

Naloxone for Opioid Overdose: Prospective Longitudinal Study in Drug Users

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Wednesday, April 4, 2018

NIH launches HEAL Initiative, doubles funding to accelerate scientific solutions to stem national opioid epidemic



Health » FDA chief: Opioids are 'biggest crisis facing the FDA'

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FDA chief: Opioids are 'biggest crisis facing the FDA'

By Sandee LaMotte, CNN

Updated 11:14 AM ET, Thu April 5, 2018



Dr. Scott Gottlieb

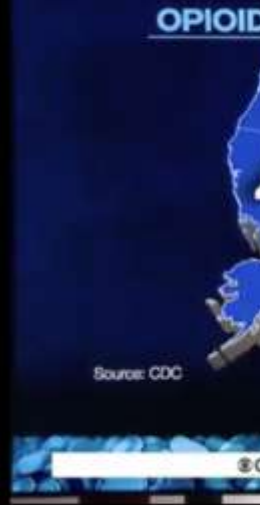
Food and Drug Administration commissioner



Source: CNN

By JERICKA DUNCAN / CB

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NALOXONE

Surgeon General Urges Americans to Carry Drug That Stops Opioid Overdoses

By **ABBY GOODNOUGH** APRIL 5, 2018



A kit containing naloxone, the opioid overdose antidote that the surgeon general is advising more Americans to keep nearby. Hiroko Masuike/The New York Times.





RESEARCH

Opioid overdose rates and implementation of overdose education and nasal naloxone distribution in Massachusetts: interrupted time series analysis

OPEN ACCESS

Alexander V Mellow, assistant professor of medicine, medical director of Massachusetts opioid

Lancet Public Health 2018;
3: e218-25

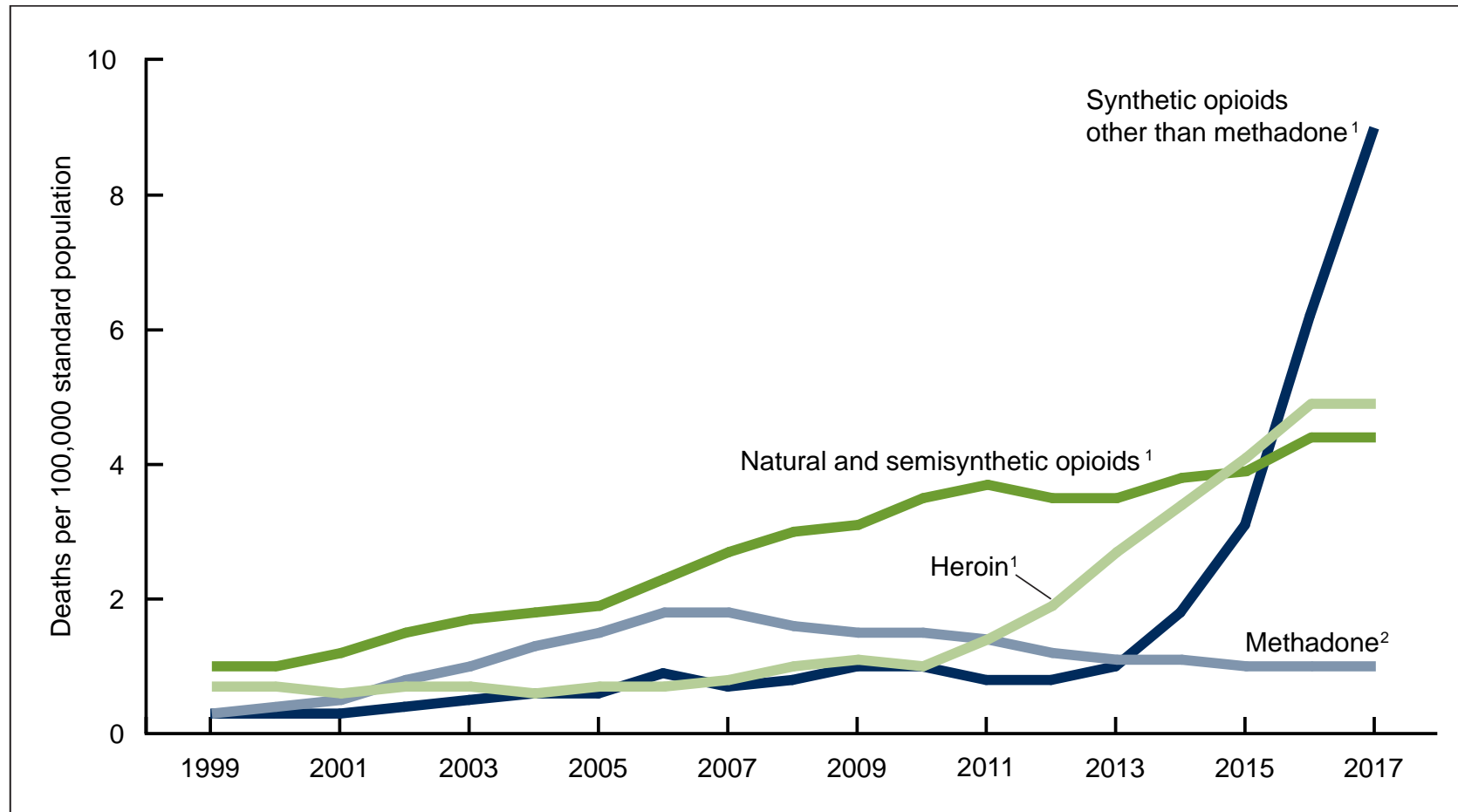
Distribution of take-home opioid antagonist kits during a synthetic opioid epidemic in British Columbia, Canada: a modelling study

