



LISBON  
ADDICTIONS  
2019

## Prescription Drug Misuse in the UK

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Reader in Clinical Toxicology  
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## Funding and Conflicts of Interest

### Euro-DEN and Euro-DEN Plus

- 2013-2015: The Euro-DEN project had financial support from the DPIP/ISEC Programme of the European Union
- 2015 onwards: The Euro-DEN Plus Project has received support from EMCDDA since August 2015



### Rocky Mountain Poison and Drug Control Center

- Grants and statistical assistance with analysis of data from UK Internet surveys and web monitoring surveys
- Honorarium to attend and present at annual RADARS scientific meetings and international pre-symposium



Sun+

## Why 1.6m Britons are addicted to prescription pills

MailOnline

### The 'safe' painkiller that is turning unsuspecting women into drug addicts

- Co-codamol is a painkiller containing paracetamol and codeine
- Over the past decade, the number of prescriptions for it have doubled
- The majority of addicts are not men, but women

### A nation of prescription drug addicts: More Britons die from abusing painkillers and tranquillisers than heroin and cocaine

Many GPs 'prescribe drugs to addicted patients'

By Claire Marshall

BBC News

BBC NEWS HEALTH

theguardian

### Prescription abuse outstrips illegal drug use, UN warns

- Counterfeit market has lethal consequences
- Crackdown on appetite suppressants urged



### Prescription opioid misuse in the United States and the United Kingdom: Cautionary lessons

Daniel F. Weisberg<sup>a,b,1</sup>, William C. Becker<sup>b,c,1</sup>, David A. Fiellin<sup>d</sup>, Cathy Stannard<sup>c,1</sup>

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<sup>c</sup> Massachusetts General Hospital, Boston, MA

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### Medicine 'misuse': Implications for health and environmental sustainability

Felicity Thomas<sup>a</sup>, Michael Depledge

<sup>a</sup> European Centre for Environment and Human Health, University of Exeter Medical School, Knowledge Spa, Royal Cornwall Hospital, Truro, TR1 3HD, UK



THE TIMES  
SATURDAY  
September 26 2010 (Times Daily) No 72964  
Only £1.50 to subscribers



## Online opioids scandal

Dangerous painkillers sold without proper checks despite fears over addiction.

TIMES INVESTIGATION

How 200 million of diverted codeine are

being sold on the internet

The investigation was able to order

diverted codeine from the internet

to the hands of new regulators, a

first investigation has found.

An undercover reporter bought

hundreds of the painkillers from the

internet

most foreign doctors and could not

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to prescribe for patients in Britain.

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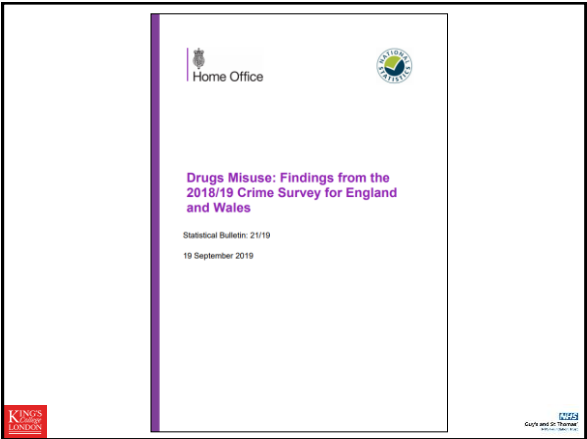
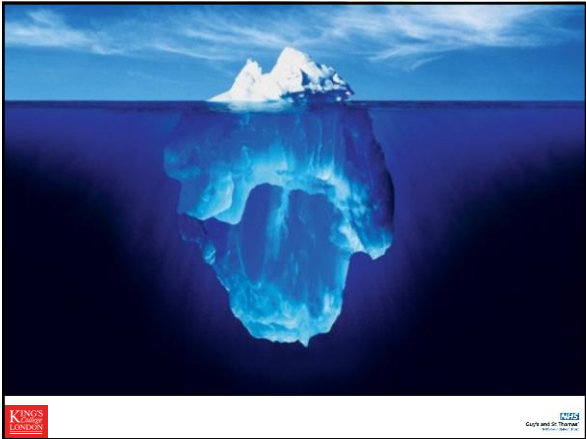
ACMD  
Advisory Council on the Misuse of Drugs

