Trends in driving under the influence of alcohol or drugs in Norway

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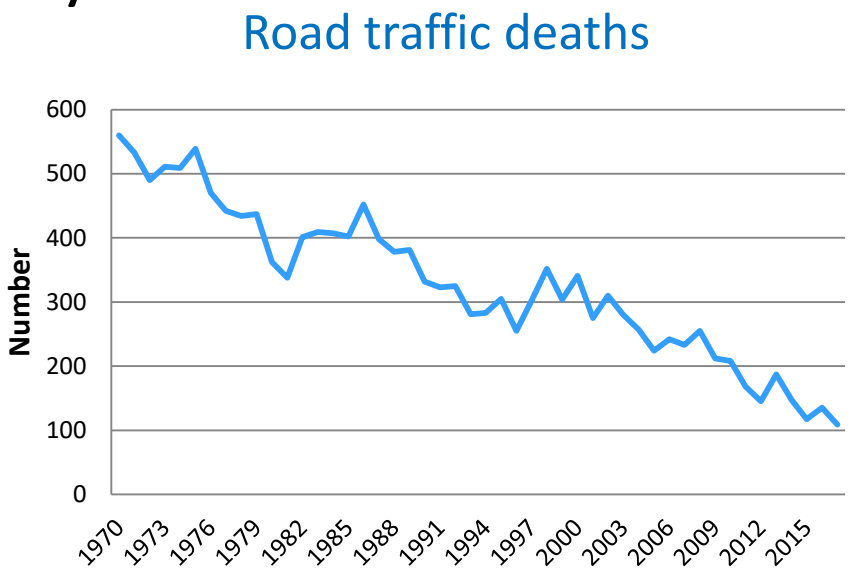
How are we doing in Norway?

- Quite well, compared to other countries
- Alcohol represents a larger risk increase in Norway, why?



Outline

- Laws and enforcement
- Alcohol and drug use among drivers
  - ✓ Apprehended by the police for DUI
  - ✓ In random road traffic
  - ✓ Killed in road traffic crashes

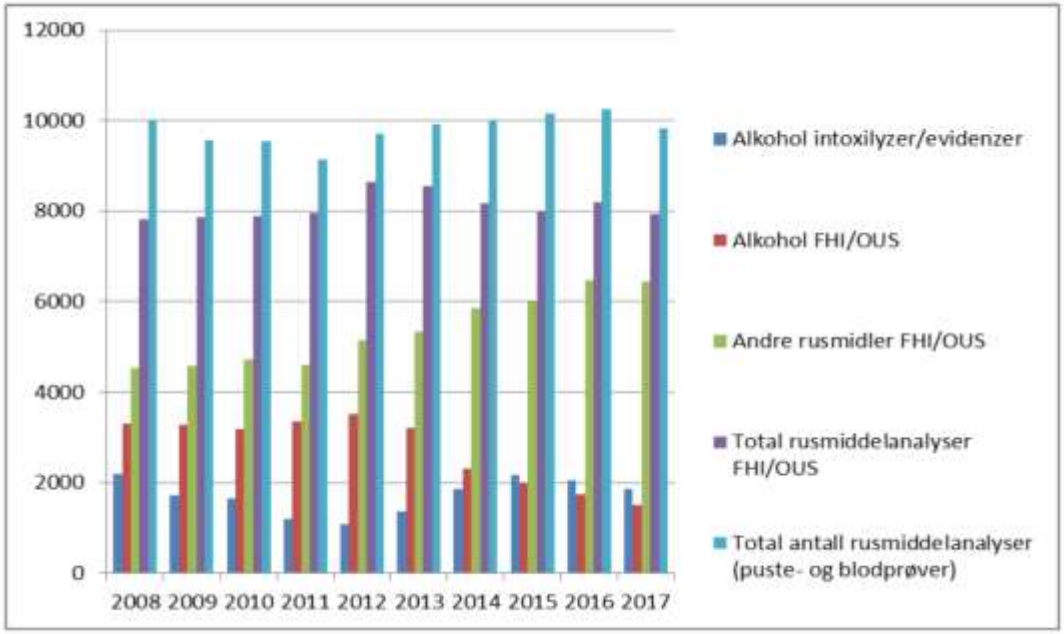


Laws

- Legal blood alcohol concentration (BAC) limit: 0.2 g/kg blood (2001)
- Legislative limits for medicinal and illicit drugs (2012/2016)
  - Legal limits corresponding to BAC of 0.2 g/kg for 28 drugs
  - Additional limits for graded sanctions for 22 drugs (corresponding to BAC of 0.5 g/kg and 1.2 g/kg)

Arrested drivers

- About 10 000 drivers are suspected for DUI each year
- The number of drivers suspected for DUI of drugs has increased from about 2 000 in 1989 to over 6 000 in 2017
- About 2 000 drivers are subject to evidential breath testing for alcohol

