

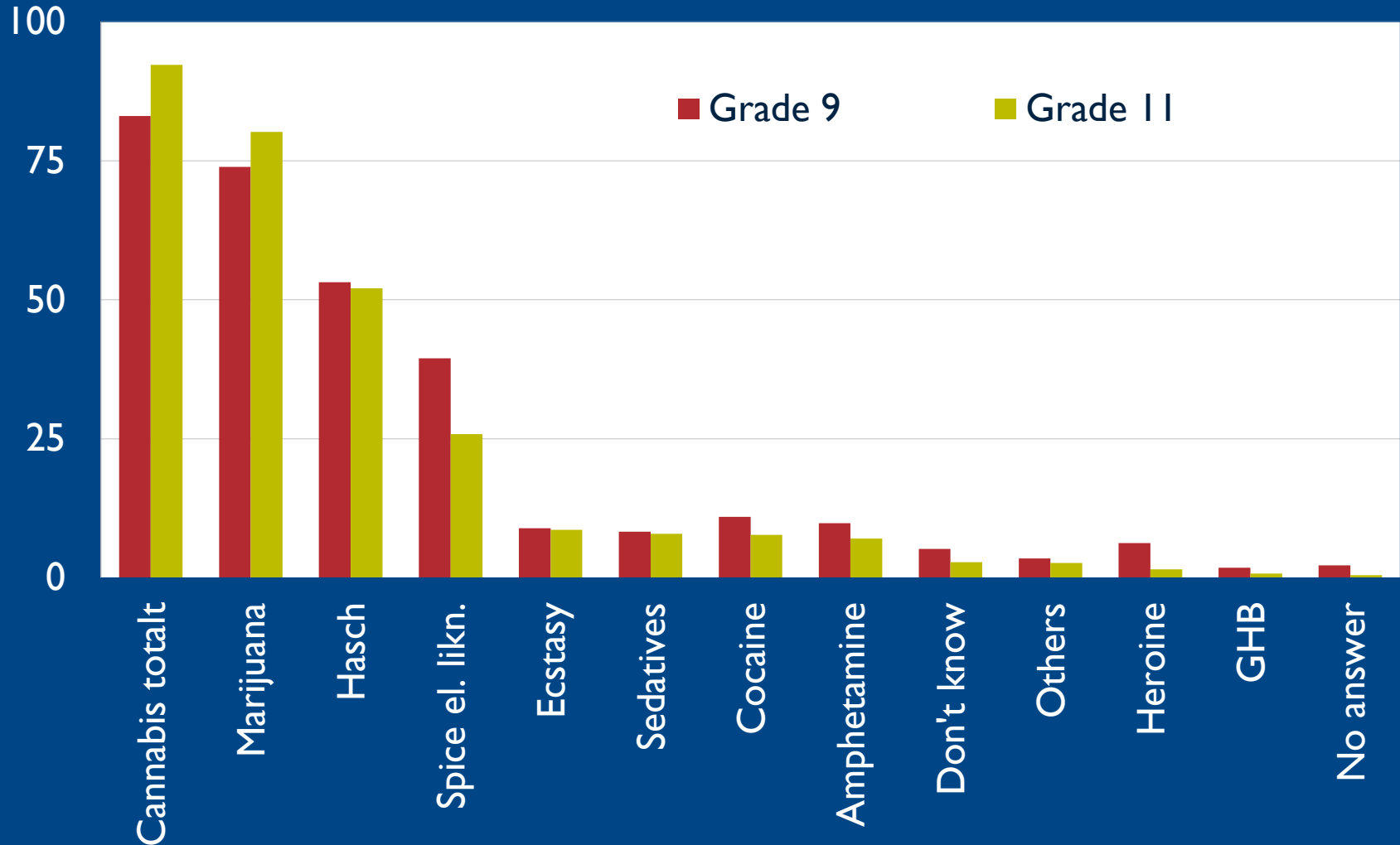
# Syntetic opioids and NPS

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NARKOTIKAUPPLYSNING



# Experiences of different narcotic substances among students grade 9 (15-16 years of age), and grade 11 (17-18 years of age) who report use of any narcotic substance



# Wording of the NPS question in the CANs annual school survey

**36 Nuförtiden talas det om så kallade nätdroger (även kallat designerdroger, RC-droger, nya syntetiska droger). Har du använt någon sådan?**

Markera med ett eller flera kryss.

Nej

Ja, Spice eller liknande rökmixar

Ja, Mefedron, Metedron eller liknande

Ja, annan nätdrog, nämligen:

**Var preparatet lagligt när du använde det?**

Ja

Nej

Vet ej

# Life-time prevalence of NPS among students in grade 9 and 11 2012-2016

	2012	2013	2014	2015	2016
<b>Gy 2:</b>					
Pojkar	5,4	5,2	6,1	3,7	3,4
Flickor	2,7	2,0	2,7	2,7	1,9
<b>Totalt</b>	<b>4,0</b>	<b>3,6</b>	<b>4,4</b>	<b>3,2</b>	<b>2,6</b>
<i>Tot Spice</i>	<i>3,7</i>	<i>3,4</i>	<i>4,1</i>	<i>3,1</i>	<i>2,4</i>
<b>Åk 9:</b>					
Pojkar	2,8	2,7	2,8	1,9	0,9
Flickor	2,0	1,5	2,4	1,3	0,5
<b>Totalt</b>	<b>2,4</b>	<b>2,1</b>	<b>2,6</b>	<b>1,6</b>	<b>0,7</b>
<i>Tot Spice</i>	<i>2,0</i>	<i>1,8</i>	<i>2,4</i>	<i>1,5</i>	<i>0,6</i>

# **Poly-drug profile among NPH-users and non-NPS-users, Grade II (17-18 years of age), in year 2014-2015**

	<b>NPS-users</b>	<b>Others</b>
<b>Cannabis</b>	<b>81 %</b>	<b>13 %</b>
<b>Amphetamine</b>	<b>16 %</b>	<b>1 %</b>
<b>Sedatives</b>	<b>18 %</b>	<b>1 %</b>
<b>High consumers alc</b>	<b>36 %</b>	<b>9 %</b>
<b>Regular smokers (daily/almost daily)</b>	<b>50 %</b>	<b>10 %</b>