Michael A Irvine, Jane A Buxton, Michael Otterstatter, Robert Balshaw, Reka Gustafson, Mark Tyndall, Perry Kendall, Thomas Kerr, Mark Gilbert*, Daniel Coombs*

Opioid Fatalities are Still Increasing

Opioid OD Deaths US, 2000-2017

Figure 4. Age-adjusted drug overdose death rates, by opioid category: United States, 1999–2017



¹Significant increasing trend from 1999 through 2017 with different rates of change over time, $p < 0.05$.

²Significant increasing trend from 1999 through 2006, then decreasing trend from 2006 through 2017, $p < 0.05$.

NOTES: Deaths are classified using the *International Classification of Diseases, 10th Revision*. Drug-poisoning (overdose) deaths are identified using underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Drug overdose deaths involving selected drug categories are identified by specific multiple-cause-of-death codes: heroin, T40.1; natural and semisynthetic opioids, T40.2; methadone, T40.3; and synthetic opioids other than methadone, T40.4. Deaths involving more than one opioid category (e.g., a death involving both methadone and a natural and semisynthetic opioid) are counted in both categories. The percentage of drug overdose deaths that identified the specific drugs involved varied by year, with ranges of 75%–79% from 1999 through 2013 and 81%–88% from 2014 through 2017. Access data table for Figure 4 at: https://www.cdc.gov/nchs/data/databriefs/db329_tables-508.pdf#1

Prescribing naloxone for opioid overdose intervention

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“Effective use of naloxone in community settings requires screening to identify patients at risk of opioid overdose, discussing naloxone use with patients and their relatives, and providing appropriate training.”

How can we maximize the
EFFECTIVENESS of naloxone?


Extensive Training (ET) vs Training as Usual (TAU)

Everyone received the standard training (10 min)


RANDOMIZED to ET or TAU

Stratified on sex, severity of drug use, type of user (recently detoxified, in treatment, not in treatment)

Extensive Training (ET; 2-hr)

- OD prevention strategies 
 - Not injecting alone
 - Not mixing drugs
 - Starting with low doses
- Rescue breathing
- CPR
- OD simulation and rescue breathing, naloxone administration

Training as Usual (TAU; 2-hr)

- Watched educational videos about HIV and Hepatitis C 

Extensive Training (ET)



vs Training as Usual (TAU)



We followed everyone for 1 year
(baseline, 0, 1, 3, 6, and 12 months)

AND WE MEASURED:

Opioid overdose knowledge and attitudes

Naloxone kit use

Interest in treatment

Heroin use (self-report and urine drug screens)

Heroin use behaviors (alone, with others, both)

