HARM REDUCTION IN THE ED: THE KGH STORY

May 10-2019

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@361Joules

FACULTY/PRESENTER DISCLOSURE

- **Relationships with financial sponsors**
  - **Research Support:** Kelowna Emergency Physicians Association
  - **Research Support:** KGH Faculty Engagement Funding


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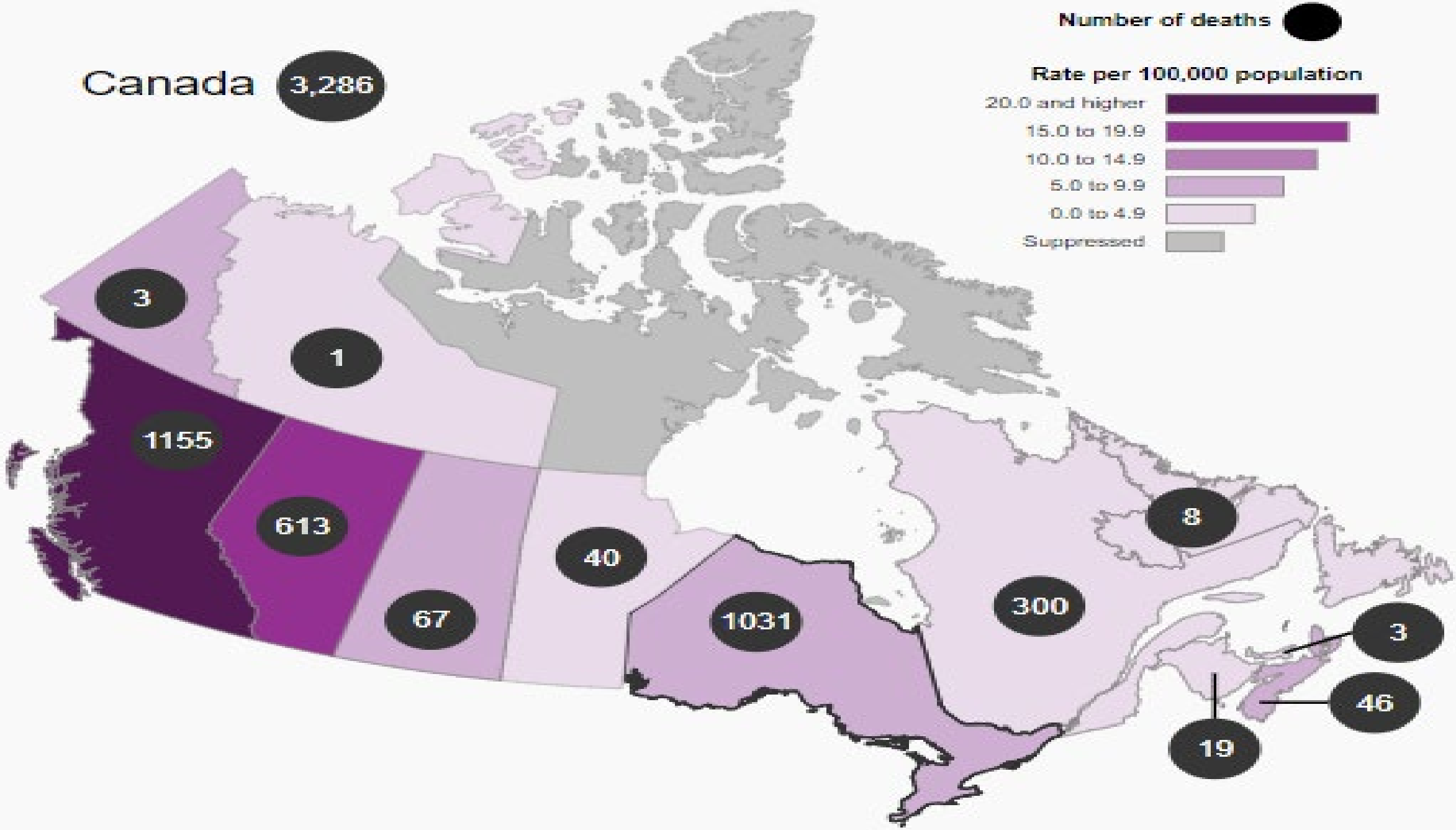

Canada 3,286
Number of deaths
Rate per 100,000 population
20.0 and higher
15.0 to 19.9
10.0 to 14.9
5.0 to 9.9
0.0 to 4.9
Suppressed
3
1
1155
613
67
40
1031
8
300
3
46
19