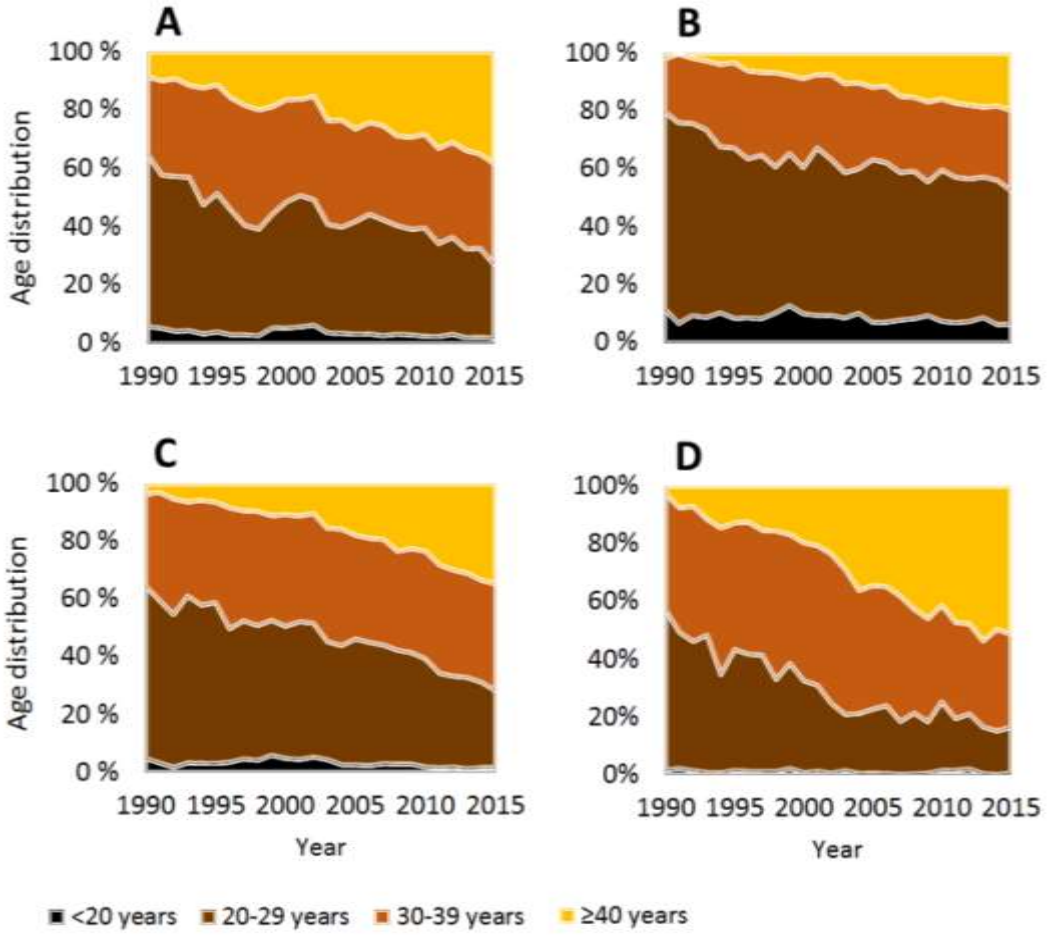


Arrested drivers: drugs detected

	Stoffnavn	Eksempel på medikamentnavn / forklaring	Totalt antall	Prosent
1	Etanol	Alkohol	2959	
2	THC	Tetrahydrocannabinol (cannabis), Sativex	2605	40 %
3	Amfetamin	Attentin, Dexamfetamine, Elvanse, Metamina	2115	33 %
4	Klonazepam	Rivotril	1527	24 %
5	Metamfetamin		1179	18 %
6	Diazepam	Valium, Vival, Stesolid	857	13 %
7	Alprazolam	Xanor	405	6 %
8	MDMA	Ecstasy	229	4 %
9	Buprenorfin	Norspan, Subutex, Suboxone, Temgesic	210	3 %
10	Kokain		197	3 %
11	Pregabalin	Lyrica	163	3 %
12	Tramadol	Nobligan, Tramagetic, Trampalgin	155	2 %
13	Morfin	Heroin, Dolcontin, Morfin, Malfin	154	2 %
13	Oxazepam	Sobril	154	2 %
15	Nitrazepam	Apodorm, Mogadon	142	2 %
16	Zopiklon	Imovane, Zopiclone, Zopitin	137	2 %
17	GHB	Gammahydroksybutyrat, Xyrem	130	2 %
18	Ritalinsyre/Metylfenidat	Concerta, Medikinet, Ritalin, Equasym	125	2 %
19	Kodein	Altermol, Paralgin forte, Pinex Forte	120	2 %
20	Metadon		101	2 %

Tabell 1: De vanligste påviste stoff i blodprøver hos bilførere mistenkt for ruspåvirket kjøring i 2017. Totalt ble det utført analyse av alkohol i 7947 blodprøver i 2017. I 6439 av disse sakene er det også analysert for over 40 andre rusmidler. For de øvrige rusmidler er det angitt andel (i prosent) av de 6439 analyserte sakene. Det er ikke angitt andel av alkohol. Det bemerkes at politiets analyser av pusteprøver (med bevisinstrumentet Evidenzer Mobile 240) ikke er tatt med i denne oversikten.