Diversion and Illicit Supply of Medicines

December 2016

**Type of drug:** The most prevalent diverted drugs are opioids and benzodiazepines. Increasing amounts of gabapentin and pregabalin are being diverted. Cognitive enhancers could be susceptible to diversion in the future. Further attention needs to be given to the misuse of codeine in over-the-counter (OTC) preparations as a precursor to the misuse of prescription opioids.



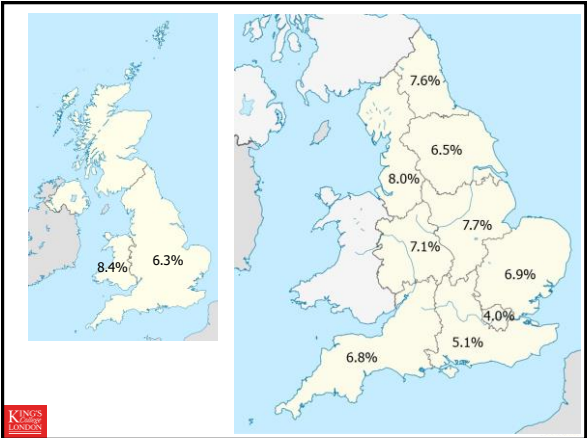


### UK population level data: prescription painkiller misuse

- From 2014/15 CSEW survey following question included:  
*"Have you taken prescription-only painkillers not prescribed to you, which you took only for the feeling or experience it gave you"*

	Any Drug	Painkillers
16 to 59 years old	9.4%	6.4%
16 to 24 years old	20.3%	6.1%
25 to 59 years old	7.0%	8.5%
Males	12.6%	6.9%
Females	6.3%	5.9%

The line graph shows the lifetime use of any drug and painkillers across different age groups. The x-axis represents age groups from 16-19 to 55-59. The y-axis represents the percentage of the population, ranging from 0% to 20%. The blue line represents 'Any Drug' and the orange line represents 'Painkillers'. The 'Any Drug' line starts at approximately 18% for the 16-19 group, peaks at 20.3% for the 16-24 group, and then generally declines to about 5% for the 55-59 group. The 'Painkillers' line starts at approximately 5% for the 16-19 group, peaks at 8.5% for the 25-29 group, and then declines to about 5.9% for the 55-59 group.



Journal of Public Health | Vol. 36, No. 6, pp. 722-730 | doi:10.1093/pub/adv001 | Advance Access Publication February 2, 2015

### Non-prescription medicine misuse, abuse and dependence: a cross-sectional survey of the UK general population

Niamh A. Fingleton<sup>1</sup>, Margaret C. Watson<sup>2</sup>, Eilidh M. Duncan<sup>2</sup>, Catriona Matheson<sup>1</sup>

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Address correspondence to Niamh Fingleton, E-mail: n.fingleton@abdn.ac.uk

**ABSTRACT**

**Background:** Non-prescription medicines (NPMs) can be misused, abused or lead to dependence, but the prevalence of these problems within the UK general population was unknown. The aim of this study was to estimate the prevalence of self-reported misuse, abuse and dependence to NPMs.

**Methods:** A cross-sectional postal survey was sent to 1000 individuals aged ≥18 randomly drawn from the UK Edited Electoral Register.

**Results:** A response rate of 43.4% was achieved. The lifetime prevalence of NPM misuse was 19.3%. Lifetime prevalence of abuse was 4.1%. Younger age, having a long-standing illness requiring regular NPM use and ever having used illicit drugs or legal highs were predictive of misuse/abuse of NPMs. In terms of dependence, lifetime prevalence was 2% with 0.8% currently dependent and 1.3% dependent in the past. Dependence was reported with analgesics (with and without codeine), sleep aids and nicotine products.

