

# **Brief interventions for alcohol by smoking status**

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# Screening and Brief Intervention in EDs I

- Trauma is one of the earliest consequences of harmful alcohol consumption (1)
- Trauma is a chronic, “recurrent” disease (2)
- Minor injuries with immediate discharge »»  
preventive inpatient service is not an option (3)

(1) Van Leuwen et al. (2003) Eur J Epidemiol. 18: 854-54

(2) Sims et al. (1989) J Trauma, 29: 940-6

(3) Maio et al. (2005) Annals of Emergency Medicine, 45: 420-29

## Screening and Brief Intervention in EDs II

- Alcohol interventions (plus booster sessions) reduce alcohol-related consequences and injuries (1)
- 32 out of 39 studies demonstrated a positive effect of an alcohol intervention in a systematic review from 2002 (2)

(1) Longabaugh et al. (2001) J Stud Alcohol. 62: 806-16

(2) D'Onofrio et Degutis (2002) Acad Emerg Med. 9: 627

# Computerized screening and BI

College setting (1)

Occupational setting (2)

Internet screening (3)

Acceptability in ED setting (4)

- (1) Kypros et al. (2003) *Alcohol Alcoholism*, 38: 626-28
- (2) Matano et al. (2000) *J Behav Health Serv*, 27: 152-65
- (3) Cloud et Peacock (2001) *Alcoholism Treatment Quart*, 19: 23-44
- (4) Karlsson et al. (2005) *Addictive Behaviors*, 30: 767-76

## **RCTs in computerized screening and BI**

ED-trial: interactive computer program  
(n = 655, ~ 78% out of 843 eligible) 14-18-year old  
trauma patients (Ann Arbor, USA) (1)

»»»» (3 and 12-month, n = 580, ~ 89%)

No effect on binge-drinking episodes (5 or more  
drinks within the last 3 months) or the Amidx (2,3)

- (1) Gregor et al. (2003) *Annals of Emergency Medicine*, 42: 276-84
- (2) Maio et al. (2005) *Annals of Emergency Medicine*, 45: 420-29
- (3) Shope et al. (1996) *Alcohol Clin Exp Res*, 18: 726-33

## **RCTs in computerized screening and BI**

ED-trial: computerized screening program plus tailored message booklet  $\pm$  brief advice or generic message booklet  $\pm$  brief advice in 575 at-risk drinkers (Ann Arbor, USA) (1)

»»»» (12-month)

Significantly decrease of alcohol consumption compared to baseline

(1) Blow et al. (2006) J Stud Alcohol. 67: 568-78

## **RCT (Lebensstil-Study) (1)**

To test the effect of an exclusive computerized tailored brief advice on adult trauma patients with at-risk alcohol consumption in an urban emergency department setting

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# Methods I

Recruitment 24h/d from 12-2001 till 02-2003

Follow-up at 6 and 12 months

## Methods II

Lifestyle-questionnaire on portable PC with

- AUDIT-questionnaire ( $\geq 5$  points) (1)
- Amount of daily alcohol intake during the last 7 days (transformed in gram alcohol/d)
- RTC-questionnaire (Precontemplation, Contemplation, Action) (2)
- Heaviness of smoking index (0-3 points = low, 4-6 points = high dependent) (3)
- Closed question on illicit drug use (illicit drug use = min 3 times / 12 months)
- Socio-economic parameters (4)

(1) Neumann et al. (2006) J Trauma 61: 805-14

(2) Rollnick et al. (1992) Br J Addiction, 87: 743-54

(3) Diaz et al. (2005) Aust N Z J Psychiatry, 39: 161-8

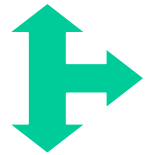
(4) Allbus Standardkategorien 2000. Mannheim, Germany, (ZUMA).

# Flowchart of all patients I

8620 patients (100%) with minor trauma



1686 (19.6%) did not meet inclusion criteria  
- language 33%,  
- physical reasons 43%  
- mental reasons 19%, other 5%



2114 (24.5%) not included because of technical reasons


4820 patients (55.9%) were asked to participate in the study




1794 (20.8% out of 8620, 37.2% out of 4820) denied participation or did not finish the questionnaire

## Flowchart of all patients II

3026 patients (100%) (62.8% out of 4820)

 AUDIT < 5 points (n = 1833, 60.6%)

1193 patients with AUDIT  $\geq$  5 points (39.4%)

 refused follow-up (n = 54), data inconsistent (n = 3)

1136 patients randomized (37.5% out of 3026)