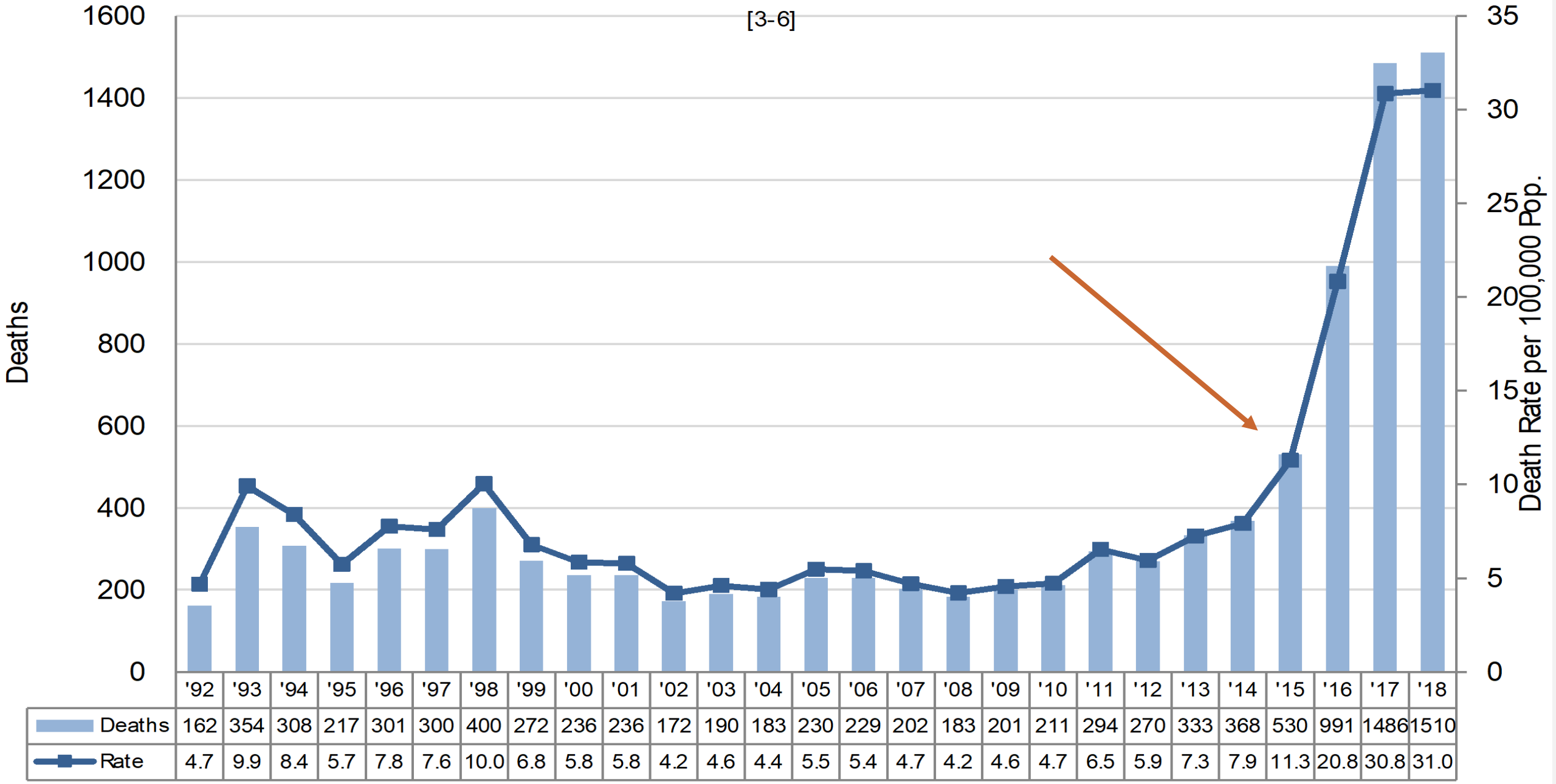
3286+

Canada's Top 10 (2016)

1. Cancer 79084
2. Cardiovascular disease 51396
3. Cerebrovascular disease 13551
4. Accidental injury 12524
5. Respiratory 12293
6. Diabetes 6838
7. Alzheimer's 6521
8. Influenza & pneumonia 6235
9. Suicide 3978
10. Liver disease 3385

Figure 3: Illicit Drug Overdose Deaths and Death Rate per 100,000 Population

[3-6]



	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18
Deaths	162	354	308	217	301	300	400	272	236	236	172	190	183	230	229	202	183	201	211	294	270	333	368	530	991	1486	1510
Rate	4.7	9.9	8.4	5.7	7.8	7.6	10.0	6.8	5.8	5.8	4.2	4.6	4.4	5.5	5.4	4.7	4.2	4.6	4.7	6.5	5.9	7.3	7.9	11.3	20.8	30.8	31.0

Figure 2: Illicit Drug Overdose Deaths including and excluding Fentanyl, 2009-2018

