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**STADE DE SUISSE
BERN**
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Opioid Dependence and the Use of Analgesics in a Swiss Teaching Hospital

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In cooperation with



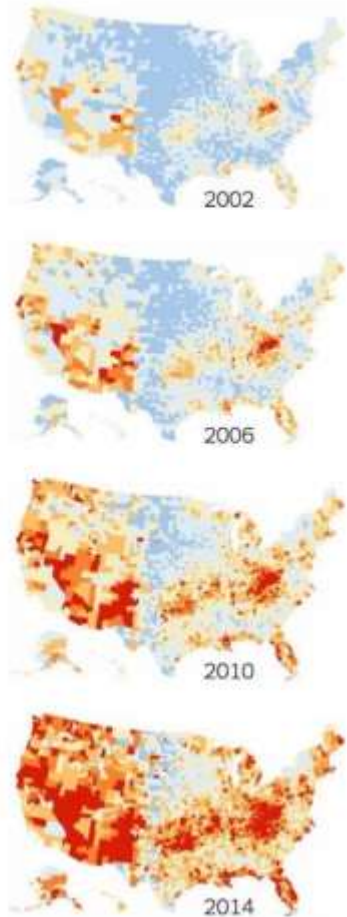
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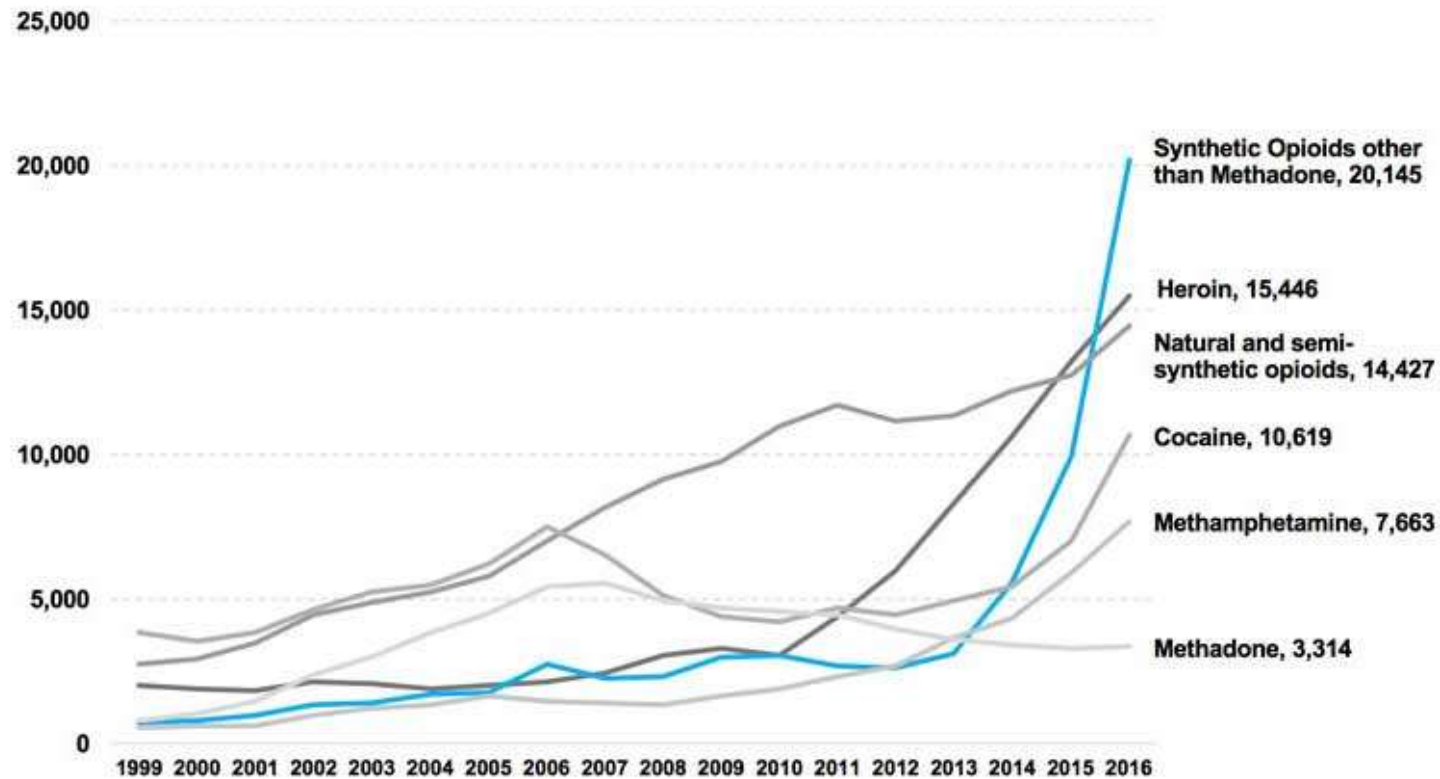