**Conclusion:** Given the increasing emphasis on self-care and empowering the public to manage their health with NPMs, the findings highlight the need for improved pharmacovigilance of these medicines to maximize benefits with minimal risk. Healthcare providers need to be aware of the potential for misuse, abuse and dependence, particularly in patients with long-term illness.

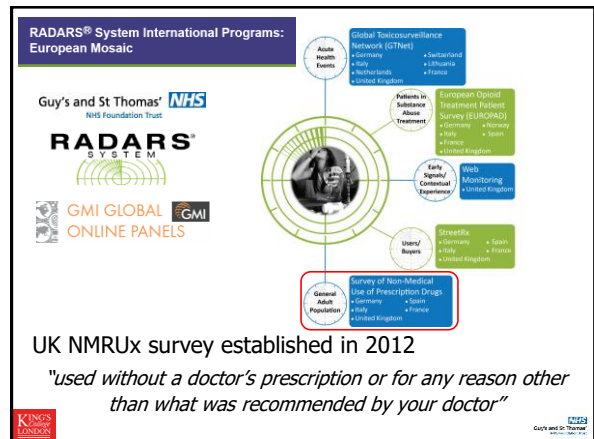
**Keywords:** epidemiology, primary care, public health

**Life-time NPM misuse: 19.3%**

	% (n)
Have you ever knowingly used a non-prescription medicine for a reason that was not recommended by the manufacturer, e.g. for the feeling or effect it caused? <sup>a</sup> (n = 394)	
Yes—in the past month	0.8 (3)
Yes—more than a month ago	3.3 (13)
No—never	95.9 (378)
At a higher dose than recommended by the manufacturer? <sup>b</sup> (n = 394)	
Yes—in the past month	2.5 (10)
Yes—more than a month ago	9.4 (37)
No—never	88.1 (347)
More often than recommended by the manufacturer? <sup>b</sup> (n = 395)	
Yes—in the past month	2.8 (11)
Yes—more than a month ago	7.8 (31)
No—never	89.4 (353)
For a longer time than recommended by the manufacturer? <sup>b</sup> (n = 396)	
Yes—in the past month	2.3 (9)
Yes—more than a month ago	8.3 (33)
No—never	89.4 (354)

<sup>a</sup>Abuse.  
<sup>b</sup>Misuse.

	or adjusted %	or adjusted %		
Sex (n = 385)			0.27	—
Female	55.8	48.3		
Male	44.2	51.7		
Age (years) (n = 385)			<0.001	n/a
Mean (SD)	51.2 (14.6)	62.1 (14.6)		
Ethnicity (n = 385)			1.0	1.05
White	97.6	97.3		
Other	2.4	2.7		
Relationship status (n = 385)			0.001	n/a
Never married or in civil partnership	30.6	15.8		
Married or in civil partnership	51.8	65.8		
Separated or divorced	12.9	6.7		
Widowed	4.7	1.7		
General health (n = 385)			0.84	—
Very good	24.4	24.3		
Good	45.3	47.5		
Fair	30.2	28.2		
Fair/bad or very bad	—	—		
Understanding illness requiring regular use of NMA (n = 381)			<0.001	—
Yes	30.6	13.5		
No	69.4	86.5		
Education (highest level completed) (n = 385)			0.014	—
No formal qualification	7.0	15.1		
High school or secondary school	36.0	45.2		
College	40.7	25.4		
University degree	16.3	14.4		
Employment (n = 381)			0.002	—
Employed or self-employed	61.2	43.2		
Retired	25.3	47.6		
Other	12.9	9.1		
Alcohol drinker (n = 384)			0.28	—
Yes	80.2	73.8		
No	19.8	26.2		
Smoking status (n = 385)			0.25	—
Smoker	15.1	10.0		
Ex-smoker	33.7	41.7		
Never smoked	51.2	48.3		
Ever used drugs or legal highs (n = 385)			<0.001	—
Yes	18.6	4.7		
No	81.4	95.3		