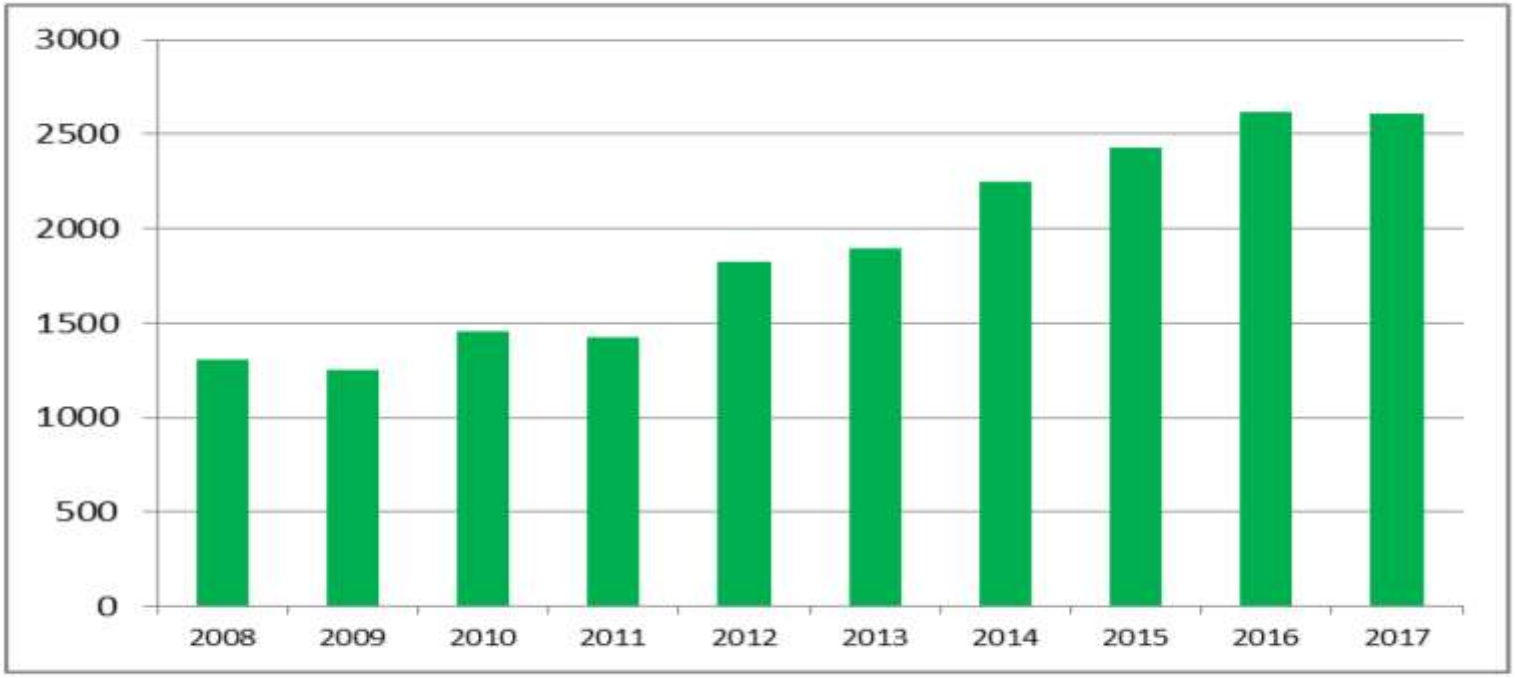
Arrested drivers: increasing age



A: Benzodiazepines, **B:** Cannabis, **C:** Stimulants, **D:** Opioids

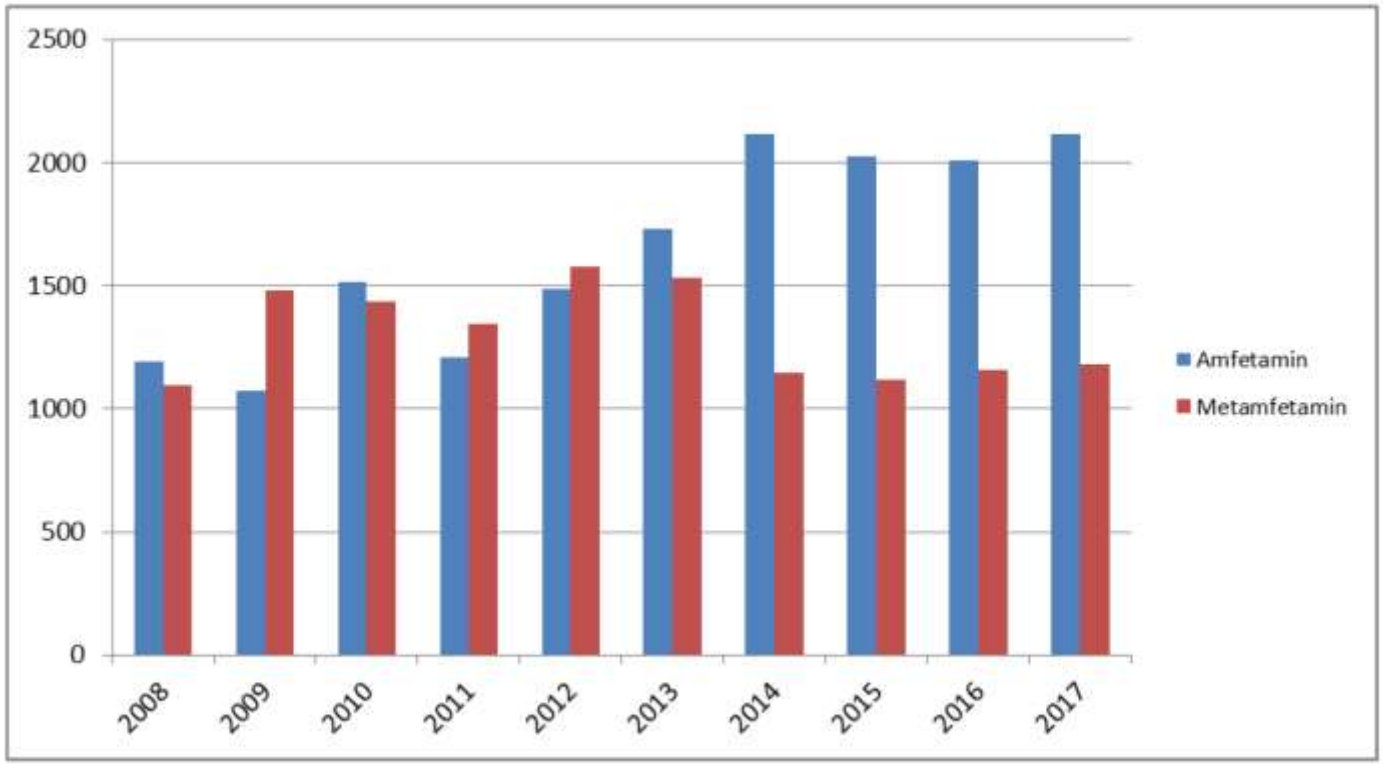
Valen et al, F Sci Int 2017

Arrested drivers: Cannabis is increasing



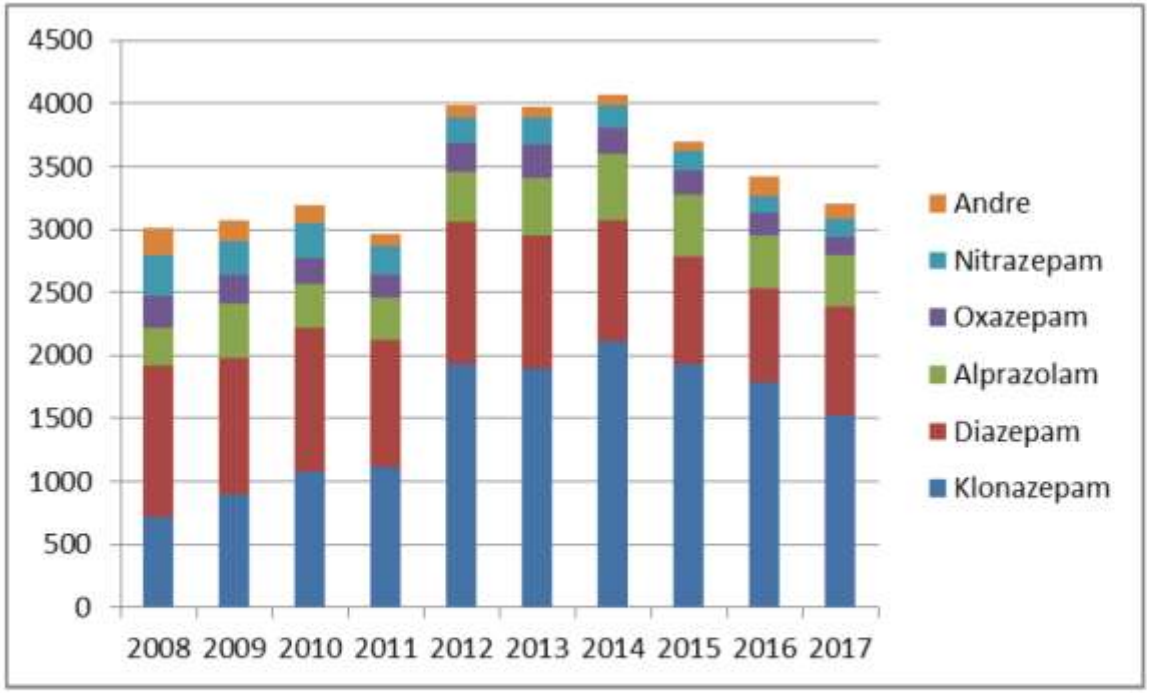