**They also score high on many other risk factors**



ESPAD

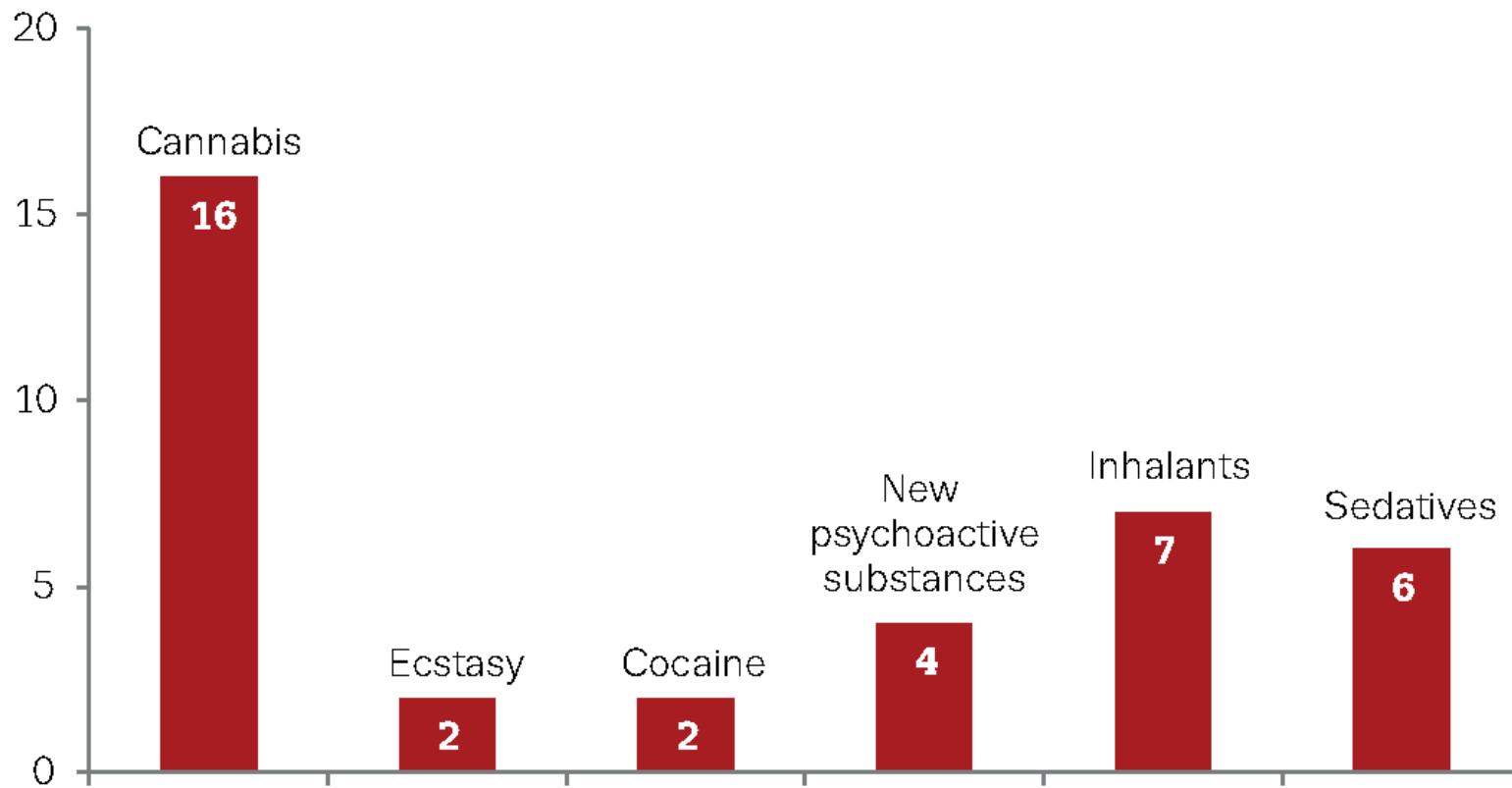
# New psychoactive substances



# Lifetime use of selected substances (percentage) (12-month prevalence: 3%)

European average  
(34 countries)