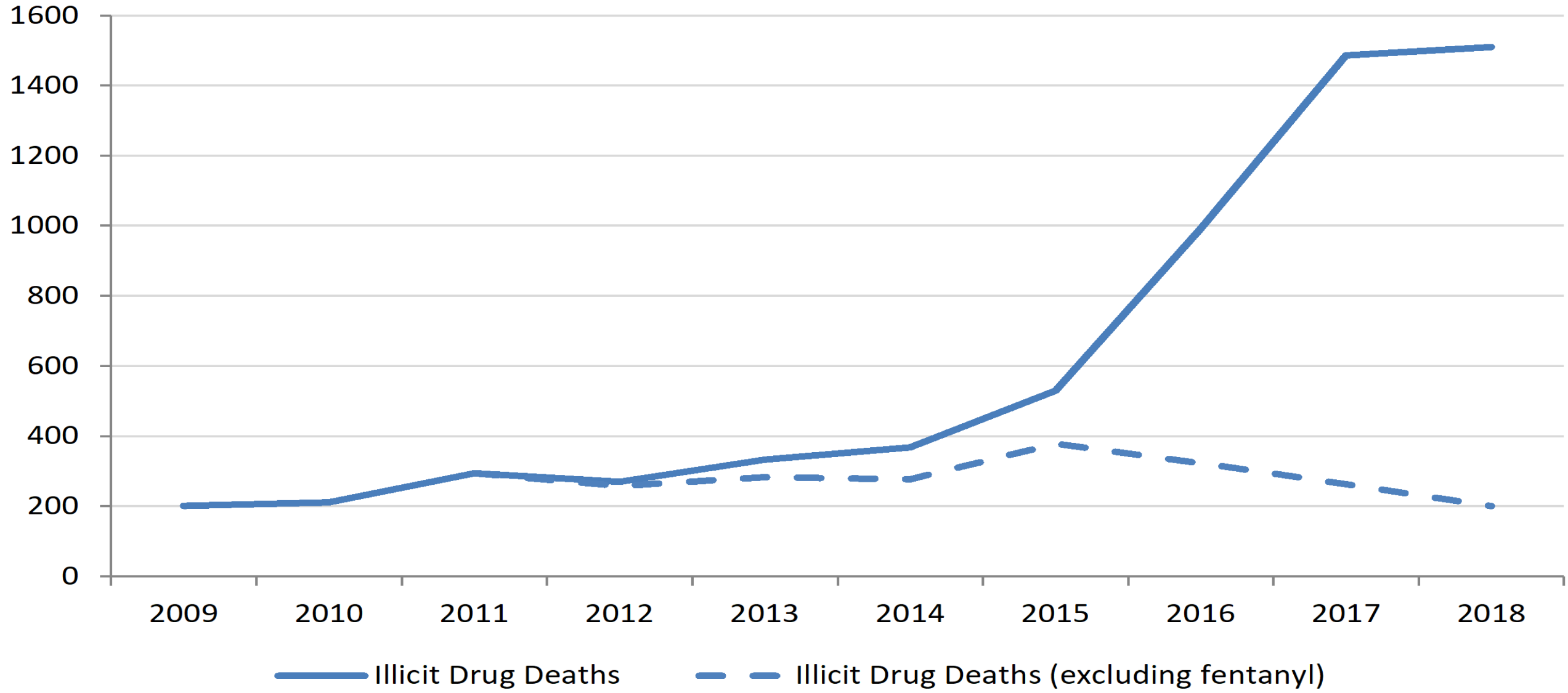
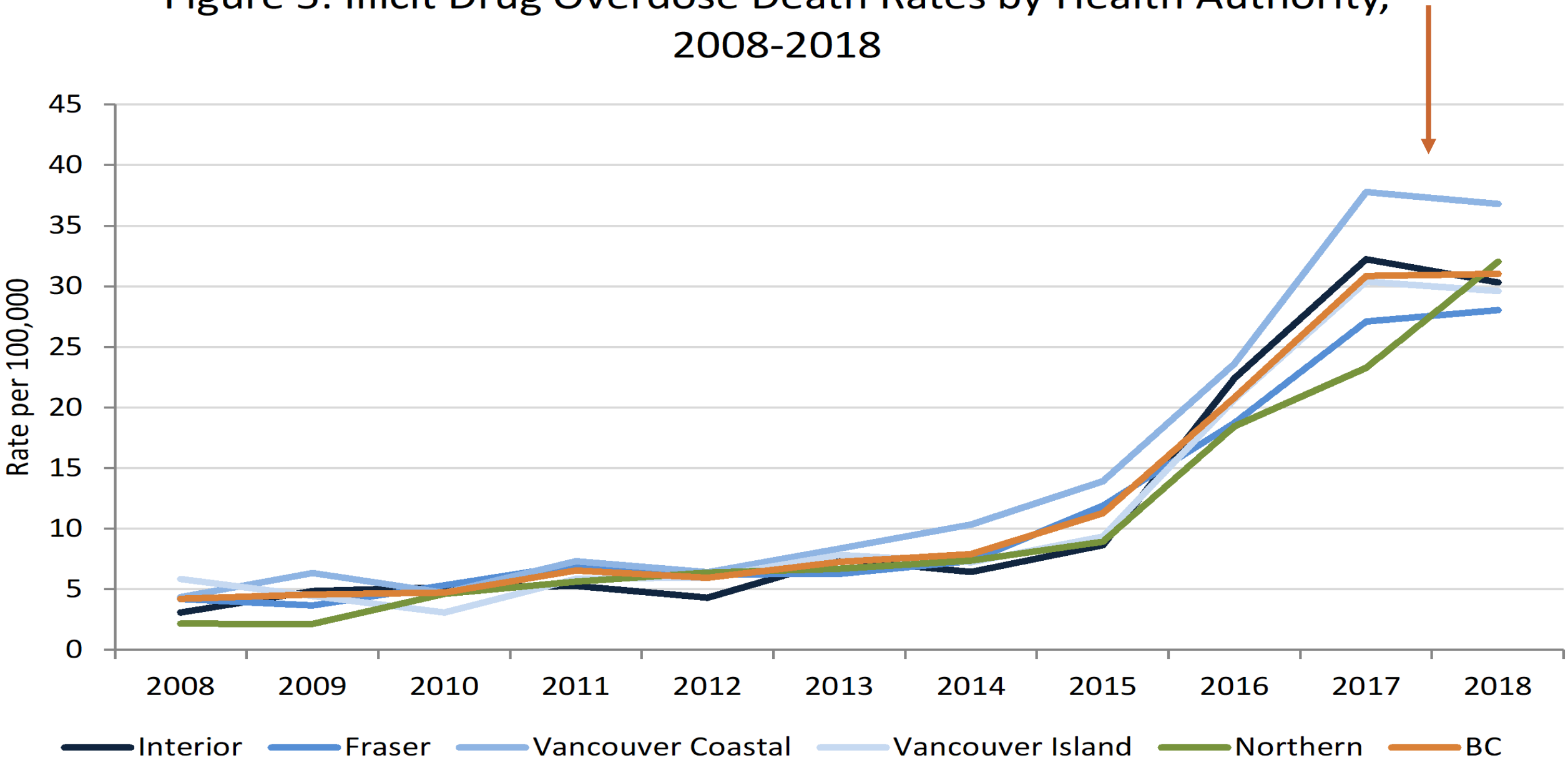


