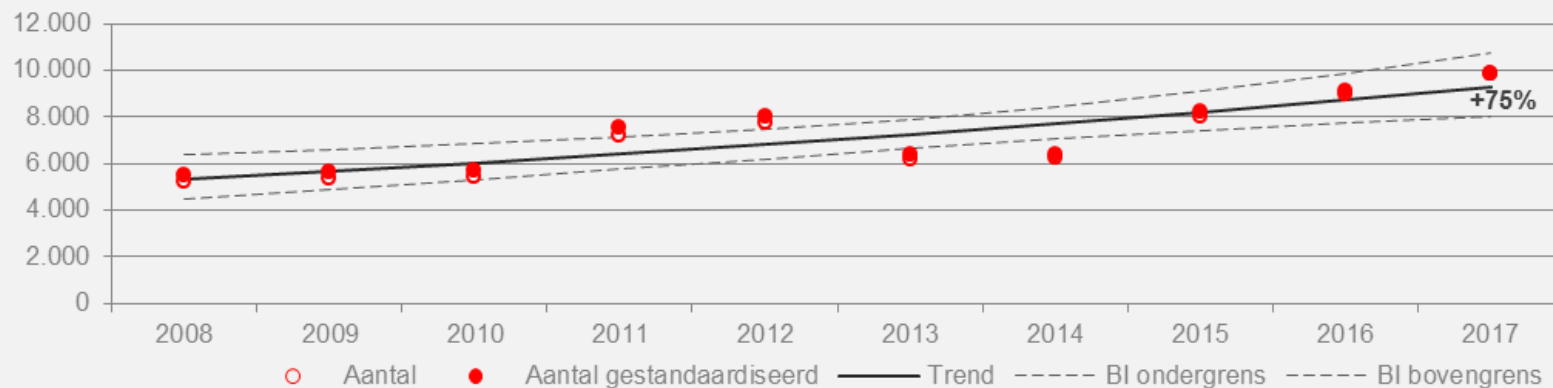
Often mentioned to doctor but not registered

Earlier research (self-report) showed: X 6



improvement
is needed

Trends alcohol related injuries: what do they mean?



Trends are probably biased by an improved registration rate

- We have urged ED's to register involvement of alcohol
- ED's more used to screening in general
- More attention for abuse of alcohol in general

But: no reason to assume differences in bias for different age groups or gender

Conclusions

- Trend for females less favorable than for males
- Trend for age group 55+ less favorable than for age group 25-54 years
- No unfavorable trend among children and young people

The best way to monitor alcohol related injuries?

- Registration of alcohol related injuries is crucial for policy making and injury prevention, but DISS results are an underestimation
- Vitale SG et al. (2007): self-report gives the most reliable outcome
- Self-report is an expensive method: all patients with injuries must be included
- Bond J et al. (2014): Clinical judgement of physicians seems to be a good predictor for the degree of alcohol intoxication
- Pilot: does this also apply to alcohol related injuries?



Methods validation of clinical judgement *

- **Objective:**

Determine the correlation between the self-reporting of patients and the clinical judgement of the ED physician concerning (1) substance use during 6 hours prior to the injury and (2) substance use being a contributing factor to the injury.

- **Methods:**

Three months data collection in one DISS center. Patients filled in a questionnaire, ED physicians documented their clinical judgement in the hospital information system.

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Results validation of clinical judgement

- **Results (not published yet):**
 - substance use (n=104): kappa value 0.846 ($p < 0.05$), excellent correlation
 - (co-) cause (n=22): kappa value 0.353 ($p = 0.023$), fair correlation
- **Conclusion: clinical judgement seems to be reliable**
- Project to implement clinical judgement in all DISS ED's
- Technically possible in all DISS ED's to register
- Long way to get all physicians along.....



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