Percent

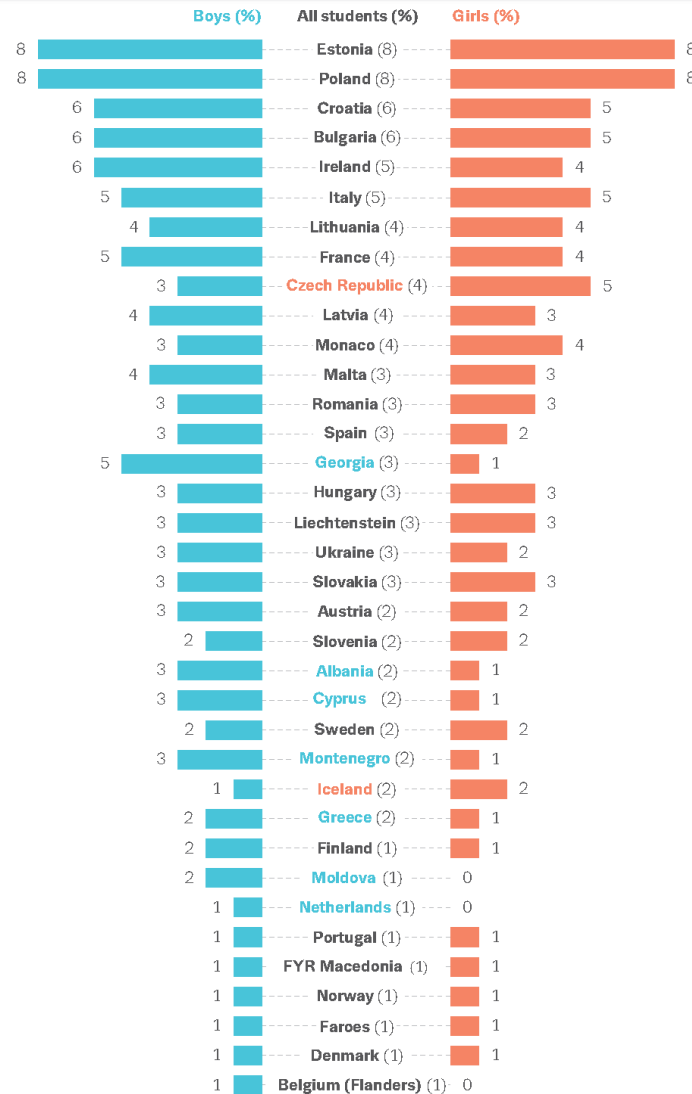


# NPS definitions

- **NPS:** narcotic or psychotropic drugs that are not controlled by the UN drug conventions, but may pose a public health threat comparable to that caused by substances listed in these conventions
- **Wording of the NPS-question in ESPAD:** ‘New substances that imitate the effects of illicit drugs (such as cannabis or ecstasy) may now be sometimes available. They are sometimes called ‘legal highs’, ‘ethno botanicals’, ‘research chemicals’ and can come in different forms, for example herbal mixtures, powders, crystals or tablets.’



# Prevalence of new psychoactive substance use in the last 12 months, by gender (percentage)



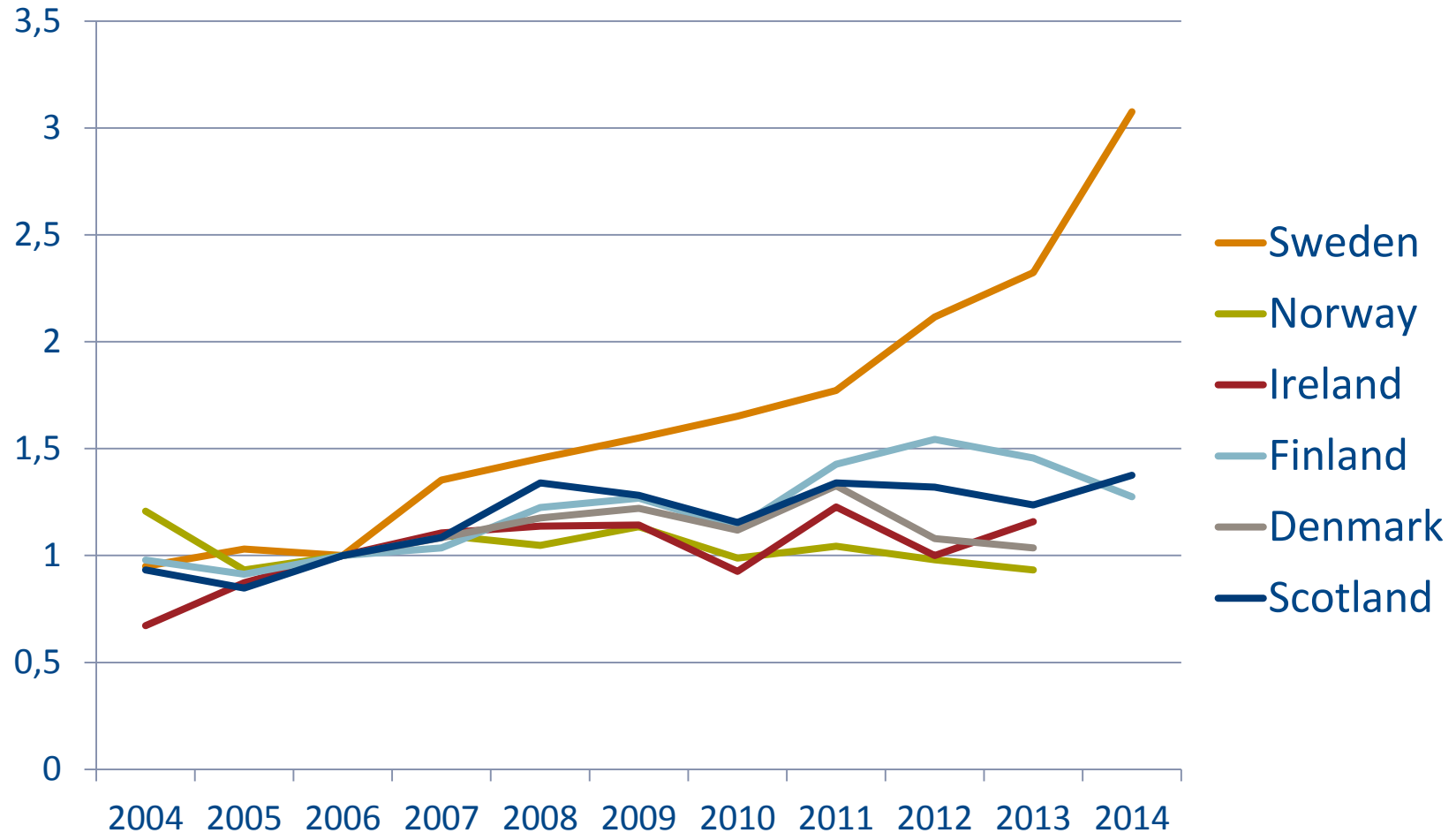
# Some learning points

- **NPS a complex and changing reality (of drugs), a new landscape**
- **Prevalence higher than drugs different to cannabis**
- **Big country differences difficult to explain**
- **Not marked gender differences**

# Drug-related deaths – the Swedish case



# Proportional increase in number of DRDs (all): anchored on 2006



EMCDDA: ST6



# Background

- **The reported increase: used to in order to support and to criticise the current Swedish drug policy ('everyone' is fuelled by an increase!)**

## **Why CAN involvement in DRD statistics?**

- **CAN – commissioned to follow drug trends by different indicators; DRD is one important indicator**
- **CAN – not a Government body but and umbrella organisation of different NGOs; and**
- **A centre of competence within the ANDT-field; epid., prevention, communication...**

# Thus:

**According to all reported DRD (DD) indicators in Sweden: dramatic increases**

**Increase (more than +100% since 2006), especially in opioids: methadone, buprenorphine, fentanyl, oxycodone (thus, opioid pharmaceuticals)**

**Recent years, no decrease in heroin**

**Is this a true increase?**

## **Changes in recording practices (methodological changes)**

### **Two parts**

1. Coding practices for all causes of deaths certificates  
(done at the National Board of Health and Welfare)
2. Changes in practices in toxicological tests  
(done by the National Board of Forensic Medicine)