Table 6: Illicit Drug Overdose Deaths by Top Townships of Injury in 2018, 2009-2019* [3,4]

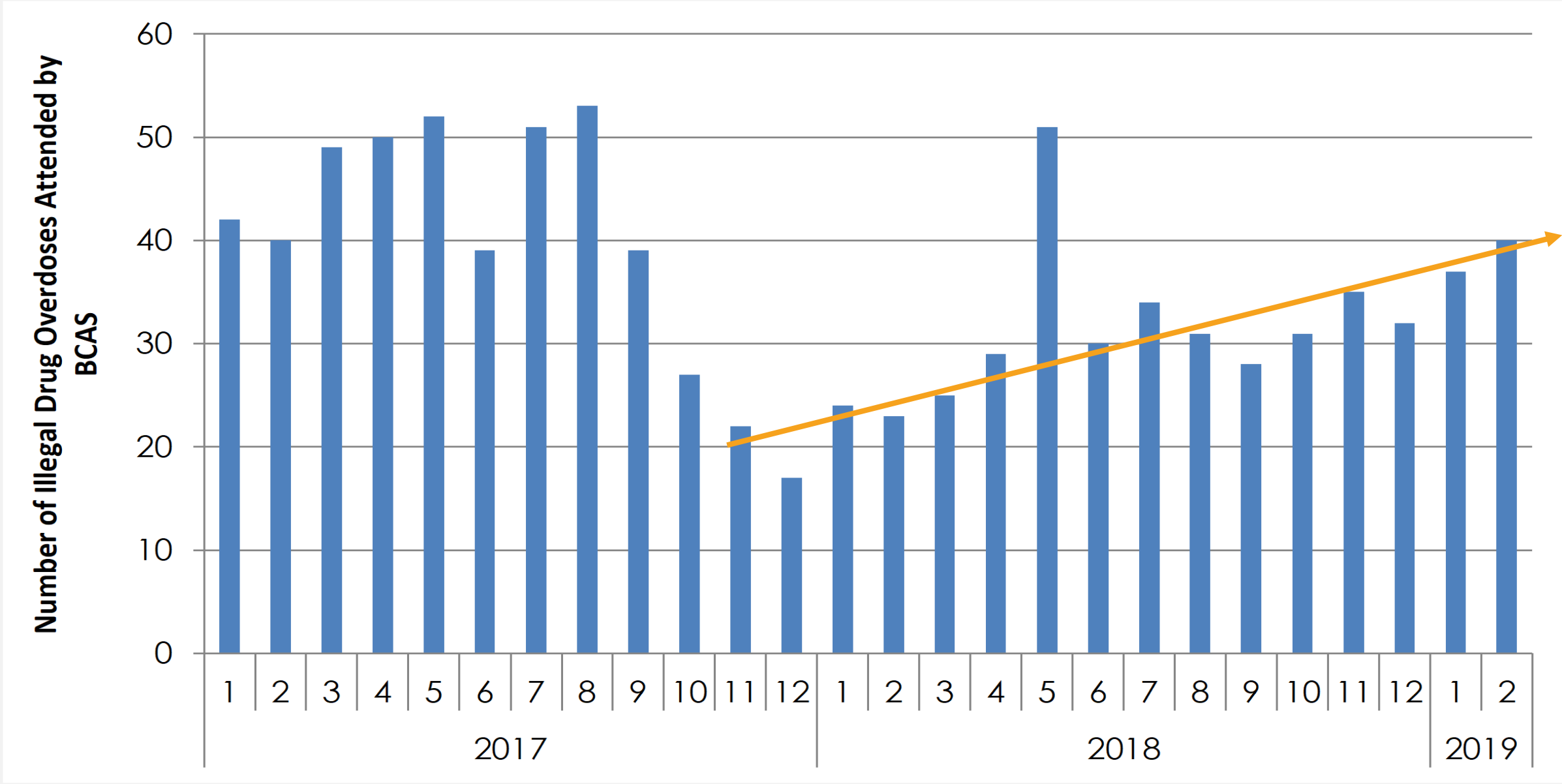
Township	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Vancouver	60	42	69	65	80	101	139	232	376	387	24
Surrey	23	32	42	44	36	44	76	117	179	213	8
Victoria	13	13	17	18	25	20	23	68	93	96	5
Kelowna	5	9	14	8	12	12	20	47	74	55	3
Kamloops	7	10	2	5	8	7	7	44	38	48	2
Burnaby	8	9	10	10	13	11	15	40	44	46	2
Prince George	4	1	6	10	7	10	12	18	24	46	2
Abbotsford	4	10	16	7	10	7	27	40	52	40	2
Chilliwack	2	2	8	8	6	6	10	13	22	35	4
New Westminster	2	6	6	3	5	9	12	10	25	35	1
Nanaimo	6	4	8	6	20	16	18	28	56	34	1
Langley	2	3	10	5	10	10	10	31	36	32	4
Maple Ridge	6	4	4	5	10	14	29	28	33	28	3
Vernon	4	6	7	1	11	6	8	12	23	24	3
Delta	1	2	6	3	4	2	5	10	20	21	1
Other Township	54	58	69	72	76	93	119	253	391	370	25
Total	201	211	294	270	333	368	530	991	1,486	1,510	90