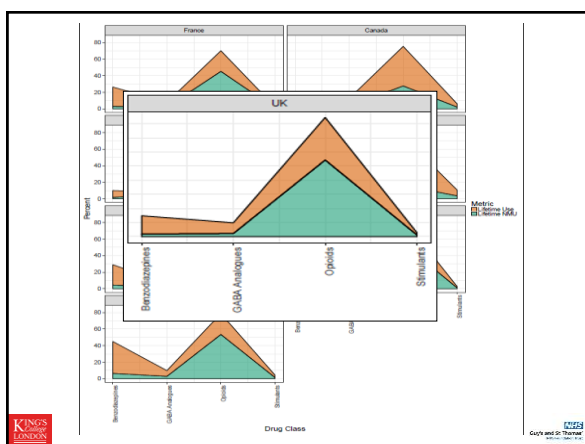
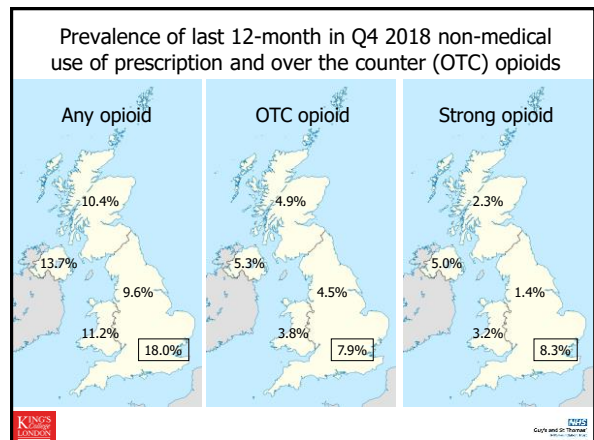


Postgrad Med J 2018;94:627-633. Original article

### UK survey of non-medical use of prescription drugs (NMURx) as a valuable source of general population illicit drug use data

Fu Liang Ng,<sup>1,2</sup> Karilynn Rockhill,<sup>3</sup> Joshua Black,<sup>3</sup> Kevin Patrick May,<sup>3</sup> Melanie D Whittington,<sup>2</sup> David M Wood,<sup>1,4</sup> Paul I Dargan,<sup>1,4</sup> Jody L Green<sup>3,5</sup>

**Conclusions** The NMURx survey has a broad reach of participants, and a sampling scheme that achieves external validity, compared with general population demographics. NMURx's online format allows flexibility in items surveyed and in response to emerging trends.



**CASE REPORT**

### Loperamide dependence and abuse

Ryan MacDonald,<sup>1</sup> Jason Heier,<sup>2</sup> Joshua Villanar,<sup>3</sup> Jared Stroh<sup>4</sup>

**CRITICAL CARE**

Cardiac conduction disturbance after loperamide abuse

J. M. MARRAS<sup>1</sup>, J. M. G. ROHLAND<sup>2</sup>, R. W. SULLIVAN<sup>3</sup>, R. W. MORGAN<sup>4</sup>, A. GARDEN<sup>5</sup>, J. WILLIAMS<sup>6</sup> and M. J. HEDGECOCK<sup>7</sup>

**BE ALERT TO POTENTIAL LOPERAMIDE ABUSE**

**UNDERSTAND THE RISKS OF PREGNANT LOPERAMIDE**

**KNOW THE SIGNS OF LOPERAMIDE ABUSE**

**ASK THE RIGHT QUESTIONS TO IDENTIFY AND PREVENT LOPERAMIDE ABUSE**

**PREVENTION AND TREATMENT OF LOPERAMIDE ABUSE**

**ADDITIONAL RESOURCES**

DOI: 10.2196/med.2019.1-6

N.E. Webb<sup>1</sup>, D.M. Wood<sup>1,2</sup>, J.C. Black<sup>3</sup>, E. Amioka<sup>3</sup>, R.C. Dart<sup>3</sup> and P.I. Dargan<sup>1,2</sup>