The CAN-study focus on the latter and the answer is that the reported rate of increase is false

## I. Coding practices for all causes of deaths certificates (done at the National Board of Health and Welfare)

- **T50.9:** (others, non specified drugs/medicines) *not included* in the DRD-series, but from 2006/07 more information on the causes of death certificates – deaths previously would be under the T50.9 will now have codes *included* in the DRD-series
- **Tramadol:** Until 2012 coded as T39.3, after that T40.8. T39.3 *not included*, T40.8 *included*
- **NPS:** Number increased, previously under T50.9 (*not included*) from 2014 under T43.6 (*included*)
- **Dextropropoxifen (DXP):** *not included* and removed from the market in March 2011. Other substances ‘replacing’ DXP *included*

**Altogether: all these changes – drive the DRD-time series upward**



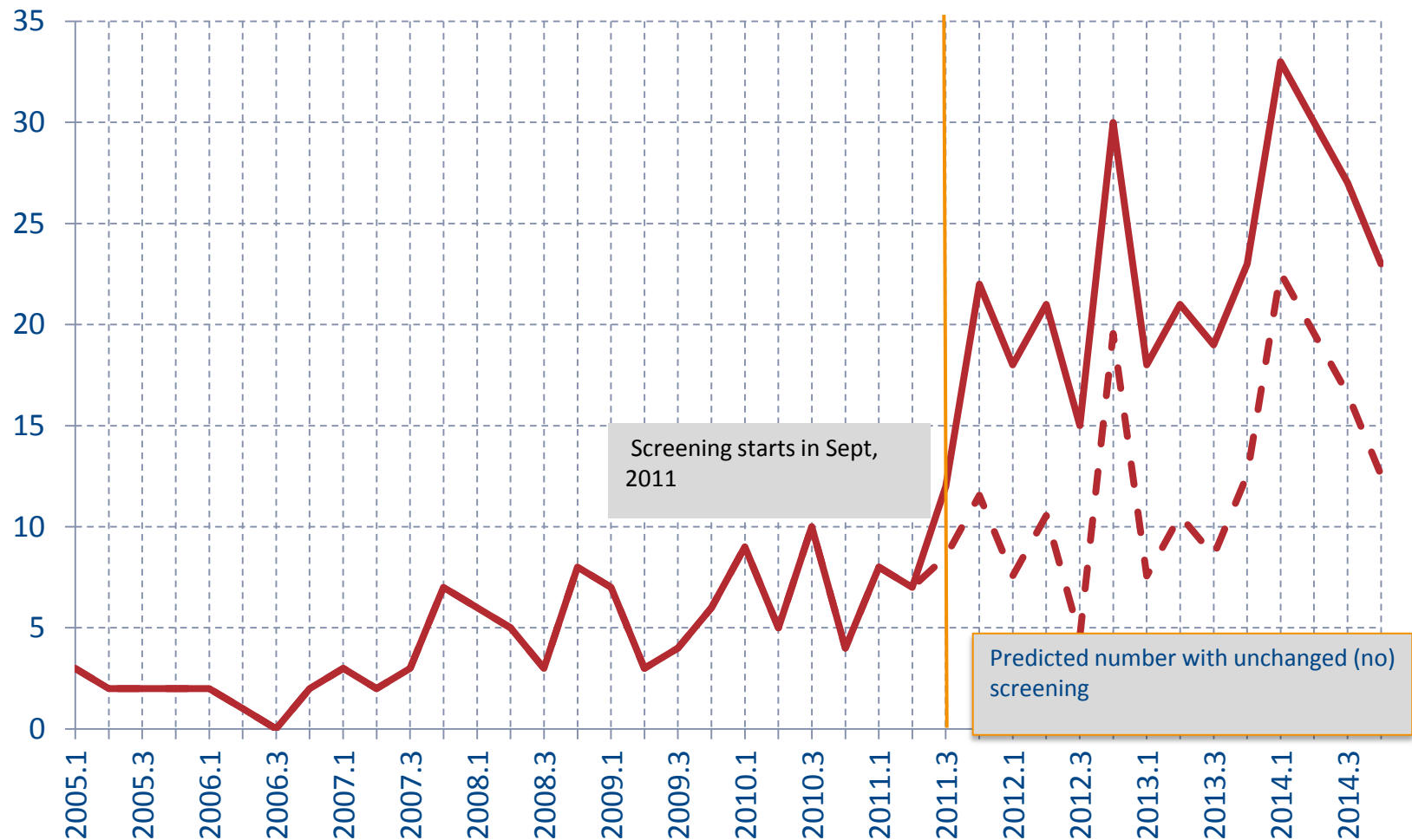
## 2. Changes in the toxicological testing (done at the National Board of Forensic Medicine)

(also mentioned in the NBHW-report)

- Previously – most tests done after request from forensic doctor, but now...
- More routine screening and
- More substances routinely screened
- Lower cut-off (quantification /concentration) (e.g. halving of the methadone quantities)
- September 2011: new analysis apparatus (mass spectrograph (Time of Flight))