Figur 3: Antall saker der THC er påvist i blodprøver fra bilførere mistenkt for ruspåvirket kjøring 2008-2017.

Arrested drivers: Amphetamine is stable



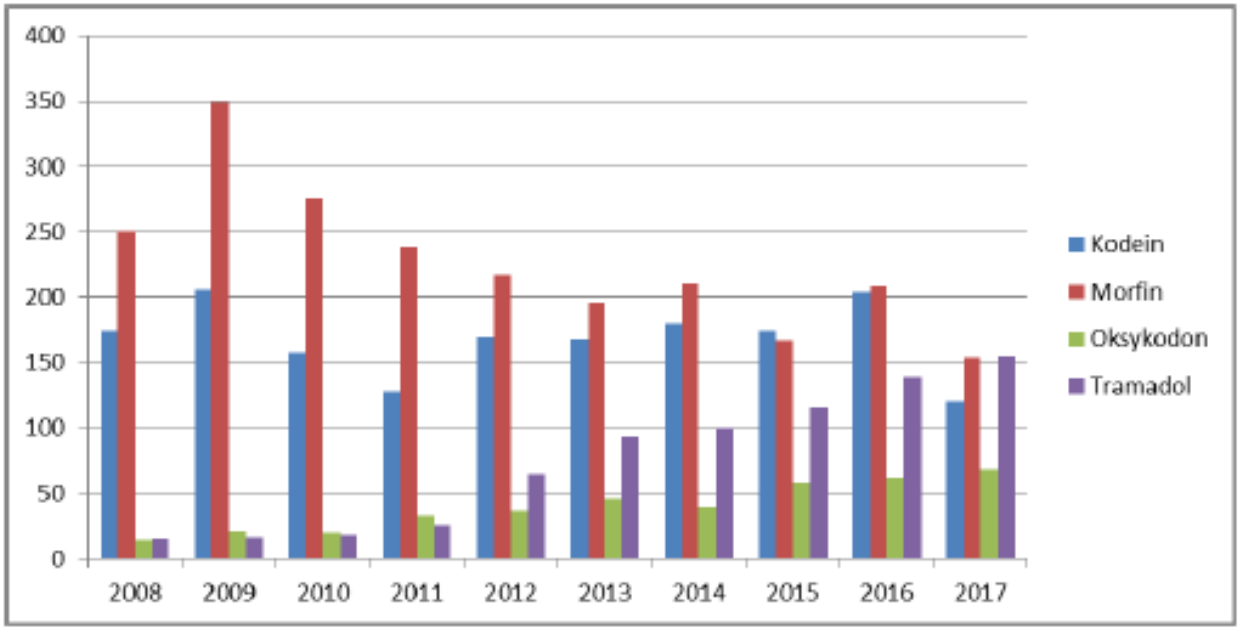
Figur 4: Antall saker der amfetamin og metamfetamin er påvist i blodprøver fra pågrepne bilførere mistenkt for ruspåvirket kjøring 2008-2017.