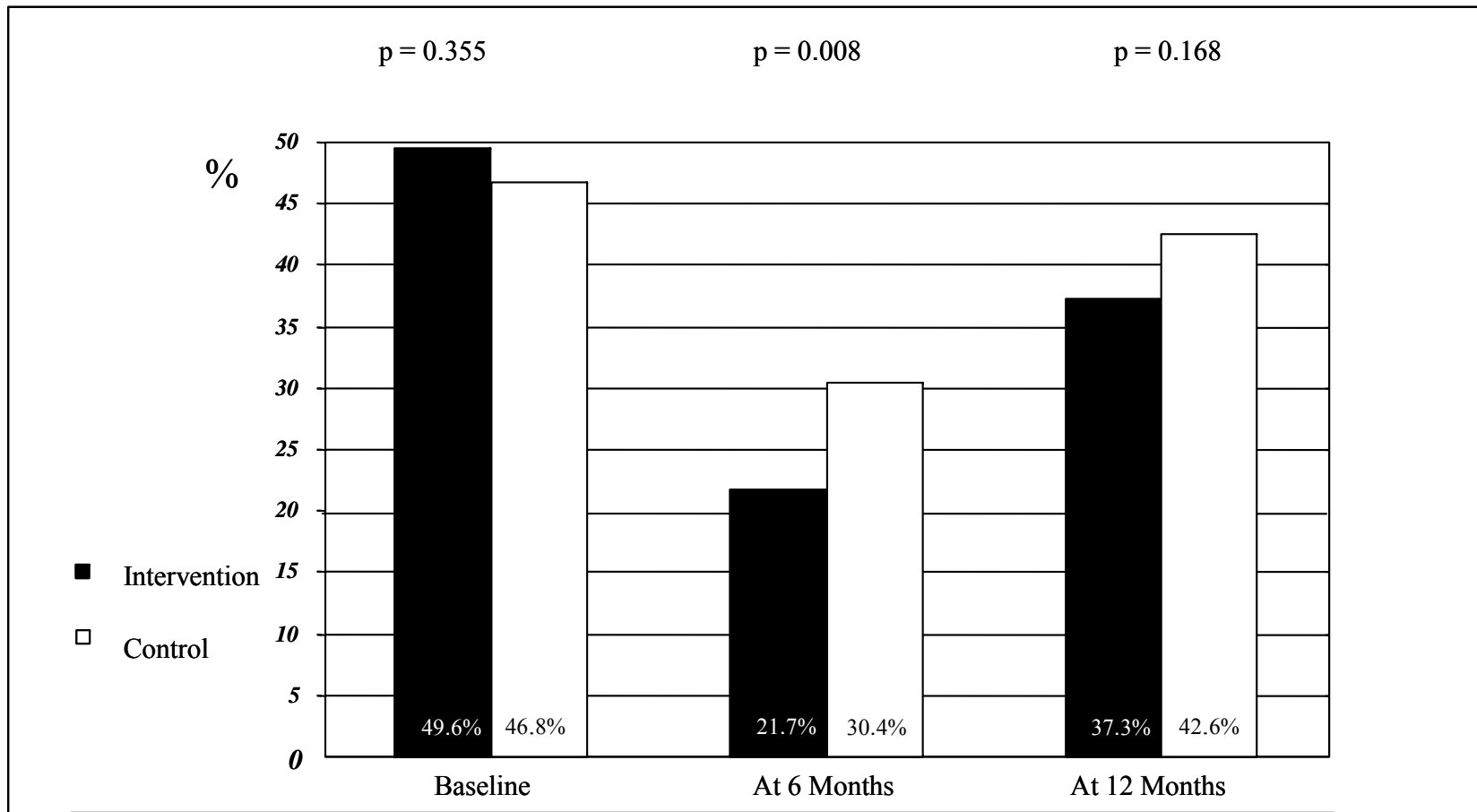
# Intervention

Computer print-out for taking home

Text modules stratified according to (each positive) AUDIT-question and RTC-Q-stage

Menu of health promoting strategies, addresses of alcohol treatment services, number of telephone hotlines

Untailored brief advice for smokers, and illicit drug users



**Frequencies of at-risk drinker status: > 30 g/d males, > 20g/d females, using British Medical Association (BMA criteria).**

**Neumann et al. (2006) J Trauma 61: 805-14**

# **Aim of this presentation**

Analysis of results of the Lebensstil-Study according to the smoking status

## Basic patients characteristics at baseline

Parameter	All patients* N = 1136 100%	Non smokers N = 453 39.9%	Low dependent smokers N = 468 41.2%	High dependent Smokers N = 215 18.9%
Male	79.0%	77.0%	79.3%	82.8%
Age (Years)**	32.8 [11.3]	35.1 [12.9]	30.6 [9.8]	33.0 [10.1]
Intervention (%)	49.4	49.5	47.5	53.5
RTC-P-Stadium	50.4 %	59.2 %	47.0 %	39.1 %
RTC-C-Stadium	28.9 %	21.0 %	32.9 %	36.7 %
RTC-A-Stadium	20.8 %	19.9 %	20.1 %	24.2 %
Alcohol intake, gram / d***	27.4 (0 – 500)	22.9 (0 – 500)	28.4 (0 – 326)	40.0 (0 – 343)
Illicit drug use (%)	33.7	21.9	42.5	39.5

