

RADARS[®]
S Y S T E M 2019

13TH ANNUAL SCIENTIFIC MEETING

Wednesday, May 15, 2019
International Pre-Symposium

**The Shifting Landscape of Prescription Drug Abuse:
The Canadian Perspective**

RADARS International Pre-Symposium

- Housekeeping
- RADARS innovations at the annual meeting
 - RADARS annual report demonstration
 - RADARS NMURx Express topic crowdsourcing

Agenda

12:00 pm–1:00 pm	Registration
1:00 pm–1:45 pm	<p>Canada and the Global Mosaic: How Does Prescription Drug Abuse Compare? Janetta L. Iwanicki, MD Scientific Director of Research and Surveillance, Rocky Mountain Poison & Drug Center, Denver Health and Hospital Authority</p>
1:45 pm–2:15 pm	<p>Canadian Approach to Prescription Opioid Risk Management Andrew Slot, PhD Manager, Marketed Health Products Directorate, Health Canada</p>
2:15 pm–2:45 pm	<p>Cannabis and Opioids: A Cautionary Tale of Cannabis Policies on the Opioid Epidemic Rosalie Liccardo Pacula, PhD Director, BING Center for Health Economics; Co-Director, Drug Policy Research Center; Senior Economist; Professor, Pardee RAND Graduate School; RAND Corporation</p>
2:45 pm–3:15 pm	Break

Agenda

3:15 pm–4:30 pm

Comparing Canada and the United States: The RADARS® System

Codeine in Canada – Don't Forget Weak Opioids...

Beth Sproule, RPh, BScPhm, PharmD

Centre for Addiction and Mental Health and Leslie Dan Faculty of Pharmacy, University of Toronto

Emerging Changes in Opioid Diversion in Canada and the United States

Mance E. Buttram, PhD

Associate Director, Center for Applied Research on Substance Use and Health Disparities,
Nova Southeastern University

Steven P. Kurtz, PhD

Professor and Director, Center for Applied Research on Substance Use and Health Disparities,
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Who's Winning? Opioid Abuse Patterns in the United States and Canada

Theodore J. Cicero, PhD

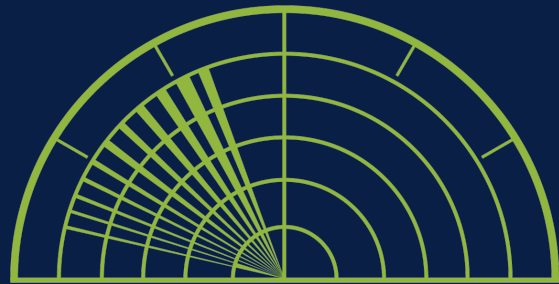
John P. Feighner Professor of Psychiatry, Department of Psychiatry,
Washington University in St. Louis School of Medicine

4:30 pm–5:00 pm

Panel Discussion and Summary

Richard C. Dart, MD, PhD (Moderator)

Executive Director, RADARS® System, Denver Health and Hospital Authority
President, Canadian Consumer Product and Pharmaceutical Safety Inc.



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**Canada and the Global Mosaic:
How Does Prescription Drug Use Compare?**