Arrested drivers: Benzodiazepines are decreasing



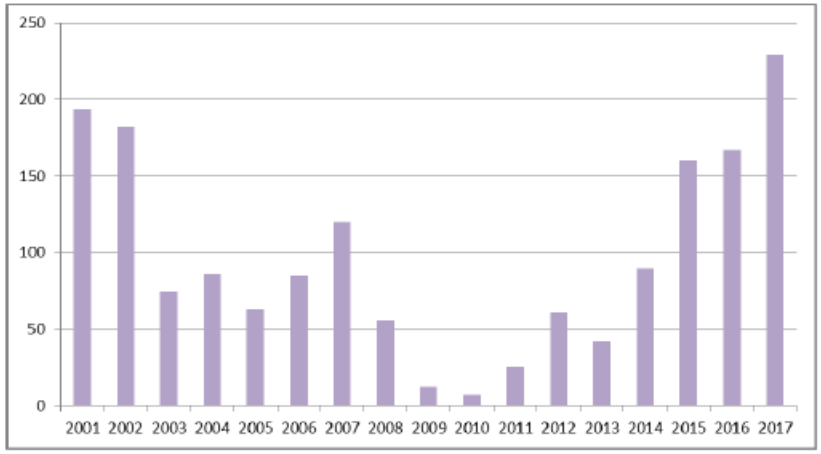
Figur 5: Antall saker med ulike benzodiazepiner påvist i blodprøver fra pågrepne bilførere mistenkt for ruspåvirket kjøring 2008-2017. I gruppen «andre» inngår flunitrazepam, fenazepam, midazolam, lorazepam, bromazepam, etizolam, diklazepam, flubromazepam, flubromazolam og klonazolam.

Arrested drivers: Opioids are decreasing (at least morphine)

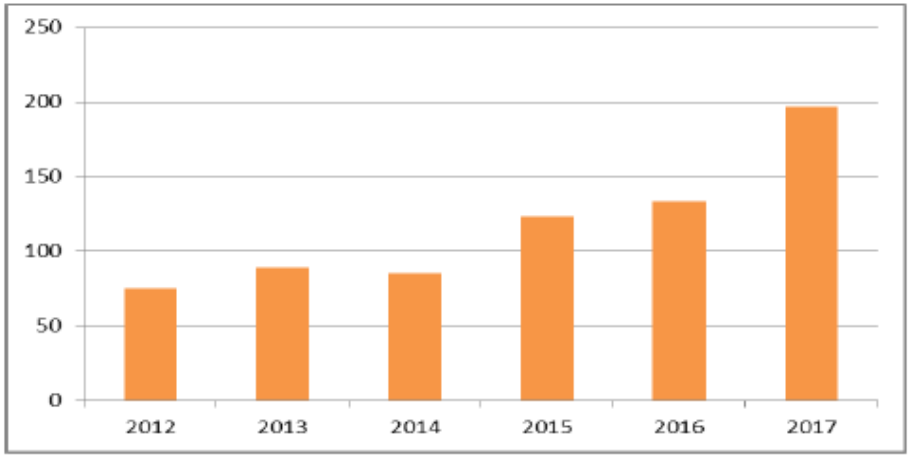


Figur 8: Antall saker der kodein, morfin, oksykodon og tramadol er påvist i blodprøver fra pågrepne bilførere mistenkt for ruspåvirket kjøring 2008-2017.