From the <sup>1</sup>Clinical Toxicology Department, St Thomas' Hospital, Westminster Bridge Road London SE1 7EH, London, UK, <sup>2</sup>Faculty of Life Sciences and Medicine, King's College London, Strand, London WC2R 2LS, London, UK and <sup>3</sup>Rocky Mountain Poison and Drug Center, 1391 Speer Boulevard, Suite 600, Denver, CO 80204, USA

**Background:** Loperamide is a  $\mu$ -opioid receptor agonist that is available as an over-the-counter anti-motility agent in the US and UK, recommended maximum doses of 12–16 mg/day. Anecdotal reports of non-medical use (NMU) have increased over the past decade with supra-therapeutic doses (70–800 mg/day) associated with cardiotoxicity. Little data exists on the prevalence of loperamide NMU.

**Aim:** The aim of this study was to determine the prevalence of loperamide NMU in the UK and US and to describe characteristics of non-medical loperamide users.

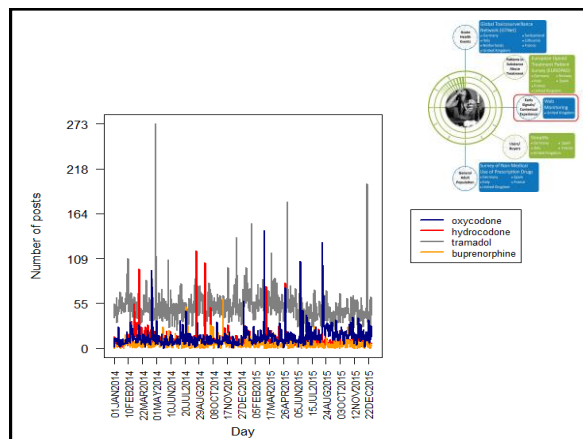
**Design:** The Researched, Abuse, Diversion and Addiction Related Surveillance (RADARS®) Survey of Nonmedical Use of Prescription Drugs (NMURx) was utilized to study NMU of loperamide among the adult population in the UK and US in 2017. The RADARS® NMURx is anonymous and self-administered online.

**Methods:** A total of 40,029 completed surveys were included (10,019 from the UK and 30,010 from the US). Respondents were asked questions about medical and NMU of loperamide, frequency of and reasons for NMU, route of use problematic drug use markers, and demographics.

**Results:** Prevalence of lifetime loperamide use (95% CI) and lifetime NMU of loperamide were: UK 28.5% (27.67-29.4), and 0.66% (0.5-0.8), respectively; US 33.7% (33.1-34.2), and 5.19% (4.9-5.5), respectively. Problematic drug use markers were elevated in those who reported NMU of loperamide in both the UK and US, however high-risk use was more prevalent in the UK than in the US.

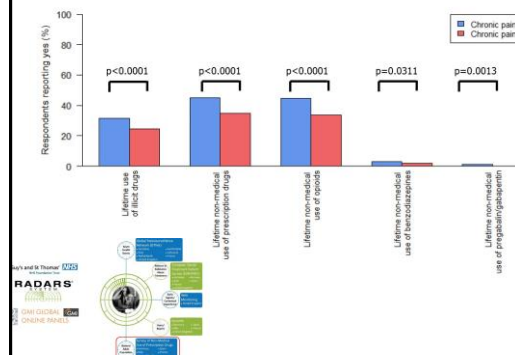
**Conclusion:** NMU of loperamide is common. In the current international environment of opioid addiction involving both therapeutic and illicit opioids, awareness of the NMU of loperamide is important.