Janetta L. Iwanicki, MD

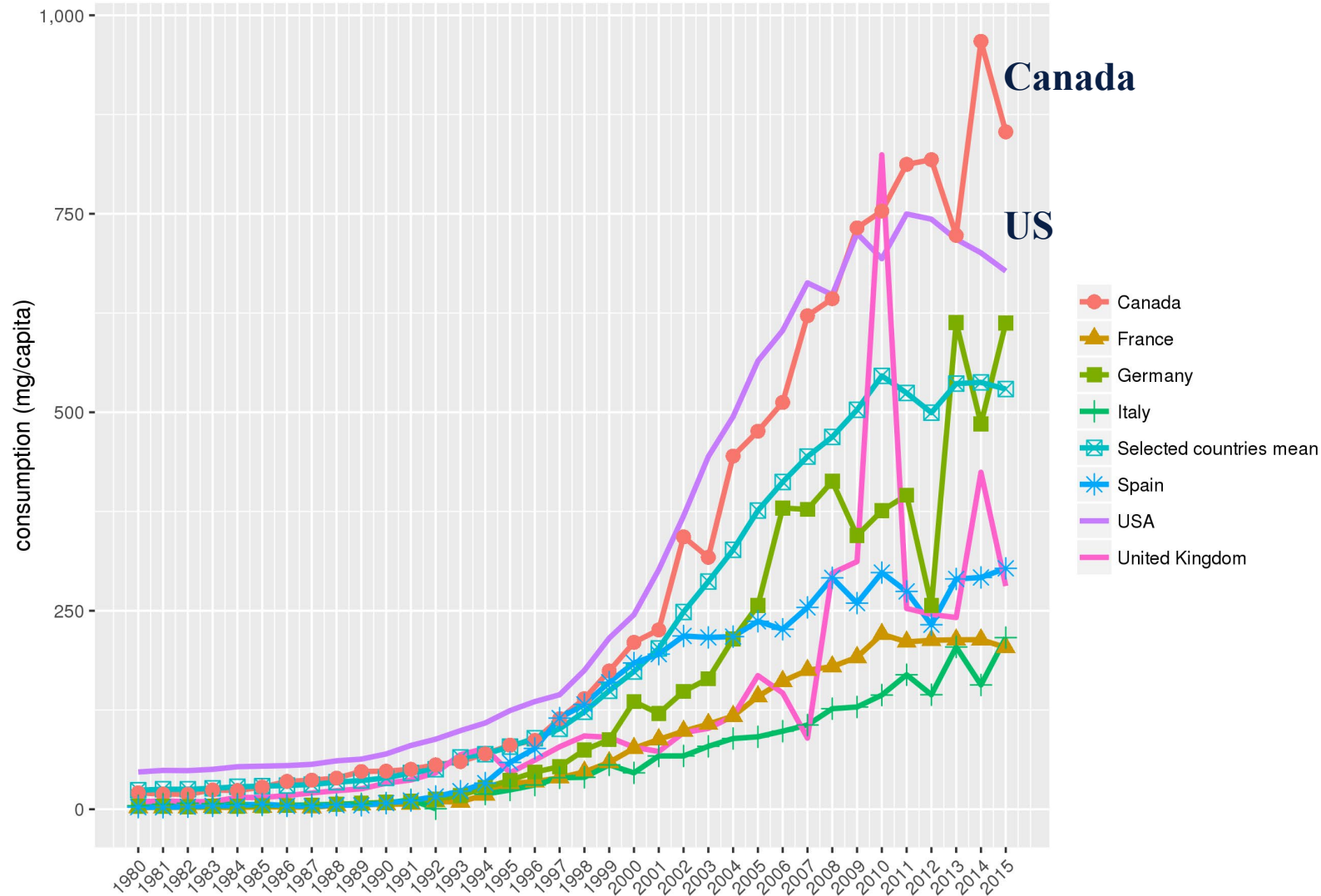
Scientific Director of Research and Surveillance

Rocky Mountain Poison and Drug Center

The Global Mosaic: Can We Compare Apples and Oranges?

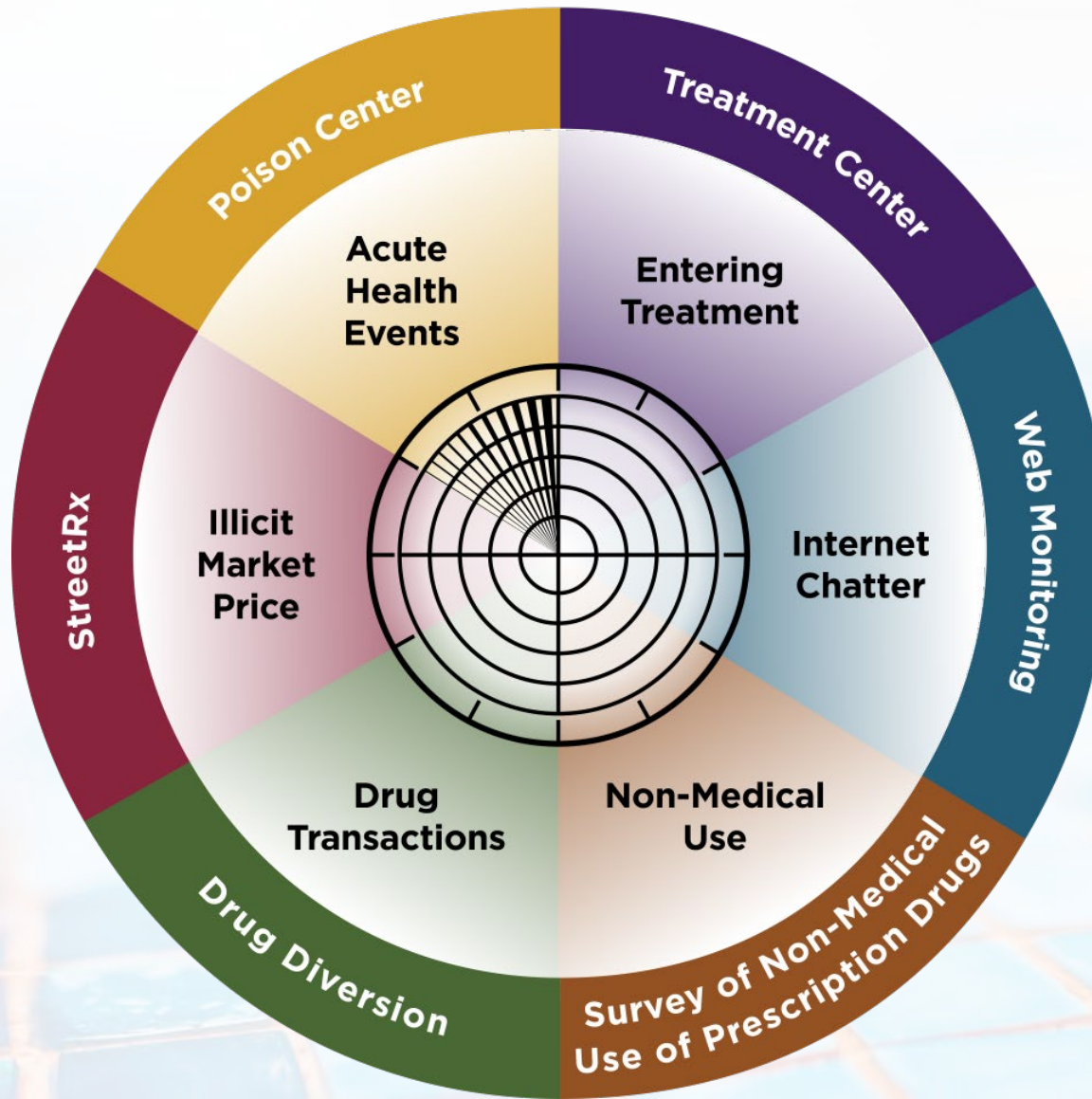
- Prescription medications vary widely across countries
 - Prescribing patterns
 - Medication availability
 - Cultural and social trends
- Each country measures the impacts of nonmedical use differently
 - Nationwide surveys
 - Nationwide databases
- How can we transition to comparing apples to apples?