			Treatment Group						
			Training as Usual (TAU) (N=109)		Extended Training (ET) (N=108)		Extended Training with Significant Other (ETwSO) (N=104)		
Variable	Total N	%	n	col %	n	col %	n	col %	
Gender	320								
Male	249	77.81	83	76.15	88	81.48	78	75.73	
Female	71	22.19	26	23.85	20	18.52	25	24.27	
Age category	315								
Under 40	75	23.81	31	29.25	24	22.43	20	19.61	
40 to 50	100	31.75	35	33.02	31	28.97	34	33.33	
Over 50	140	44.44	40	37.74	52	48.60	48	47.06	
Race/ethnicity	313								
Non-Hispanic White	59	18.85	29	27.36	15	14.15	15	14.85	
Non-Hispanic Black	135	43.13	39	36.79	50	47.17	46	45.54	
Hispanic/Latinx	99	31.63	31	29.25	32	30.19	36	35.64	
Other/Multiracial	20	6.39	7	6.60	9	8.49	4	3.96	
Type of user	320								
OP Illicit	145	45.31	48	44.04	51	47.22	46	44.66	
OP Maintain	139	43.44	49	44.95	45	41.67	45	43.69	
Detoxed	36	11.25	12	11.01	12	11.11	12	11.65	
Addiction severity	320								
Severe	87	27.19	31	28.44	30	27.78	26	25.24	
Non-severe	233	72.81	78	71.56	78	72.22	77	74.76	
Health insurance	311								
No	33	10.61	12	11.32	11	10.28	10	10.20	
Yes	278	89.39	94	88.68	96	89.72	88	89.80	
Employment	311								
No	270	86.82	85	80.95	93	88.57	92	91.09	
Yes	41	13.18	20	19.05	12	11.43	9	8.91	
Participation status	321								
Completed T12 visit	193	60.12	67	61.47	64	59.26	62	59.62	
Did not complete T12	83	25.85	27	24.77	30	27.79	26	24.99	
Loss to follow up	62	19.31	20	18.35	20	18.52	22	21.15	

Mostly men

Mostly >40 yrs

Mostly Black and Hispanic

Stratified on type of user and severity of use

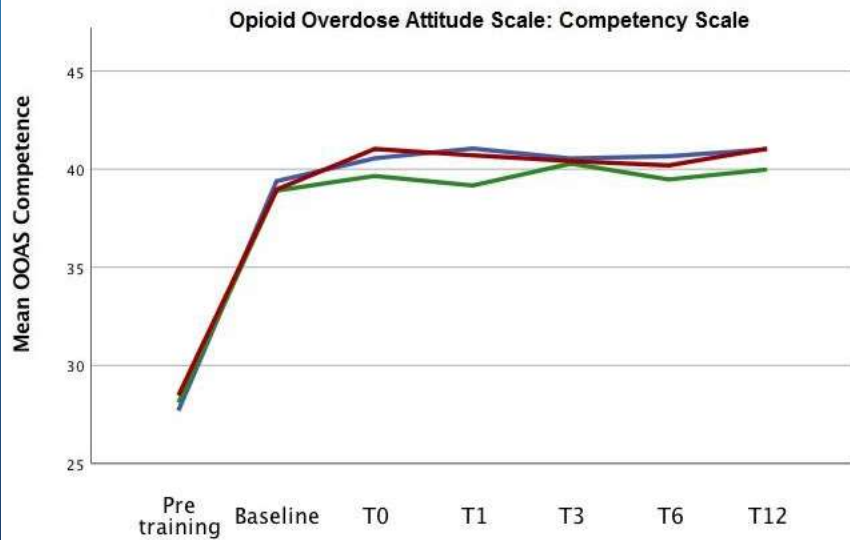
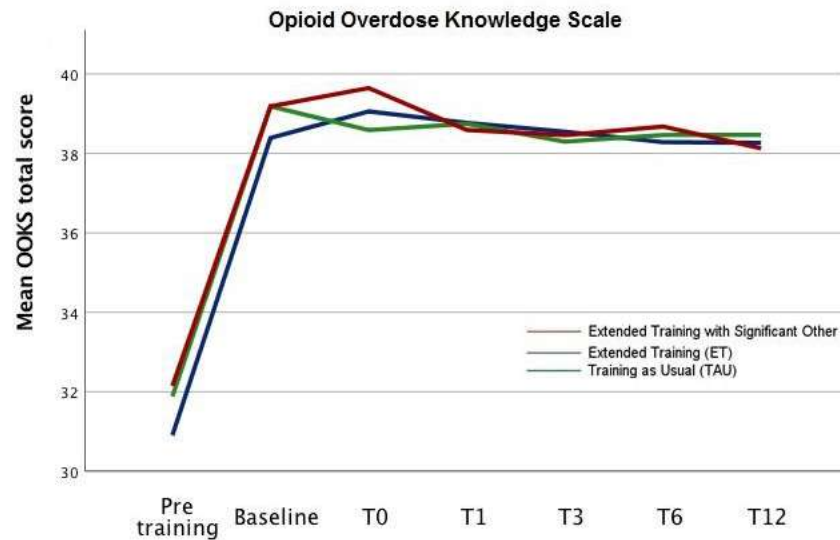
Most had insurance but no job