Figure 5: Illicit Drug Overdose Death Rates by Health Authority, 2008-2018



British Columbia Coroners Service Fentanyl-Detected Illicit Drug Overdose Deaths Report March 19, 2019

Figure 2. Number of illegal drug overdoses attended by BC Ambulance Services (BCAS) and transported to Kelowna General Hospital (KGH) (Jan 1, 2017- February 28, 2019)



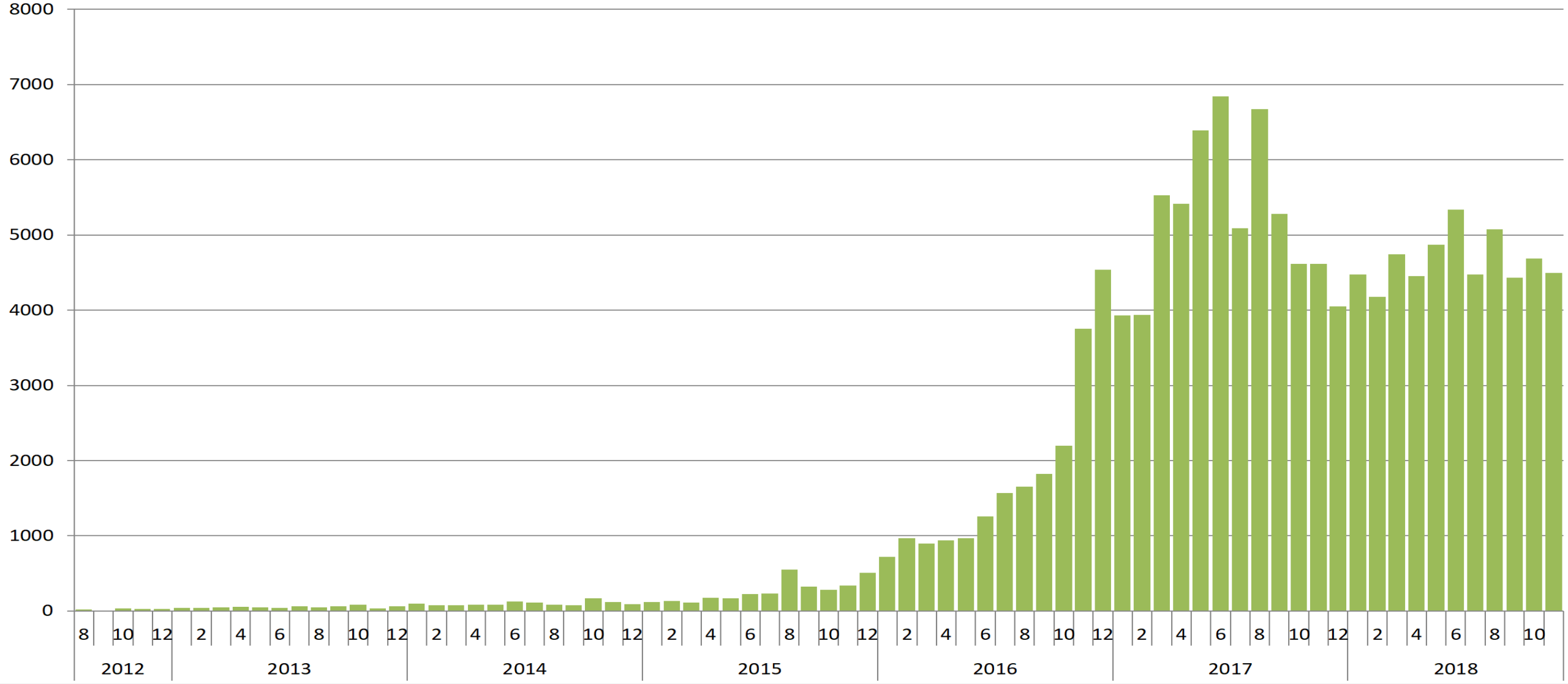
BCCDC April 24, 2019

ED HARM REDUCTION

1. Take-home Naloxone

2. ED Suboxone inductions

THN Kits Distributed per Month through the BC Take Home Naloxone Program, August 2012 to November 2018 (data updated Apr.15th, 2019)



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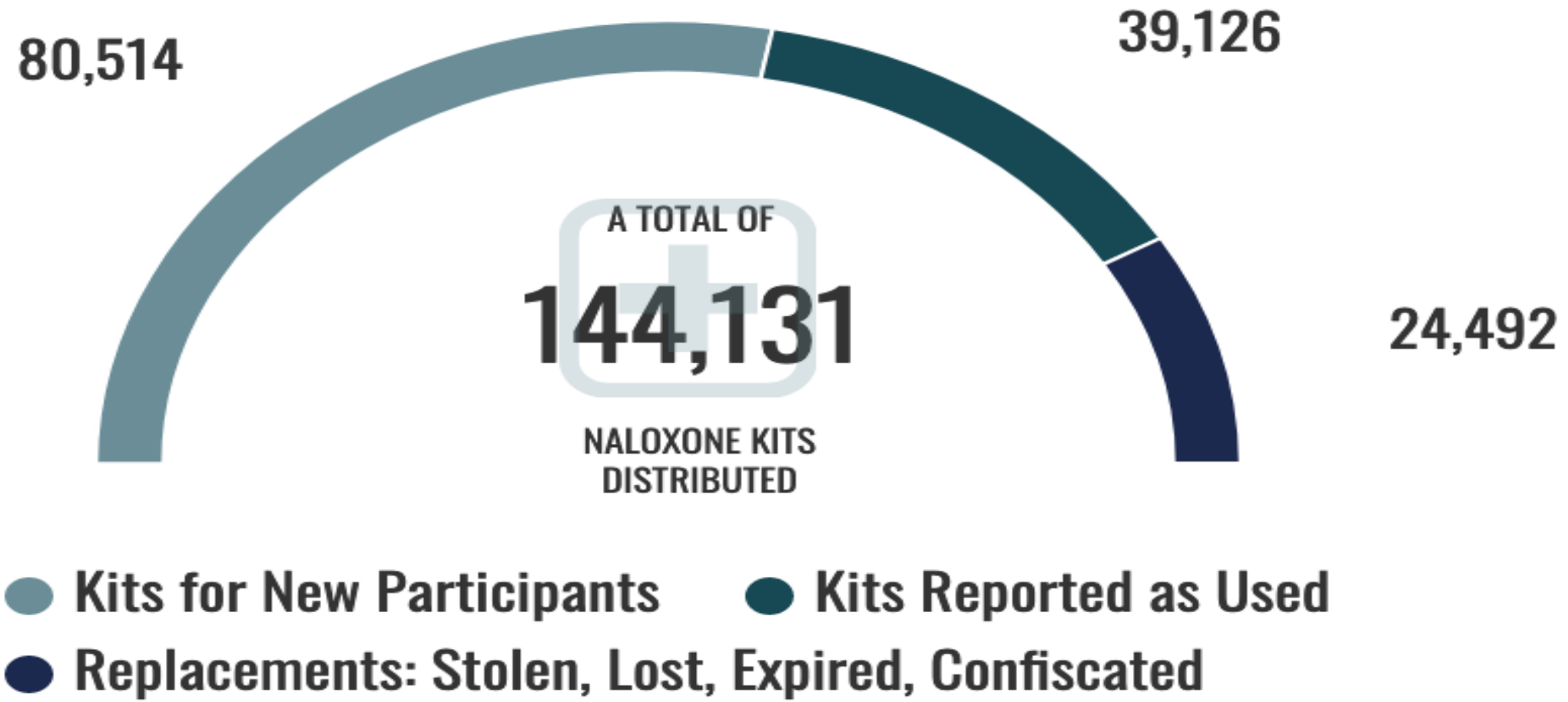
DISTRIBUTION OF KITS