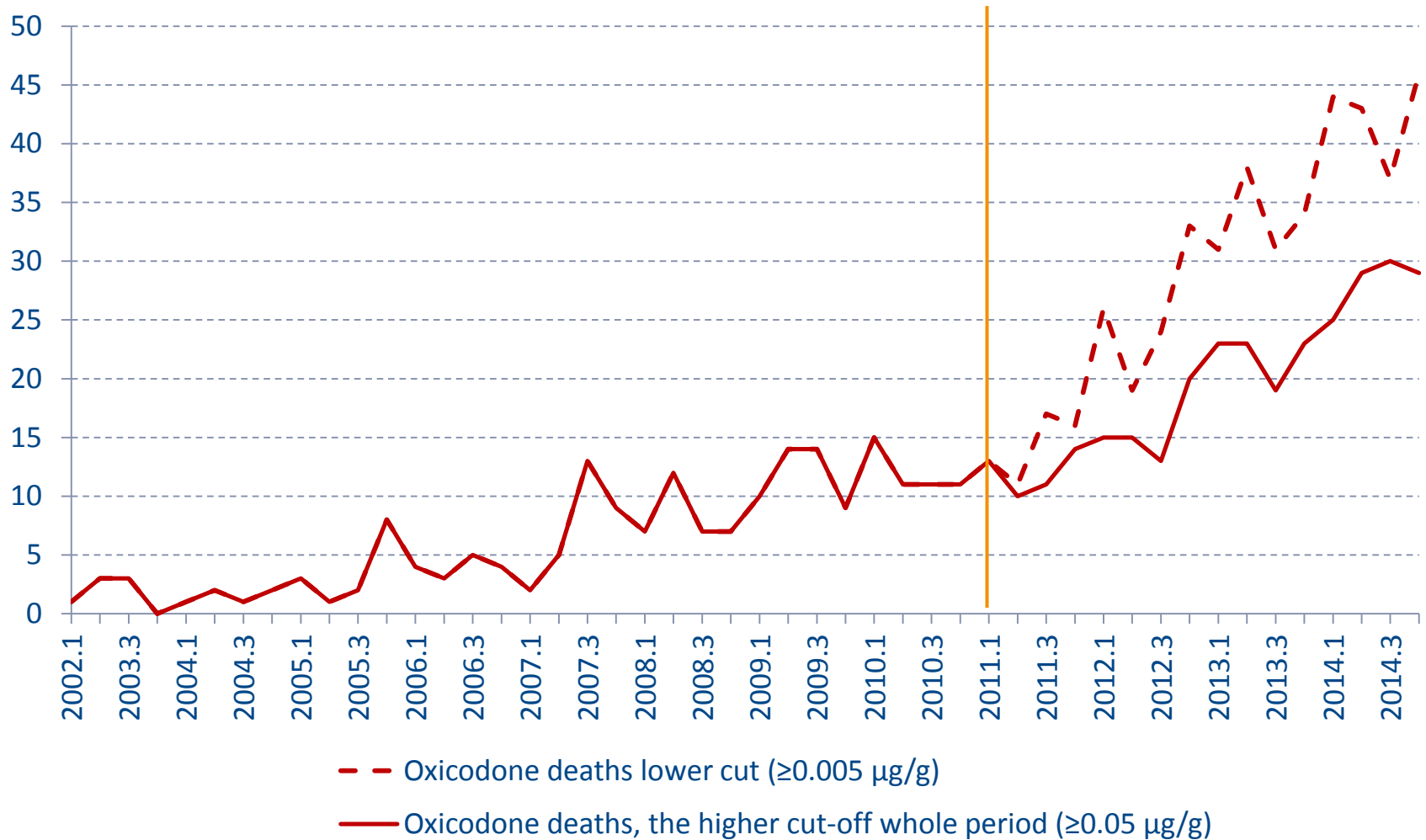
**Altogether: all these changes – drive the DRD-time series upward – the more you search, the more you find. But more detailed analyses needed, the effect is size not assessed**

# Number of positive fentanyl cases before and after implementation of routine screening (from 0% to 100% screening)



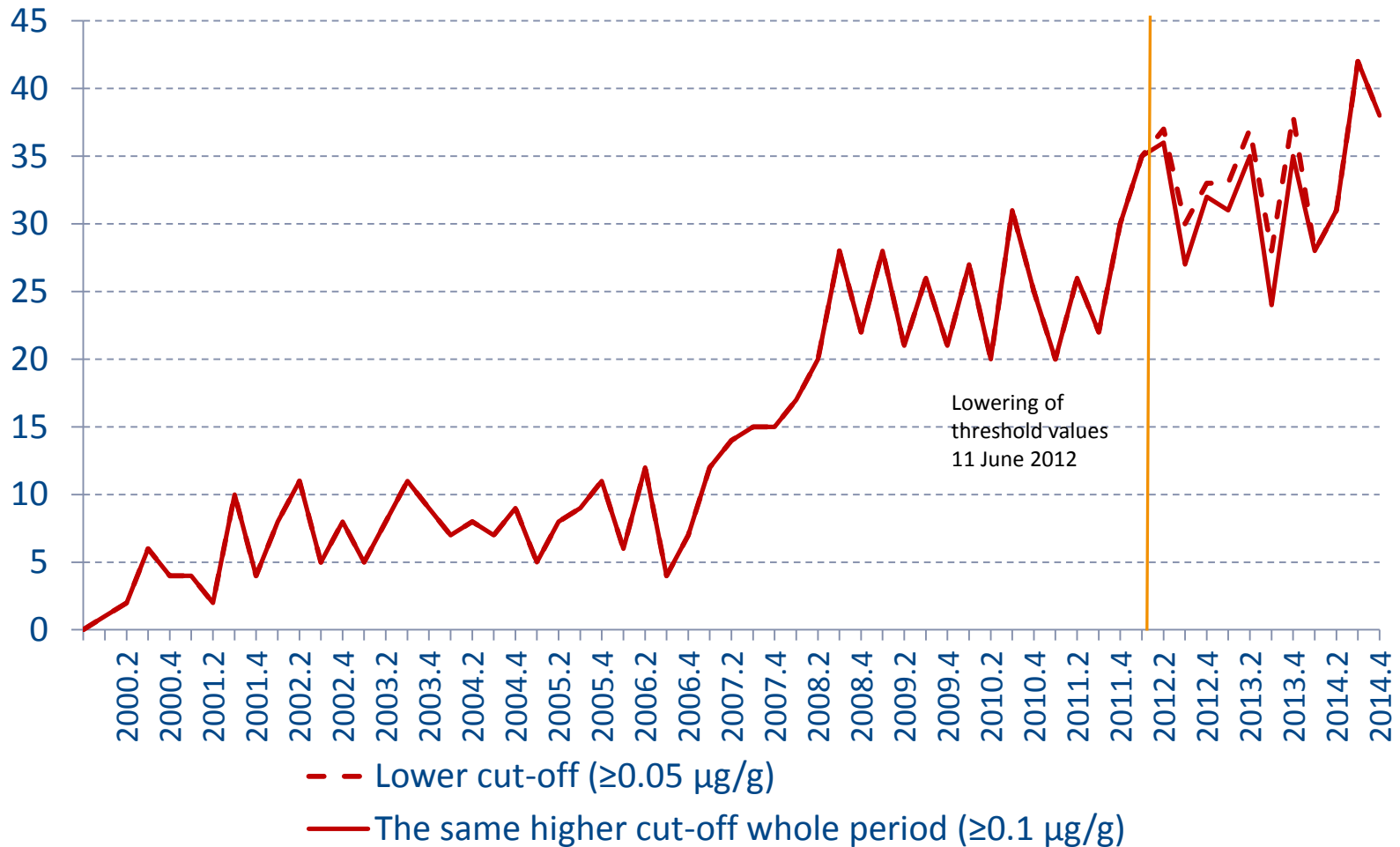
# Methodological effects: lowered threshold value for oxycodone (clear effect)