Similar study completion

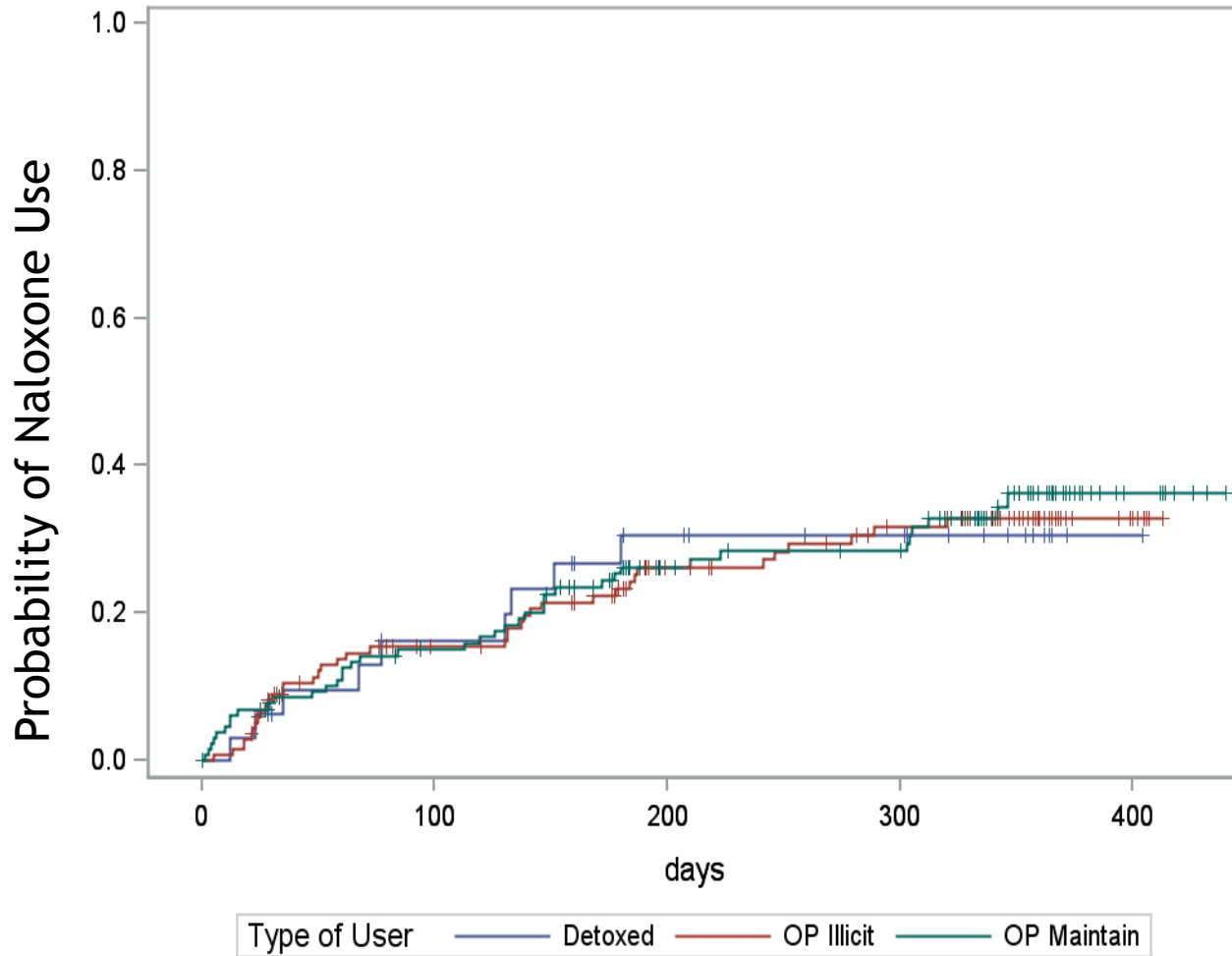
Overdose Events

- Across the 320 subjects who completed the training:
 - 95 unique subjects reported using naloxone to rescue someone else
 - Several of the subjects used naloxone more than once so that a total of 170 reversals were reported:
 - 164 of the reversals were successful
 - 6 of the reversals were unsuccessful
- 18 unique subjects reported experiencing an overdose during the 12-month study
- Some of those 18 subjects reported multiple overdoses: a total of 28 individual overdose events were reported
- 8 subjects died during the study: 2 experienced fatal opioid ODs, 1 from a “lung problem,” 1 “died in his sleep,” 1 from a surgical complication, and 3 died from unknown causes