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OAT IN THE ED

Original Investigation

Emergency Department–Initiated Buprenorphine/Naloxone Treatment for Opioid Dependence
A Randomized Clinical Trial

Gail D'Onofrio, MD, MS; Patrick G. O'Connor, MD, MPH; Michael V. Pantalon, PhD; Marek C. Chawarski, PhD; Susan H. Busch, PhD; Patricia H. Owens, MS; Steven L. Bernstein, MD; David A. Fiellin, MD

JAMA. 2015;313(16):1636-1644. doi:10.1001/jama.2015.3474

Research

Original Investigation

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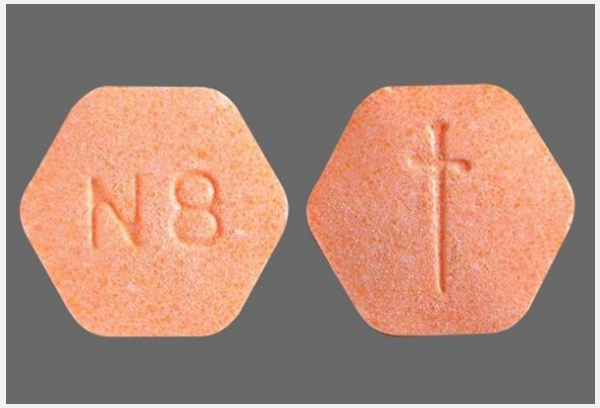
- ↑ Engagement in treatment at 30 days
- ↓ Self-reported illicit opioid use in the prior week
- ↓ Use of inpatient addiction treatment services

BARRIERS

- No experience with Suboxone
- Buy-in from physicians, nursing staff, pharmacy, hospital admin
- No existing link to outpatient OAT

OVERCOMING BARRIERS

- No experience with Suboxone



BRITISH COLUMBIA CENTRE ON SUBSTANCE USE

Networking researchers, educators & care providers

OVERCOMING BARRIERS

- Buy-in from physicians, nursing staff, pharmacy, hospital admin

OVERCOMING BARRIERS

- No existing link to outpatient OAT

Interior Health

ADULT BUPRENORPHINE-NALOXONE INDUCTION, STABILIZATION AND DISCHARGE ORDERS

Kelowna General Hospital

Weight (kg)

Bulleted orders are initiated by default, unless crossed out and initialed by the physician/prescriber. Boxed orders (☐) require physician/prescriber check mark (☑) to be initiated.

Indications: This protocol is intended for adult patients (18 years or older) with opioid use disorder who are able to provide informed consent. Patients must be in moderate to severe opioid withdrawal evidenced by Clinical Opiate Withdrawal (COW) Scale greater than or equal to 16 with last immediate release opioid use greater than or equal to 12 hours ****OR**** last extended/controlled release opioid use greater than or equal to 24 hours.

Contraindications: This protocol should **NOT** be used for patients with an allergy to buprenorphine or naloxone, severe liver dysfunction (liver enzymes greater than 3 times the upper limit of normal), severe respiratory distress, acute alcohol intoxication or withdrawal, decreased level of consciousness, pregnancy, current methadone or prescribed long acting opioid use.

- **Physician only to call** Rapid Access to Consultative Expertise (RACE) Clinic. 1-877-696-2131 Monday to Friday 0800-1700

PRE-INDUCTION PHASE

1. **ALLERGIES:** See Allergy/ADR record
2. **CODE STATUS/MOST**
   - Refer to completed Medical Orders for Scope of Treatment (MOST) #829641
3. **CONSULTS**
   - In-Reach Consult for Substance Use Connection Clinician
   - ☐ Other _____
4. **MONITORING**
   - COW (Form #855052) Scale prior to induction and then follow COW Scale monitoring parameters outlined in induction and stabilization phases
   - Vital signs (T, HR, RR, BP, SpO_2) with COW Scale and PRN until stabilization phase complete. Then follow hospital vital sign guidelines
5. **LABORATORY AND DIAGNOSTICS**
   - Urine drug screen including fentaNYL
   - CBC, lytes, Cr, BUN
   - ECG
   - ALT, AST, ALK Phos, INR, Total Bili, Albumin
   - Pregnancy test BHCG (women of childbearing age)
   - Urine for Chlamydia and Gonorrhea (GC NAAT)
   - Syphilis serology
   - Ethanol level
   - HIV serology
   - Hepatitis A immune status (total Ab), Hepatitis B surface Ab and Ag, Hepatitis Core antibody and Hepatitis C Ab

Date (dd/mm/yyyy)	Time	Prescriber's Signature	Printed Name or College ID#
/ /			

PROOF

Interior Health

ADULT BUPRENORPHINE-NALOXONE INDUCTION, STABILIZATION AND DISCHARGE ORDERS

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PHASE 1 – INDUCTION

If induction already completed in Emergency Department proceed to PHASE 2 – STABILIZATION

MEDICATIONS

Initial Dose:

- Once COW Scale greater than or equal to 16 and at least 12 hours since last immediate release opioid use ****OR**** 24 hours since last extended/controlled release opioid: give **buprenorphine-naloxone 4 mg/1 mg sublingual × 1 dose**
- Reassess patient using COW scale 60 minutes after initial buprenorphine-naloxone dose and follow chart below for subsequent doses.
- If COW Scale increases after initial dose this may indicate precipitated withdrawal. Stop, do not give additional medications and contact MRP for further instructions.