Arrested drivers: MDMA and cocaine are increasing

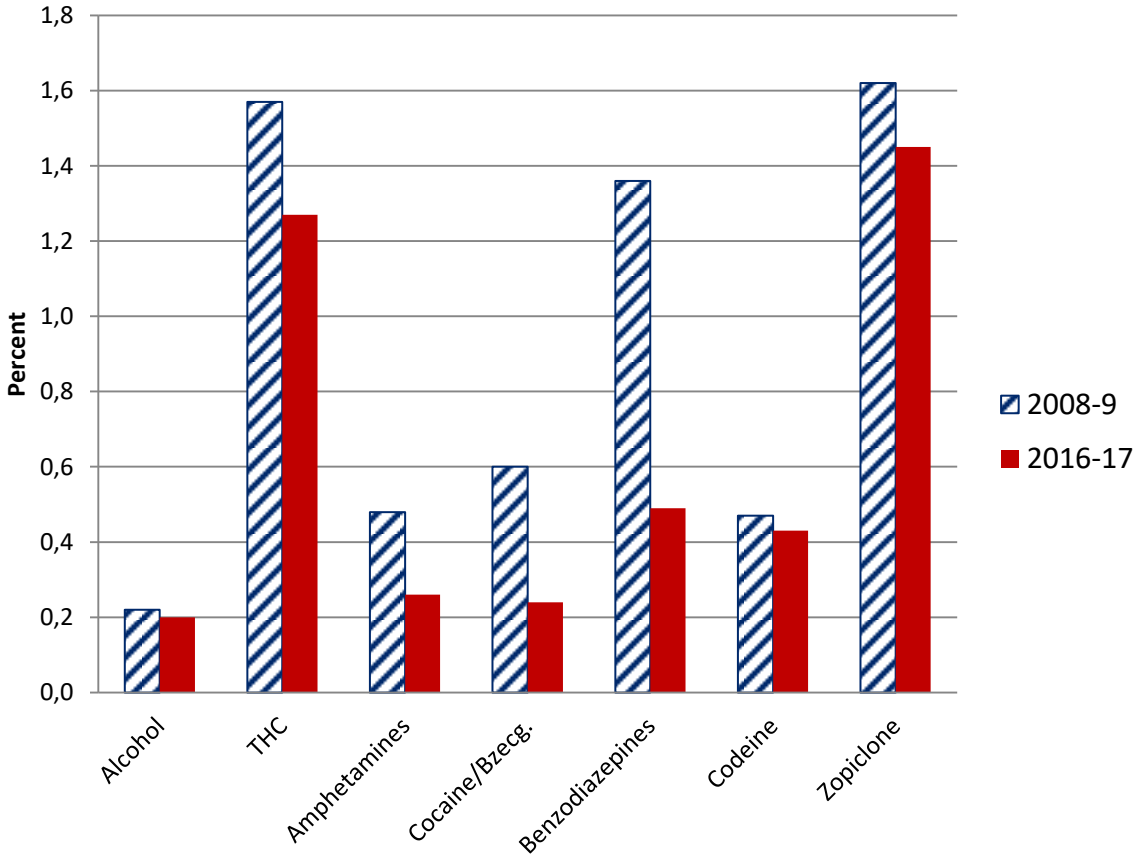


Figur 9: Antall saker der MDMA er påvist i blodprøver fra pågrepne bilførere mistenkt for ruspåvirket kjøring 2001-2017.



Figur 10: Antall saker der kokain er påvist i blodprøver fra bilkjørere mistenkt for kjøring i ruspåvirket tilstand i tidsperioden 2012-2017.

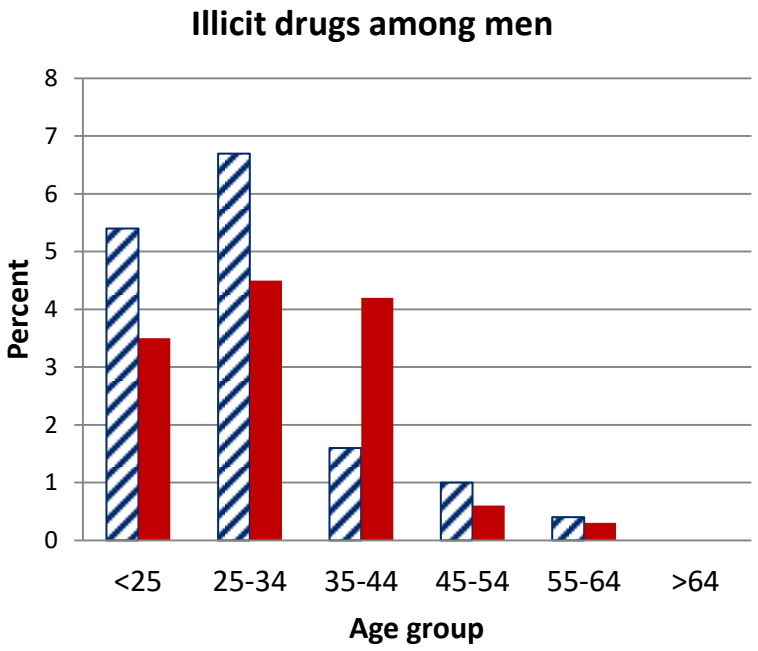
Random drivers: results from survey 2016-2017 (oral fluid)

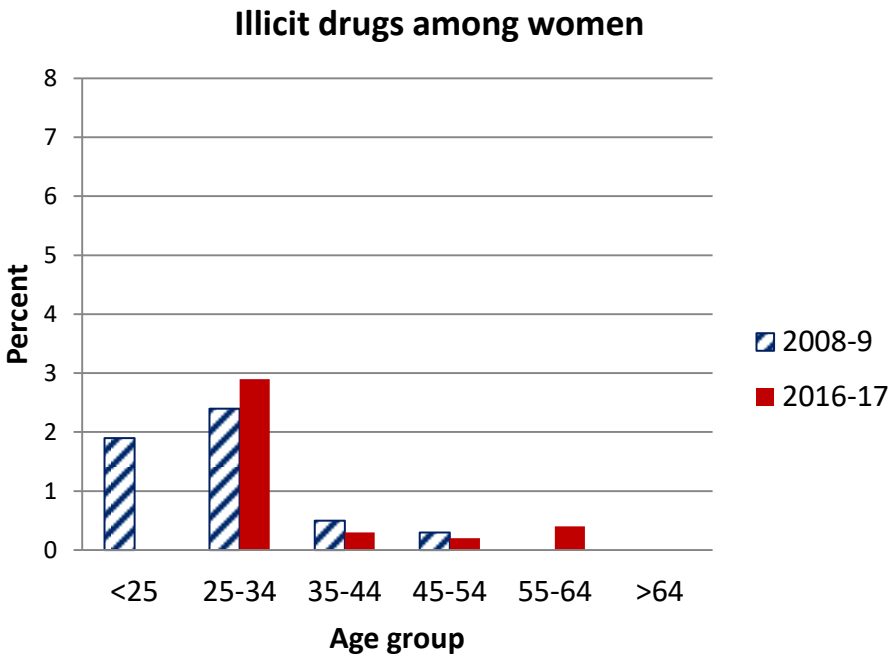


Furuhaugen et al. Traffic Injury Prevention 2018.