Effects of Treatment on Overdose Knowledge and Attitudes

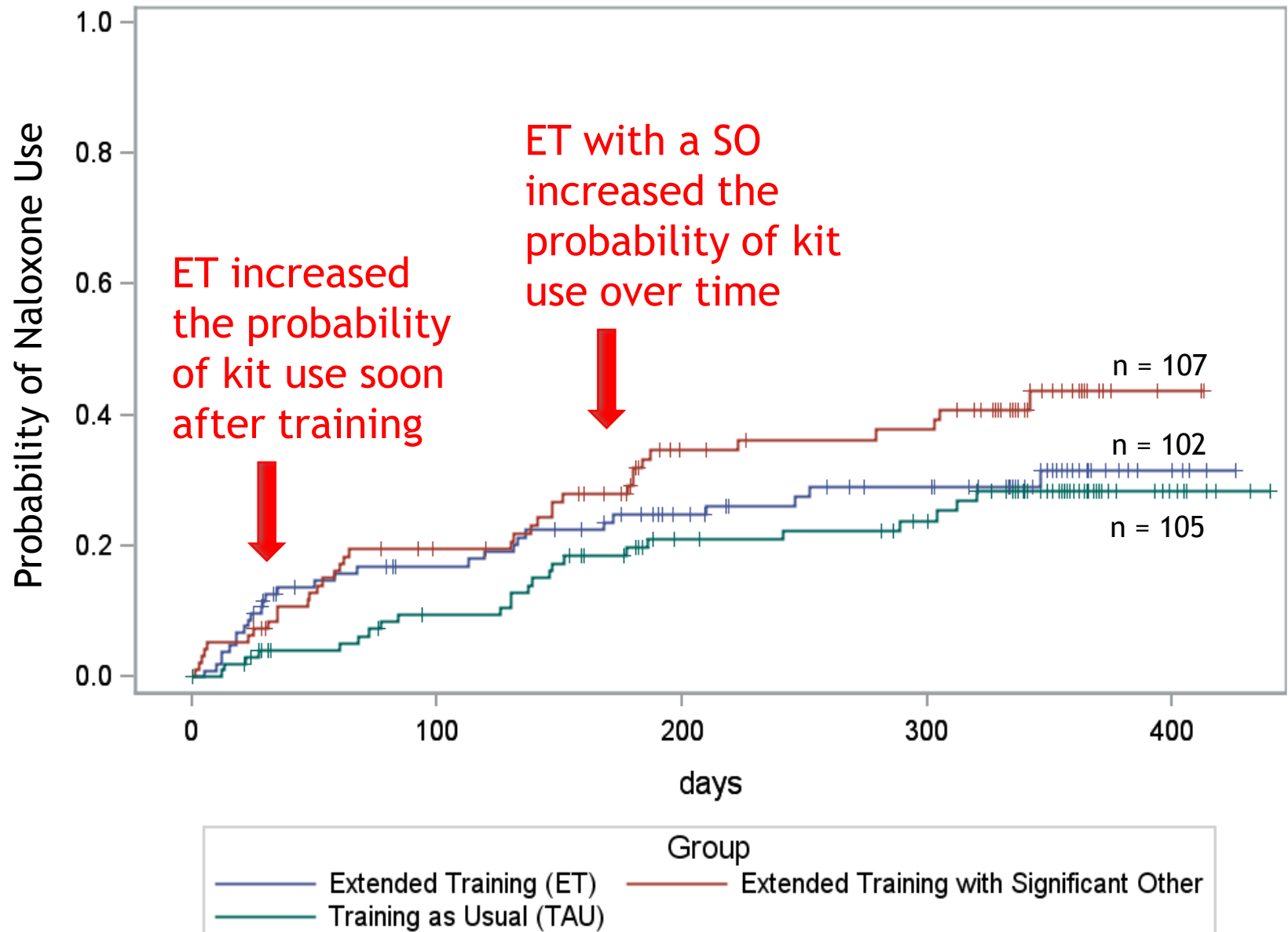


The groups did not differ in their knowledge of opioid overdose or their attitudes about rescuing someone