COW Scale less than or equal to 6	• No further buprenorphine-naloxone doses • Proceed to **Induction Completion** below
COW Scale greater than 6	**Step One:** • Give **buprenorphine-naloxone 2 mg/0.5 mg sublingual × 1 dose** • Repeat COW Scale in 1 hour then proceed to step 2 **Step Two:** If COW scale greater than 6 • Repeat **buprenorphine-naloxone 2 mg/0.5 mg sublingual every 1 hour** until: ○ COW Scale is less than 6 ****OR**** Maximum day 1 dose of buprenorphine-naloxone 12 mg/3 mg is reached • Once Cow Scale is less than 6 or maximum day 1 dose of buprenorphine-naloxone 12 mg/3 mg is reached proceed to **Induction Completion** below
Induction Completion	• If patient admitted to hospital proceed to PHASE 2 – STABILIZATION. • If patient discharged following PHASE 1 – INDUCTION. Proceed and Complete Phase 3 – DISCHARGE • Place cumulative dose on MAR in available • Time _____ Cumulative total dose: _____

Date (dd/mm/yyyy)	Time	Prescriber's Signature	Printed Name or College ID#
/ /			

ED INDUCTIONS: WHO?

Age ≥ 18

+

Moderate to severe withdrawal

+

Last opioid use > 12 hours prior

ED INDUCTIONS: WHO NOT?

Allergies

Severe liver dysfunction

Resp distress

Pregnancy

EtOH Intoxication

ALOC

Long acting opioids

(e.g. methadone)

CLINICAL OPIOID WITHDRAWAL SCALE

CLINICAL OPIOID WITHDRAWAL SCALE (COWS)

Resting pulse rate **0–4**	0 pulse rate 80 or below 1 pulse rate 81 to 100 2 pulse rate 101 to 120 4 pulse rate greater than 120
Sweating **0–4** Over past half-hour not accounted for by room temperature or patient activity	0 no report of chills or flushing 1 subjective report of chills or flushing 2 flushed or observable moistness on face 3 beads of sweat on brow or face 4 sweat streaming off face
Restlessness **0–5** Observation during assessment	0 able to sit still 1 reports difficulty sitting still, but is able to do so 3 frequent shifting or extraneous movements of legs / arms 5 unable to sit still for more than a few seconds
Pupil size **0–5**	0 pupils pinned or normal size for room light 1 pupils possibly larger than normal for room light 2 pupils moderately dilated 5 pupils so dilated that only the rim of the iris is visible
Bone or joint aches **0–4** If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored	0 not present 1 mild diffuse discomfort 2 patient reports severe diffuse aching of joints / muscles 4 patient is rubbing joints or muscles and is unable to sit still because of discomfort
Runny nose or tearing **0–4** Not accounted for by cold symptoms or allergies	0 not present 1 nasal stuffiness or unusually moist eyes 2 nose running or tearing 4 nose constantly running or tears streaming down cheeks
GI upset **0–5** Over last half-hour	0 no GI symptoms 1 stomach cramps 2 nausea or loose stool 3 vomiting or diarrhea 5 multiple episodes of diarrhea or vomiting
Tremor **0–4** Observation of outstretched hands	0 no tremor 1 tremor can be felt, but not observed 2 slight tremor observable 4 gross tremor or muscle twitching
Yawning **0–4** Observation during assessment	0 no yawning 1 yawning once or twice during assessment 2 yawning three or more times during assessment 4 yawning several times / minute
Anxiety or irritability **0–4**	0 none 1 patient reports increasing irritability or anxiousness 2 patient obviously irritable or anxious 4 patient so irritable or anxious that participation in the assessment is difficult
Gooseflesh skin **0–5**	0 skin is smooth 3 piloerrection of skin can be felt or hairs standing up on arms 5 prominent piloerrection

Reproduced from: Wesson DR, Ling W. The Clinical Opiate Withdrawal Scale (COWS). J Psychoactive Drugs 2003; 35:253.

ED INDUCTIONS: SUBOXONE DOSING

4mg SL

then...

2mg Q1h PRN

END GAME

COWS ≤ 6

Or

12mg

AFTER THE INDUCTION

Referral to OAT clinic

Suboxone Rx

Take-home naloxone kit

PRESCRIBING SUBOXONE

Daily dose = total induction dose

“Daily witnessed ingestion”

Duplicate pad

TOWARD ED INDUCTIONS: KEY STEPS

1. Identify local barriers
2. Identify/cultivate local champions
3. Educate
4. Build links
5. Beg, borrow, steal

THE FUTURE

- KEDSS
- Home inductions - AKA “self starts”

QUESTIONS