Life-time NMU: UK 0.66%. USA 5.19%



- Association with illicit drug use
  - Used in last year 10.7% -vs- not used 5.9%
- Demographic factors associated with increased use
  - Most deprived 8.3% -vs- least deprived 4.4%
  - Rural 6.2% -vs- Urban 6.4%
  - Employed 6.2% -vs- Unemployed 7.2%
  - Long-term illness / disability

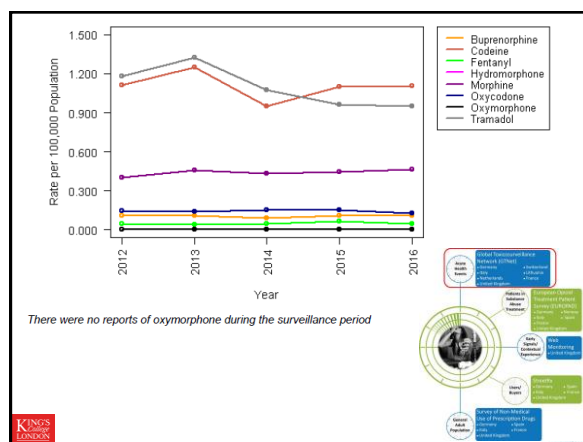
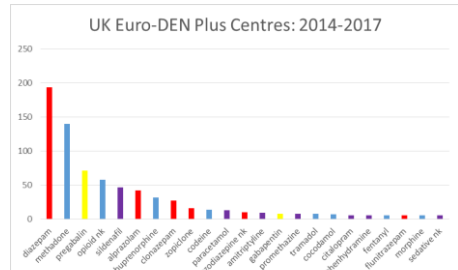
Drug	Yes	No
Prescription painkillers	12.6%	5.6%
Any illicit drug	12.7%	9.0%
Cannabis	10.9%	7.2%



*Clinical Toxicology* (2014), **52**, 239–241

D. M. WOOD,<sup>1,2</sup> F. HEYERDAHL,<sup>3</sup> C. B. YATES,<sup>4</sup> A. M. DINES,<sup>1</sup> I. GIRAUDON,<sup>5</sup> K. E. HOVDA,<sup>3</sup> and P. I. DARGAN<sup>1,2</sup>

2018: 32 centres in 22 European/neighbouring countries



## Drug Treatment Data: England

Substance	Opiate	Non-opiate only	Non-opiate and alcohol	Alcohol only	Total
	n %	n %	n %	n %	n %
<b>Opiate and/or crack cocaine use</b>					
Opiate (not crack cocaine)	88,184 50%	- -	- -	- -	88,184 31%
Both opiate and crack cocaine	61,623 41%	- -	- -	- -	61,623 21%
Crack cocaine (not opiate)	- -	2,205 9%	2,320 8%	- -	4,585 2%
<b>Other drug use</b>					
Cannabis	26,099 19%	15,618 61%	16,201 57%	- -	59,918 21%
Cocaine	8,512 0%	7,760 30%	11,678 41%	- -	27,950 10%
Benzodiazepine	17,703 12%	1,712 7%	1,312 5%	- -	20,727 7%
Amphetamine (other than ecstasy)	7,111 5%	4,070 16%	2,035 10%	- -	14,116 5%
Other drug**	1,934 1%	1,370 5%	778 3%	- -	4,082 1%
Hallucinogen	390 0%	522 2%	273 1%	- -	1,185 0%
Other prescription drug	463 0%	125 0%	118 0%	- -	706 0%
Anti-depressant	389 0%	38 0%	101 0%	- -	528 0%
Solvent	117 0%	123 0%	130 0%	- -	370 0%
Major tranquilliser	108 0%	21 0%	18 0%	- -	147 0%
Barbiturate	68 0%	13 0%	18 0%	- -	99 0%
<b>Alcohol</b>					
Alcohol	31,686 21%	- -	28,187 100%	85,035 100%	144,908 50%
Total number of individuals *	149,807 100%	26,814 100%	28,187 100%	85,035 100%	288,843 100%

\* Full substance classes registered from the National Drug Treatment Monitoring System (NDTMS) 1<sup>st</sup> April 2015 to 31<sup>st</sup> March 2016

NDTMS

CUV and Dr. Thorne

## Deaths related to drug poisoning in England and Wales: 2016 registrations

Office for National Statistics

Deaths related to drug poisoning in England and Wales from 1993 onwards, by cause of death, sex, age and substances involved in the death.