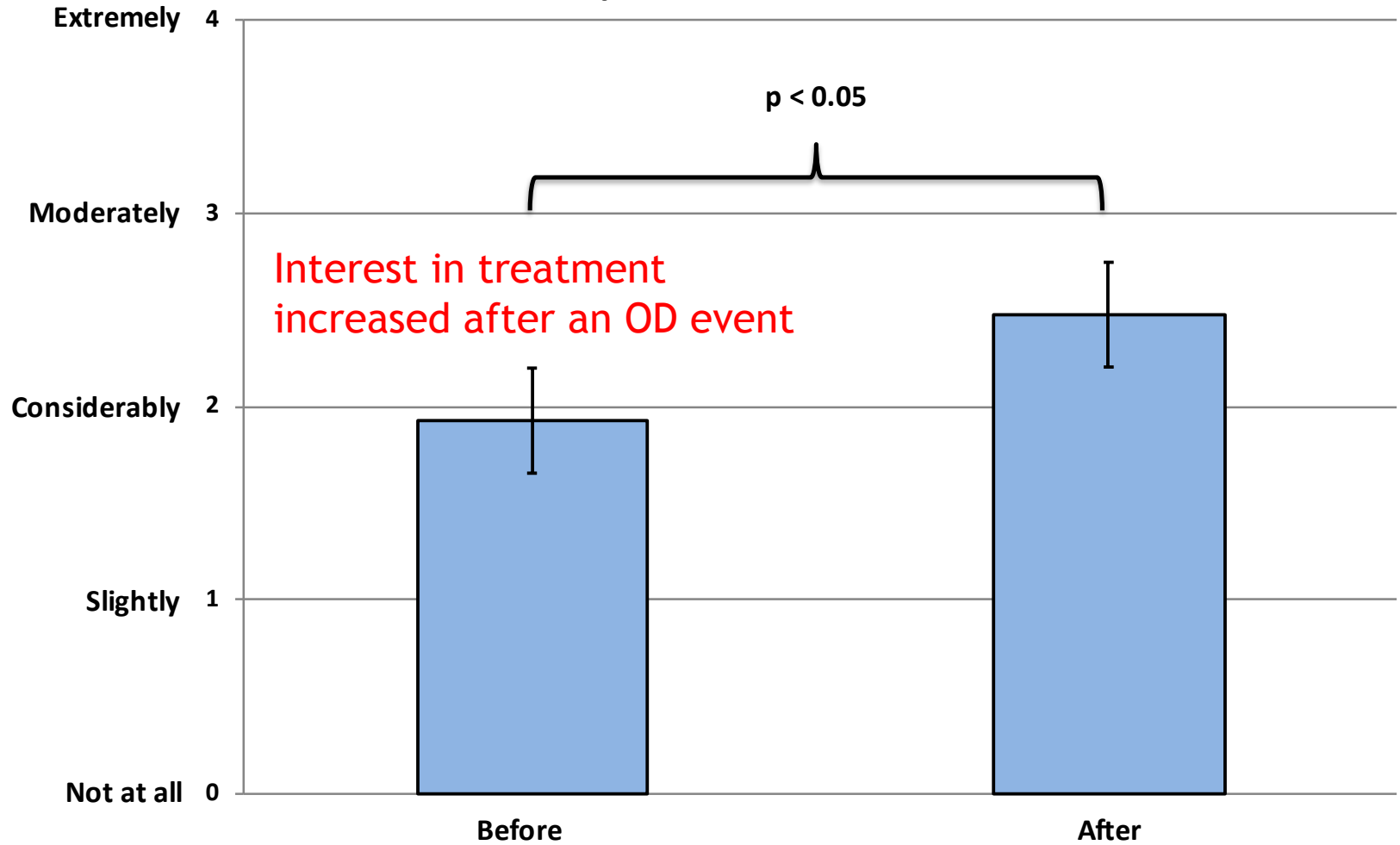


The probability of kit use did not vary as a function of type of user

The probability of naloxone use did vary as a function of TRAINING ($p < 0.05$)




Treatment Importance Before and After Overdose Event



n = 42

Heroin Use: Bags per Day

6
n=333


Addictive Behaviors 71 (2017) 104–106



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journal homepage: www.elsevier.com/locate/addictbeh