VGIch

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Drugs Involved in U.S. Overdose Deaths, 2000 to 2016





INTRODUCTION

- Increases in the use of opioids and other analgesics in Switzerland
 - Population study of Swiss insurance claims 2006-2013¹
- We investigated
 - whether this increase is reflected by opioid dependence among our inpatients
 - whether changes of in-hospital orders for analgesics might have contributed to such a trend

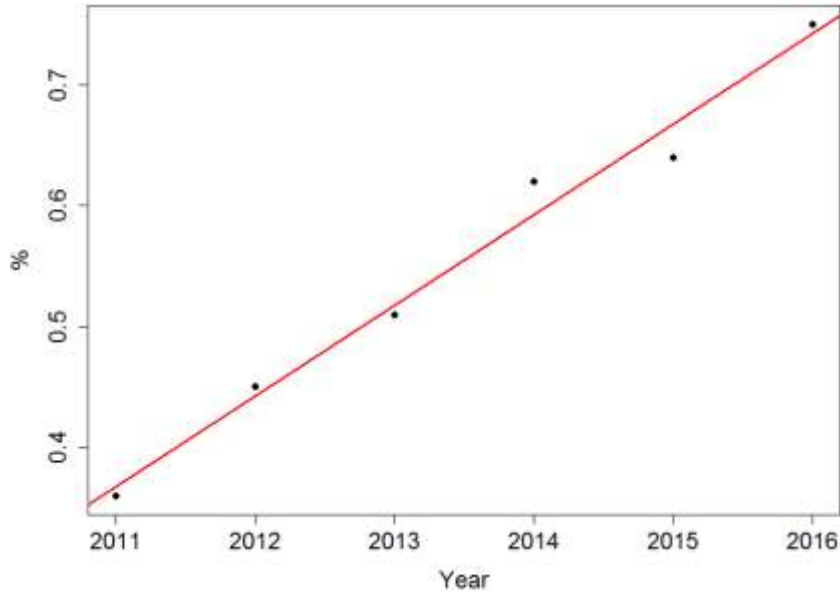
¹ Wertli et al. Changes over time in prescription practices of pain medications in Switzerland between 2006 and 2013: an analysis of insurance claims. DOI:10.1186/s12913-017-2086-6.



METHODS

- Retrospectively analyzed hospital-wide data of inpatients (2011-2016)
 - 205,833 inpatient stays
 - 6,382,275 drug orders
- Opioid dependence identified by ICD-10 code F11.2
- Anatomical Therapeutic Chemical (ATC) Classification System to group orders for analgesics
 - Iterative semi-automated process used to map free-text entries
 - ATC-coding of >96.5% of all drug orders for each year considered

PERCENTAGE OF OPIOID DEPENDENT INPATIENTS



Proportion of inpatients with a diagnosis of opioid dependence showed a linear increase and doubled during the study period ($p < 0.0002$)