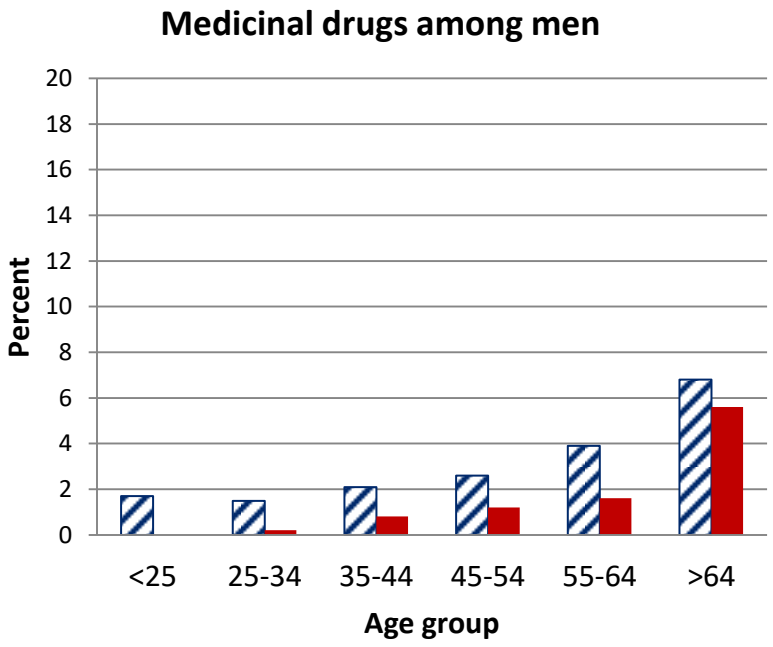
Includes the same substances in the studies of 2008-9 and 2016-17