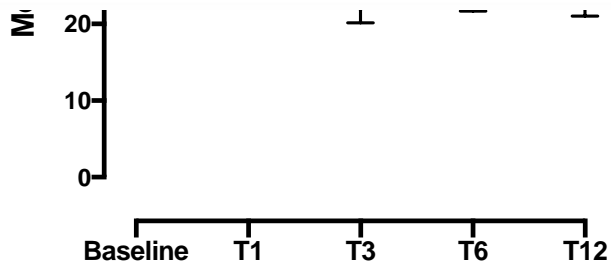
Short Communication

No evidence of compensatory drug use risk behavior among heroin users after receiving take-home naloxone



Jermaine D. Jones *, Aimee Campbell, Verena E. Metz, Sandra D. Comer

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CONCLUSIONS

ADDICTION

RESEARCH REPORT

SSA SOCIETY FOR THE
STUDY OF
ADDICTION

doi:10.1111/add.14510

How competent are people who use opioids at responding to overdoses? Qualitative analyses of actions and decisions taken during overdose emergencies

Joanne Neale^{1,2} , Caral Brown¹, Aimee N. C. Campbell³, Jermaine D. Jones³, Verena E. Metz³ , John Strang^{1*}  & Sandra D. Comer^{3*}

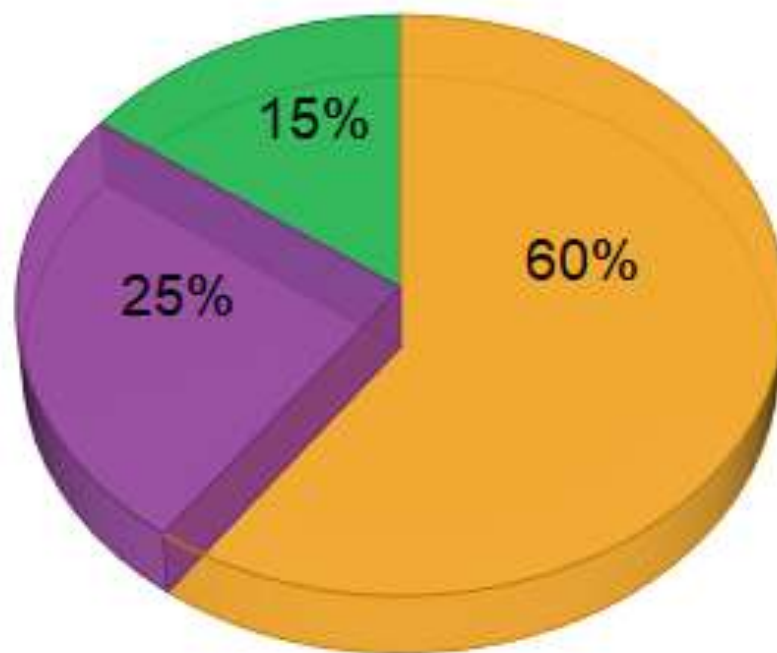
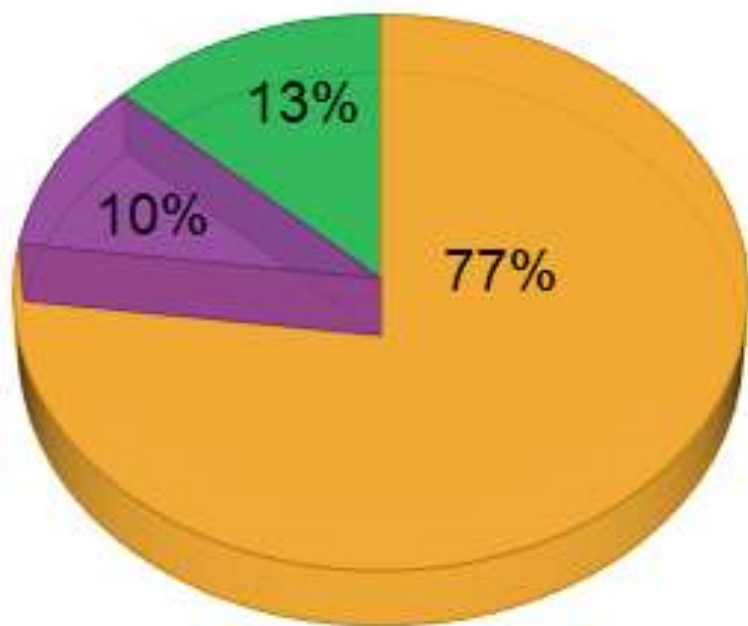
National Addiction Centre, King's College London, London, UK,¹ Centre for Social Research in Health, University of New South Wales, Sydney, Australia² and Division on Substance Use Disorders, Columbia University Medical Center and New York State Psychiatric Institute, New York, USA³