NUMBER OF TOTAL ORDERS AND OPIOID ORDERS

- Significant increase in **total** number of orders per stay

2011	2012	2013	2014	2015	2016	p-value
26.62	30.13	30.66	31.15	32.31	34.50	0.003

- No significant increase observed in total number of **opioid orders**

2011	2012	2013	2014	2015	2016	p-value
1.43	1.87	1.91	1.88	1.87	1.93	0.126

SCHEDULED OPIOID ORDERS VS. IF NEEDED

- Significant increase in number of **scheduled opioid** orders

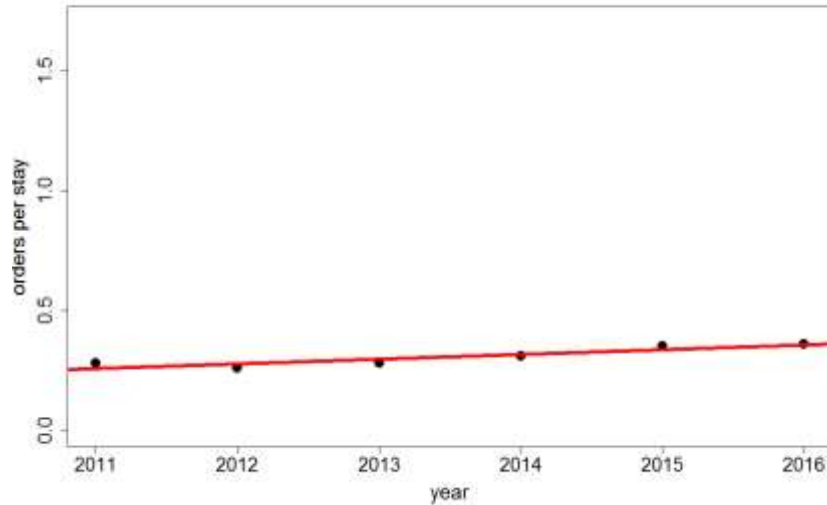
2011	2012	2013	2014	2015	2016	p-value
0.28	0.26	0.28	0.31	0.35	0.36	0.010

- No significant increase observed in **opioid orders ‘if needed’** (pro re nata)

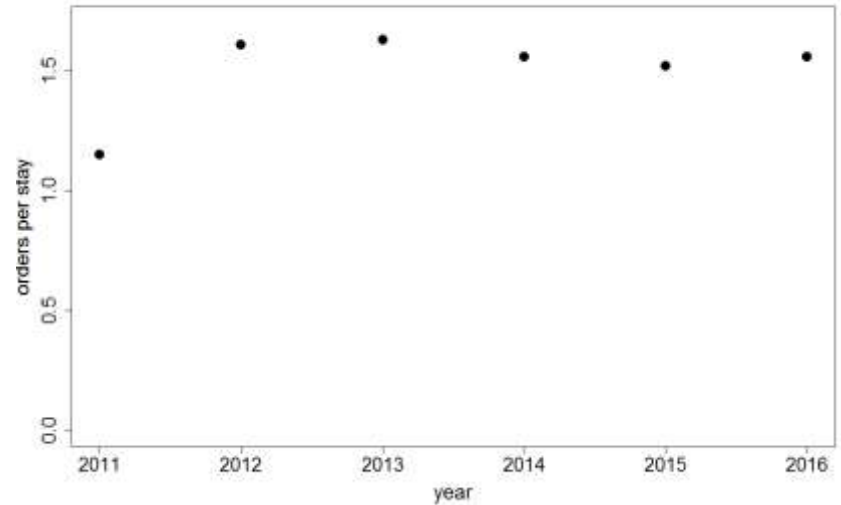
2011	2012	2013	2014	2015	2016	p-value
1.15	1.61	1.63	1.56	1.52	1.56	0.298

SCHEDULED OPIOID ORDERS VS. IF NEEDED

Per schedule



If needed



NSAID

- Total number of **NSAID orders** per stay

2011	2012	2013	2014	2015	2016	p-value
0.50	0.57	0.52	0.51	0.52	0.46	0.268

- Number of **NSAID orders** if ‘needed’ (pro re nata)

2011	2012	2013	2014	2015	2016	p-value
0.19	0.25	0.25	0.22	0.21	0.18	0.479

METAMIZOLE

- Increase in number of **metamizole** orders

2011	2012	2013	2014	2015	2016	p-value
1.38	1.59	1.59	1.57	1.61	1.72	0.035

DISCUSSION AND CONCLUSION

- Might add to the growing concern that the U.S. opioid epidemic could become an opioid pandemic, but:
 - low percentage of opioid dependence among patients treated
 - number of opioid orders, including pro re nata orders, remained stable

OUTLOOK

Oxycodone N02AA05

p.o.