(Source: National forensic toxicological database)



# Methodological effects: lowered threshold value for methadone (weak effect)

(Source: National forensic toxicological database)



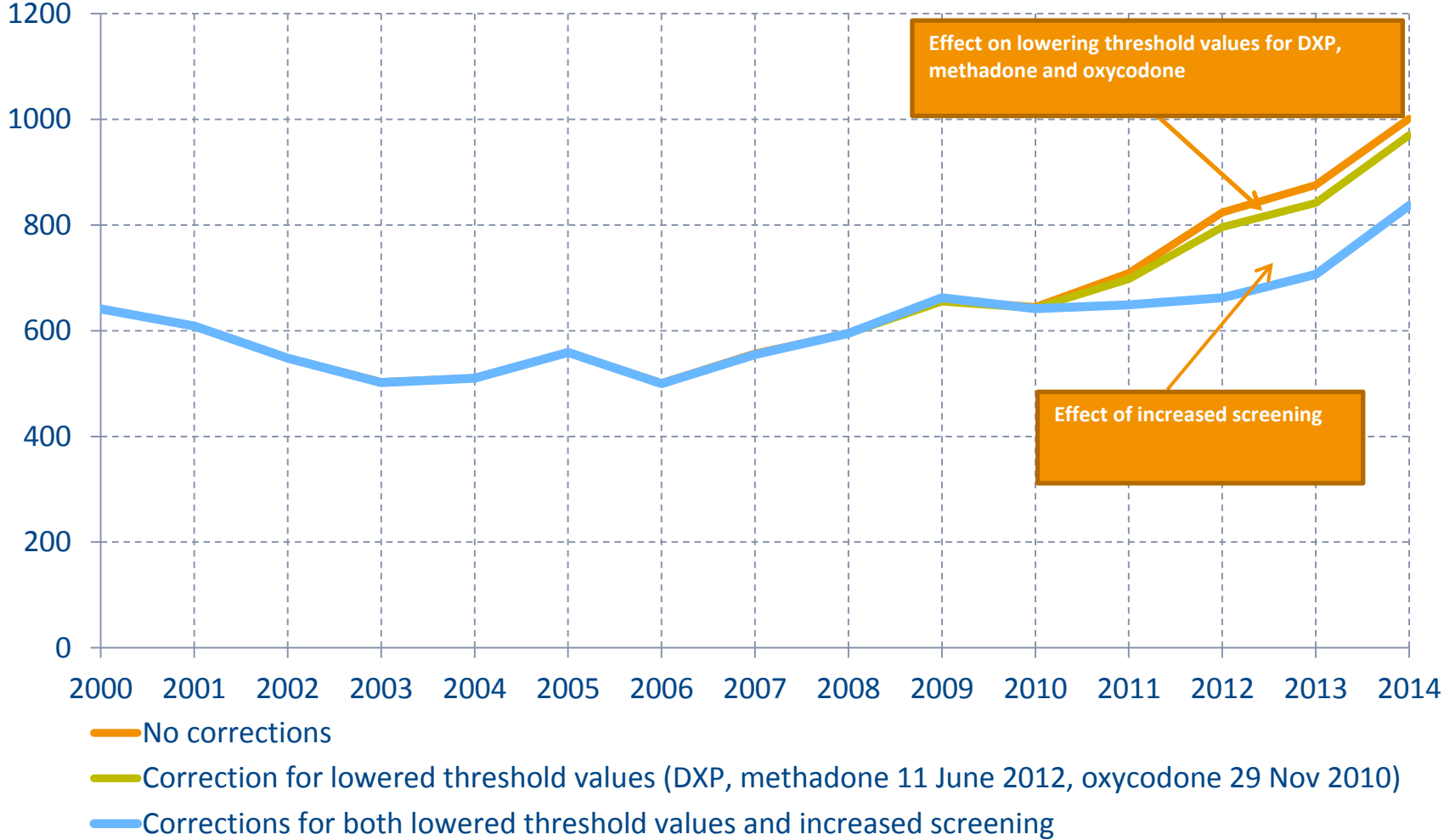
## However, except for oxycodone...

...more or less the same concentration of opioids in blood over time, despite increased screening