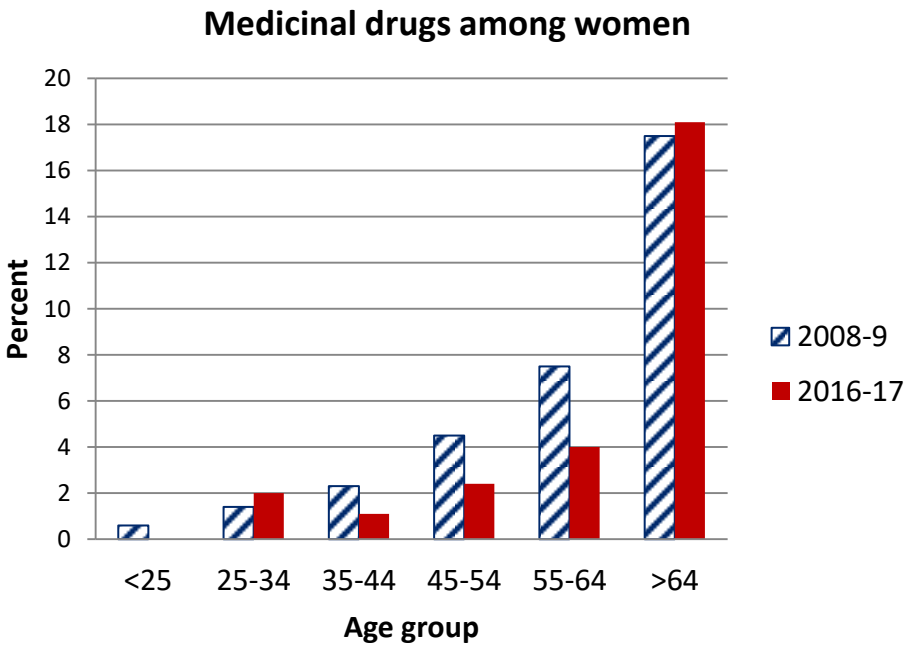
Random drivers: illicit drugs



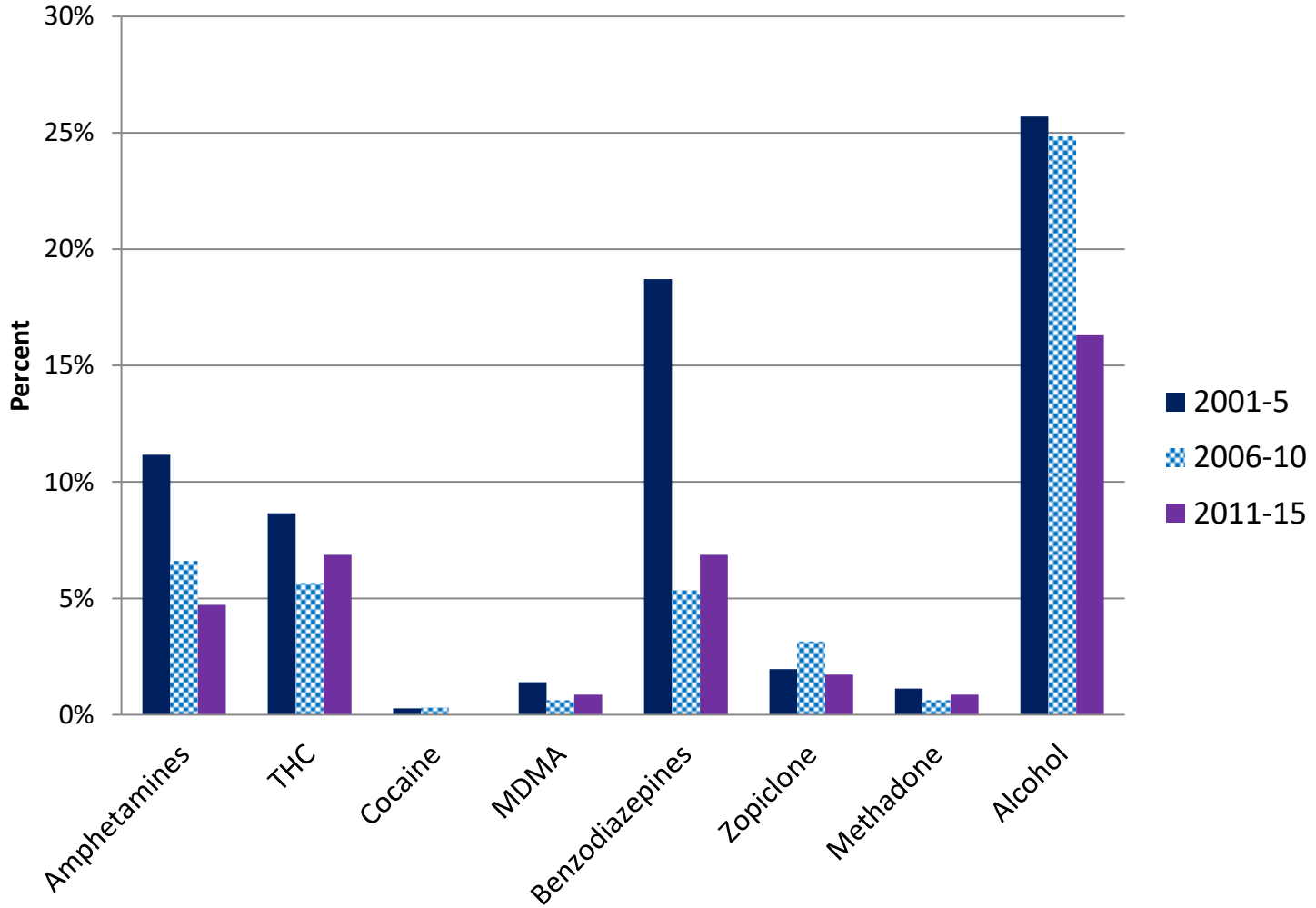


Random drivers: medicinal drugs





Killed drivers: alcohol and drugs use



Norwegian odds ratios for different drugs

Table 6
Crude and adjusted odds ratios for fatally injured driver in fatal single vehicle accident (204 'cases' and 9261 'controls').

Substance(s)	Crude OR[b]	95% CI	Adj. OR[c]	95% CI
Any substance	72.6	51.3–102.8	80.3	53.8–119.8
Two or more substances	98.3	52.5–183.9	120.5	57.8–251.6
Alcohol	290.2	169.5–496.8	405.0	203.9–804.7
Alcohol only[a]	167.1	95.8–291.4	221.6	110.7–443.5
Alcohol + drug(s)	1076.0	136.9–8459.1	889.1	101.3–7806.7
Psychoactive medicinal drugs	23.0	14.7–36.1	28.0	16.7–46.9
Two or more medicinal drugs[a]	9.9	1.4–90.1	24.8	2.4–261.1
Only a single medicinal drug[a]	7.3	3.8–14.3	9.3	4.5–19.4
Benzodiazepines	29.7	17.8–49.5	38.7	21.5–69.7
Only benzodiazepines[a]	7.5	3.2–17.8	11.7	4.7–29.1
Diazepam	25.4	13.2–48.7	31.7	14.7–68.2
Only diazepam[a]	8.3	2.7–25.2	10.5	3.1–35.2
Zopiclone	4.3	1.4–13.1	4.1	1.1–15.1
Only zopiclone[a]	1.2	0.2–9.5	1.0	0.1–8.9
Illegal drug(s)	22.6	13.9–36.7	24.8	14.3–43.1
THC	10.7	5.8–19.9	9.6	4.9–18.9
Only THC[a]	2.5	0.9–7.5	2.3	0.7–7.2
Amphetamines	59.6	28.5–124.5	90.2	38.8–210.1
Only amphetamines[a]	7.1	1.2–42.7	15.9	1.7–152.5
Only amphetamines + benzo[a]	247.9	62.1–990.0	247.9	56.6–1085.2

OR = odds ratio, CI = confidence interval.
[a] No other drugs or alcohol.
[b] Adjusted for time period and season.
[c] Adjusted for time period, region, season, road type, gender, and age group.

Alcohol: 0,3% av random drivers, 30% av killed drivers
Zopiclone: 1,6% av random drivers, 2% av killed drivers

OR for being killed in a traffic accident from alcohol is 100 in Norway and 10 in South European and North American countries

Conclusions: trends during last 10 years

- **Drivers arrested for alcohol or drug impaired driving**
  - The number has been stable of about 10 000 each year
  - The detection rate for DUI of cannabis or amphetamines has increased
- **Drivers in normal road traffic:**
  - The incidence of drink driving is low
  - The proportion testing positive for benzodiazepines or stimulants has declined
- **Drivers killed in road traffic crashes:**
  - The proportion impaired by alcohol has declined
  - The proportion testing positive for benzodiazepines or amphetamines has declined