	2012	2013	2014	2015	2016
Number of deaths					
All drug poisoning deaths	2,597	2,955	3,346	3,674	3,744
Any opiate <sup>4</sup>	1,290	1,592	1,780	1,989	2,038
- Heroin and/or morphine	579	765	952	1,201	1,209
- Methadone	414	429	394	434	413
- Tramadol	175	220	240	208	184
- Oxycodone	37	51	51	51	75
- Fentanyl	22	22	40	34	58
Cocaine	139	169	247	320	371
Any amphetamine	97	120	151	157	160
Any new psychoactive substance	55	63	82	114	123
Any benzodiazepine	284	342	372	366	406
Pregabalin	4	33	38	90	111
Gabapentin	8	9	26	49	59
All antidepressants	468	466	517	447	460
Paracetamol <sup>5</sup>	162	226	200	197	219
Propranolol	39	46	54	55	45

Source: Office for National Statistics



CUV and Dr. Thorne

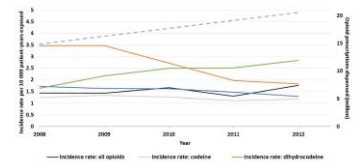


CUV and Dr. Thorne

ORIGINAL RESEARCH Pain Ther (2017) 6:73–84

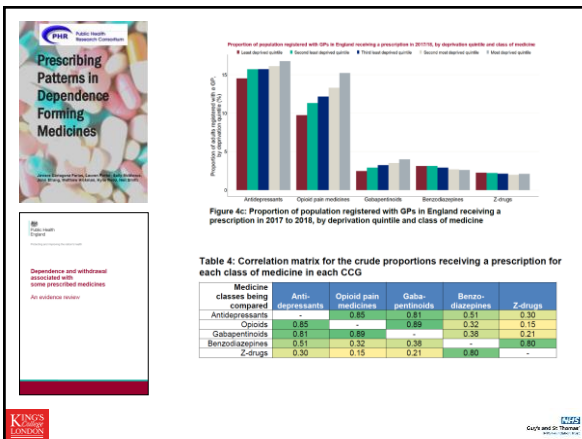
## Prevalence and Incidence Trends for Diagnosed Prescription Opioid Use Disorders in the United Kingdom

Andrew J. M. Cooper · Jenna Willis · Janice Fuller · Heike Bence · James Leighton-Scott · Frank Andersen · Joseph Kim · Christoph Maier · Roger D. Knapp



**Conclusions:** Our study demonstrates that despite the marked increase in overall opioid prescribing in the UK in the past decade, there has not been an increase in the incidence of physician-diagnosed opioid use disorders.

CUV and Dr. Thorne



CUV and Dr. Thorne

## Evening Standard.

WEBSITE OF THE YEAR

## The Opioid Timebomb: Victory for the Standard with addiction warnings set to be put on painkiller packaging

You can read our full Opioid Timebomb investigation with enhanced digital content at [standard.co.uk/opioids](http://standard.co.uk/opioids)

DAVID COHEN Investigations Editor (Friday 23 March 2018 12:53) 0 comments

News

Health Innovation Network South London

## London-wide initiative to tackle chronic joint pain could reduce use of strong painkillers

Leading NHS health innovator and physiotherapist speaks out after London newspaper The Evening Standard's 'The Opioid Timebomb: Special Evening Standard investigation into the overuse of prescription painkillers'.

CUV and Dr. Thorne



## Parting Thoughts

- Increasing evidence of non-medical use of prescription medicines in the UK
  - Predominately opioids and benzodiazepines
- Misuse appears associated with chronic illness and pain, lower income and social deprivation
- Significant harms being associated with misuse
  - Drug treatment, drug-related deaths, ED presentations
- Understanding relationship between prescribing patterns will enable improved harm reduction strategies
  - Alternative strategies to managing pain
  - Warning patients and clinicians of the risks of NMU

## Thank You