\* With an AUDIT  $\geq$  5 points, \*\* Mean [S.D]; RTC = Readiness to change questionnaire, \*\*\* Median (Range)

# Basic patients characteristics and 6 month follow-up

Parameter	All patients* N = 1136 100%	Non smokers N = 453 39.9%	Low dependent smokers N = 468 41.2%	High dependent smokers N = 215 18.9%
Complete 6 month FU	N = 719 63.4 %	N = 320 70.9 %	N = 283 60.5 %	N = 116 54.0 %

\* With an AUDIT  $\geq$  5 points

## Basic patients characteristics and 6 month follow-up

Parameter	All patients* N = 719 100%	Non Smokers at baseline N = 320 39.9%	Low dependent Smokers at baseline N = 283 41.2%	High dependent Smokers at baseline N = 116 18.9%
Reduced DAI in gram / d** in <b>controls</b>	2.3 (-52 – 180)	6.9 (-700 – 225)	6.9 (-700 – 225)	7.9 (-179 – 155)
Reduced DAI in gram / d** in the <b>intervention group</b>	5.7 (-700 – 236)	5.1 (-57 – 183)	12.6 (-38 – 158)	17.1 (-208 – 236)

\* With an AUDIT  $\geq$  5 points, \*\* DAI = Daily alcohol intake, \* Median (Range)

# Basic patients characteristics and 12 month follow-up

Parameter	All patients* N = 1136 100%	Non smokers N = 453 39.9%	Low dependent smokers N = 468 41.2%	High dependent Smokers N = 215 18.9%
Complete 12 month FU	N = 660 58.1 %	N = 311 68.7 %	N = 246 52.6 %	N = 103 47.9 %

\* With an AUDIT  $\geq$  5 points

## Basic patients characteristics and 12 month follow-up

Parameter	All patients* N = 660 100%	Non Smokers at baseline N = 311 47.1%	Low dependent Smokers at baseline N = 246 37.3%	High dependent Smokers at baseline N = 103 15.6%
Reduced DAI in gram / d** in <b>controls</b>	2.9 (-208 – 161)	1.1 (-86 – 92)	2.9 (-69 – 126)	7.0 (-208 – 161)
Reduced DAI in gram / d** in the <b>intervention group</b>	5.7 (-324 – 305)	5.2 (-122 – 175)	7.9 (-122 – 305)	5.1 (-324 – 181)

\* With an AUDIT  $\geq$  5 points, DAI = Daily alcohol intake, \*\* Median (Range)

## Smokers at baseline and smoking status at 12 month follow-up #

Parameter	Smokers at baseline	DAI –	DAI +
	N = 334 100%	N = 213 69.4%	N = 121 31.6%
Stopped smoking	N = 41 (12.3%)	N = 26 (12.2%)	N = 15 (12.4%)
Stopped smoking <b>controls (n = 185)</b>	N = 20 (10.8%)	N = 11 (9.8%)	N = 9 (12.3%)
Stopped smoking <b>intervention group (n = 149)</b>	N = 21 (14.1%)	N = 15 (14.9%)	N = 6 (12.5%)

DAI = Daily alcohol intake, # N = 15 datasets on smoking missing at 12 month

## Nonsmoker at baseline and smoking status at 12 month follow-up

Parameter	Non Smokers at baseline N = 311 100%	DAI – N = 184 59.2%	DAI + N = 127 40.8%
Started smoking	N = 34 (10.9%)	N = 20 (10.9%)	N = 14 (11.0%)
Started smoking <b>controls (n = 160)</b>	N = 22 (13.8%)	N = 13 (14.9%)	N = 9 (12.3%)
Started smoking <b>intervention group (n = 151)</b>	N = 12 (7.9%)	N = 7 (7.2%)	N = 5 (9.3%)

\* DAI = Daily alcohol intake

## Conclusion

- Computerized Screening and exclusive computerized tailored brief advice is feasible and effective in an ED setting
- Effect of SBI on alcohol is modulated by smoking status?
- Pronounced onset (and deterioration) of the effect of SBI on alcohol in smokers ?

## **Conclusion**

- High incidence rate of smoking in non-smokers at baseline during follow-up
- No evidence that study participants in the intervention group who reduce their amount of DAI compensatory start to smoke.

Thank you very much for your attendance.