- 5) The period immediately following an overdose may be an opportunity to engage drug users in treatment
- 6) We still need to counsel users about the risks of using alone

Heroin Use Behavior

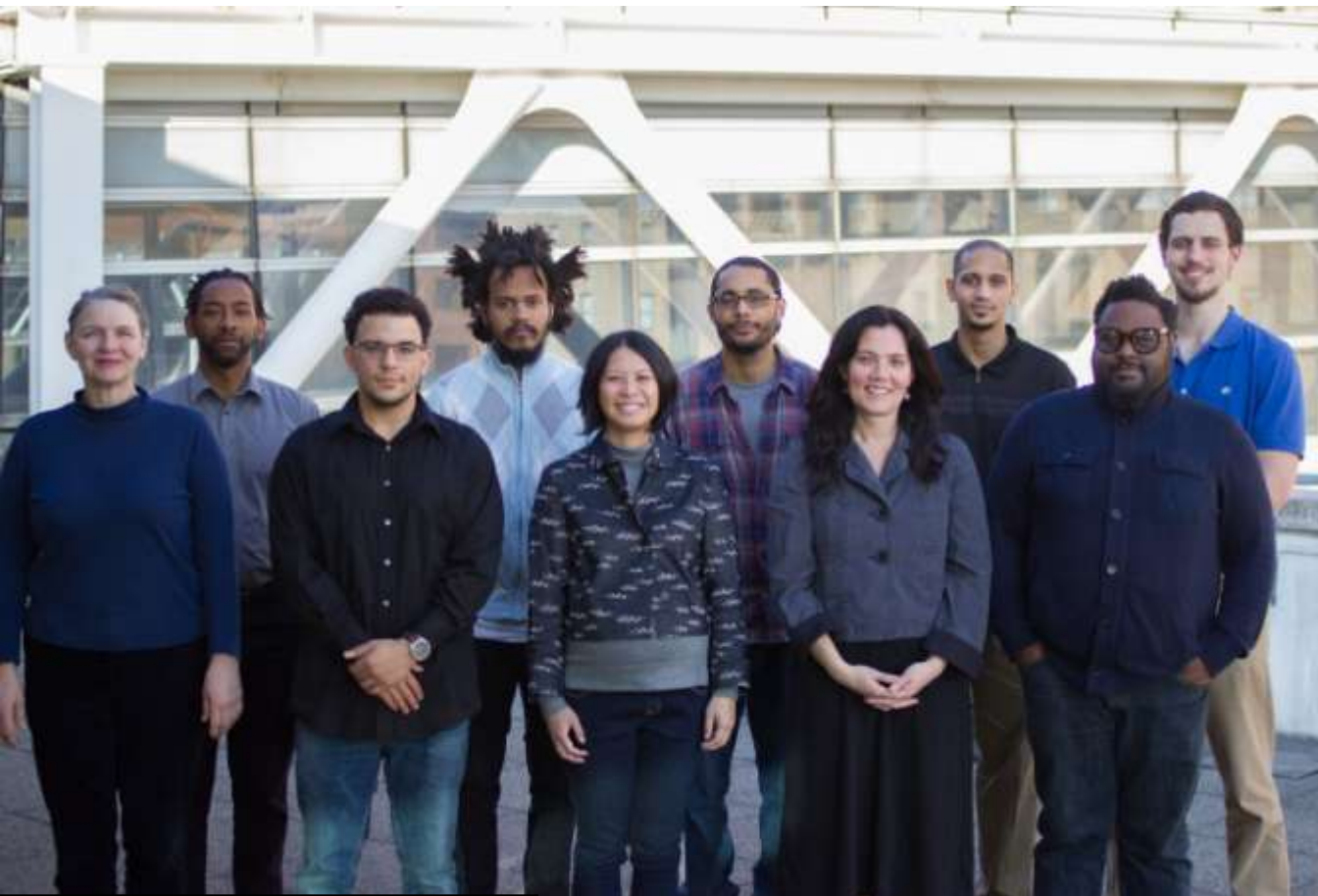
Intravenous Users

Intranasal Users



■ Alone ■ W/Someone ■ Both

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Thank you!

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ONLINE

Google Doodle honors Herbert Kleber, who changed how we view drug addiction

The American psychiatrist saved countless lives in the process.

BY STEVEN MUSIL | SEPTEMBER 30, 2019 7:00 PM PDT