'New' cases have not lower quantities of opioids

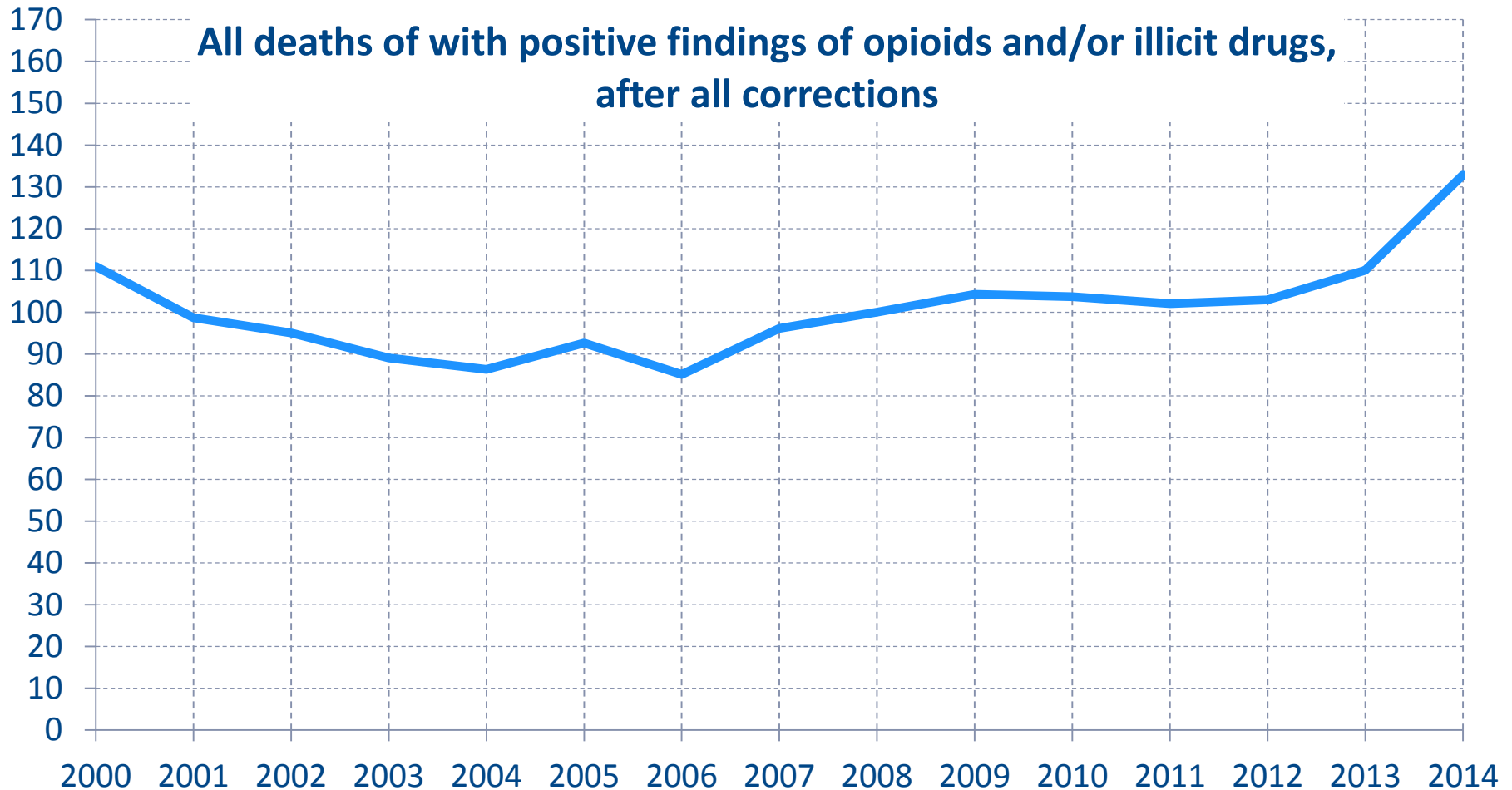
# Number of forensically examined deaths with positive finding of opioids before and after corrections for increased screening and lowering of threshold values (methadone, oxycodone, DXP) (blue line = corrected time series)

Source: national forensic toxicology database.



# Number of drug deaths (opioids, illicit drugs) in forensically examined deaths, with all corrections, anchored on 2008.

Source: national forensic toxicology database.



— All deaths of with positive findings of opioids and/or illicit drugs, after all corrections

# Still and increase...

1. **Substantially lower than what has previously been reported**
2. **Increase is due to an increase in opioids (methadone, fentanyl, buprenorphine, oxycodone)**
3. **70-75% of all drug deaths (and DRD) due to pharmaceutical opioids**
4. **An increase in most age groups, men and women**
5. **Strong correlations between drug deaths (presence of drugs) and drug-related deaths**
6. **NPS not included, still 'few' cases: 2015: 21 detected deaths with spice (14 contributed to the deaths), 2010: 1 and 0 cases**

**What about alcohol and benz?**

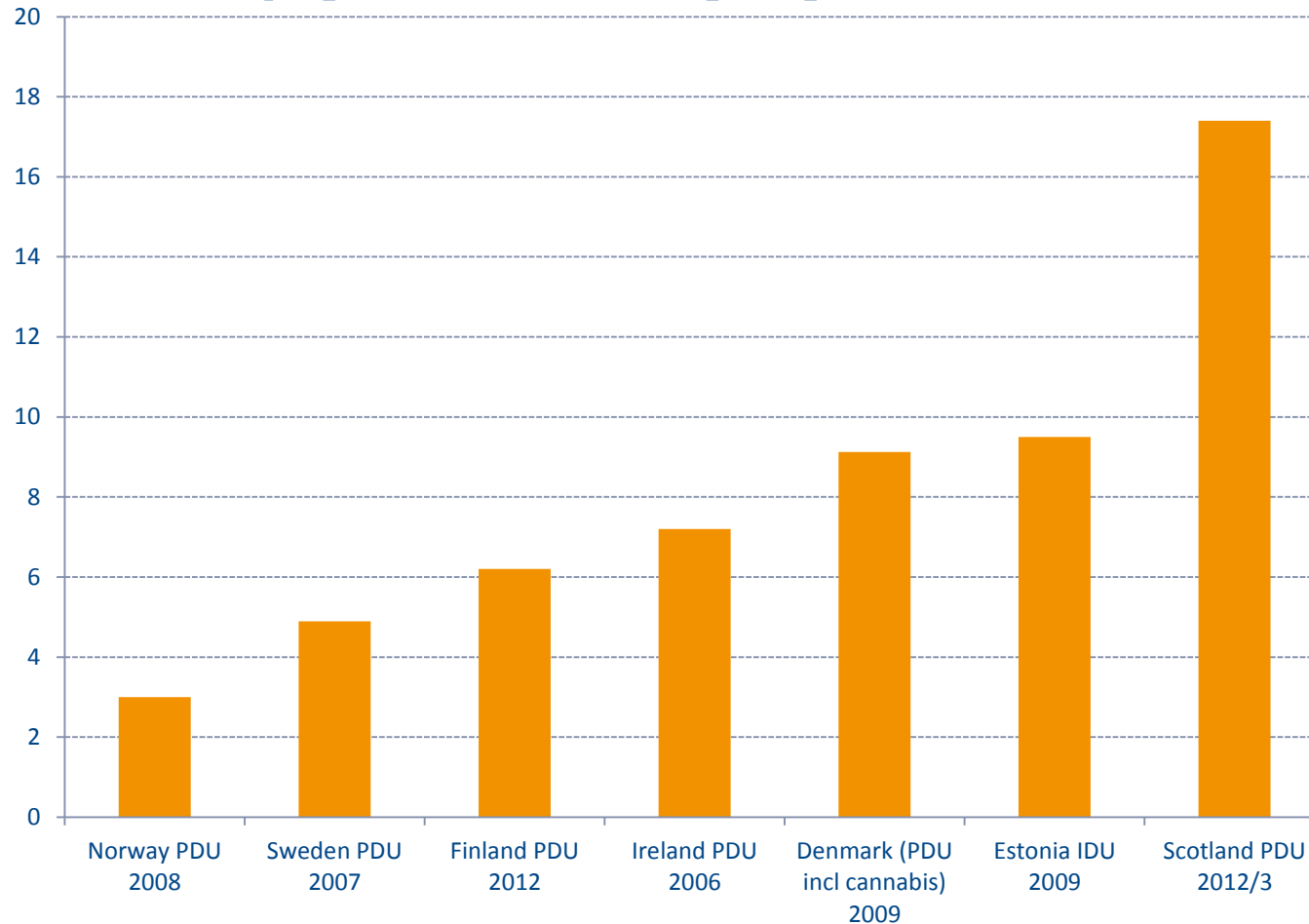


# Polydrug use

## Studying alcohol and/or benzodiazepine involvement in opioid deaths

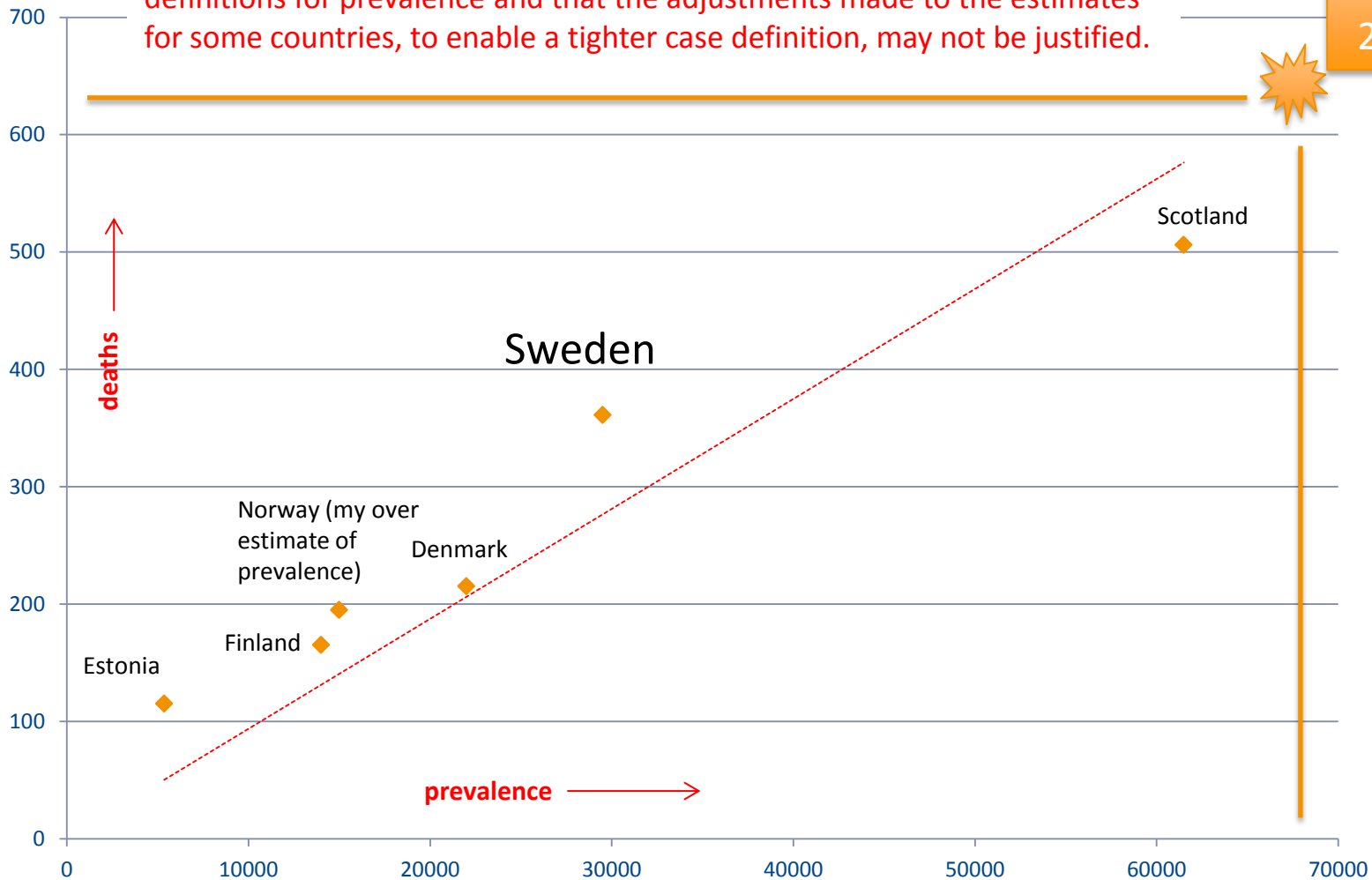
- **Decrease in relative terms (%) for alcohol**
- **Stable or increase for benzodiazepines**
- **Alcohol cannot explain the increase in opioid deaths**
- **Benzodiazepines could be an important contributory factor**

# Estimated prevalence rates of PDU (or similar) per 1,000 population 16-54 years



# Recent deaths p.a. (mean n 2011-13) vs. best approximation to recent POU/PDU/IDU prevalence

*This slide is included as a discussion prompt, for illustrative purposes only: we are aware that there are differences between countries in case definitions for prevalence and that the adjustments made to the estimates for some countries, to enable a tighter case definition, may not be justified.*



Sweden  
2014!?!?



# Comparability, conclusions

- 1. The Swedish trend data (without corrections) is not really comparable over time**
- 2. The Swedish level of DRD, but also trends, are not fully comparable with other EU-countries**
- 3. It is not plausible that the Swedish rate of 93 deaths per million compared do the EU-average of 19 per million mirrors true differences**
- 4. Most likely, also other countries have done methodological changes, along already existing differences**