WHO: Total Opioid Consumption (Morphine Equivalence Mg/Capita), 1980-2015



Sources: International Narcotics Control Board; World Health Organization population data
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2018

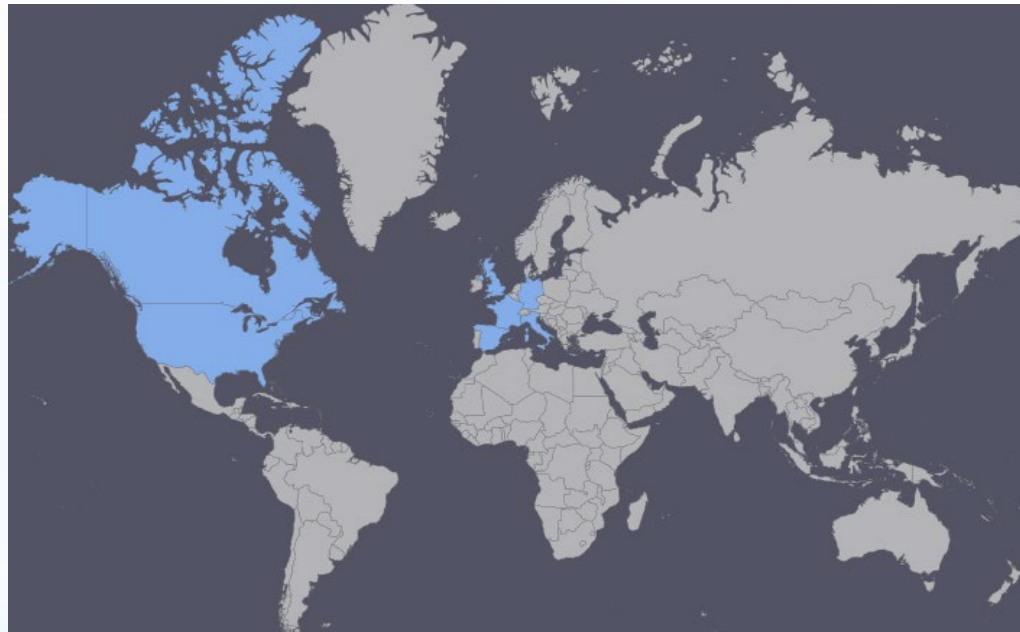
RADARS Global Mosaic



Survey of Non-Medical Use of Rx Drugs (NMURx) Coverage

- UK: 3Q14
- Singapore: 3Q15
- US, Canada: 3Q16
- France, Italy: 2Q17
- Germany, Spain: 4Q17

Methodology optimization projects in 2018



Survey of Non-Medical Use of Prescription Drugs (NMURx)

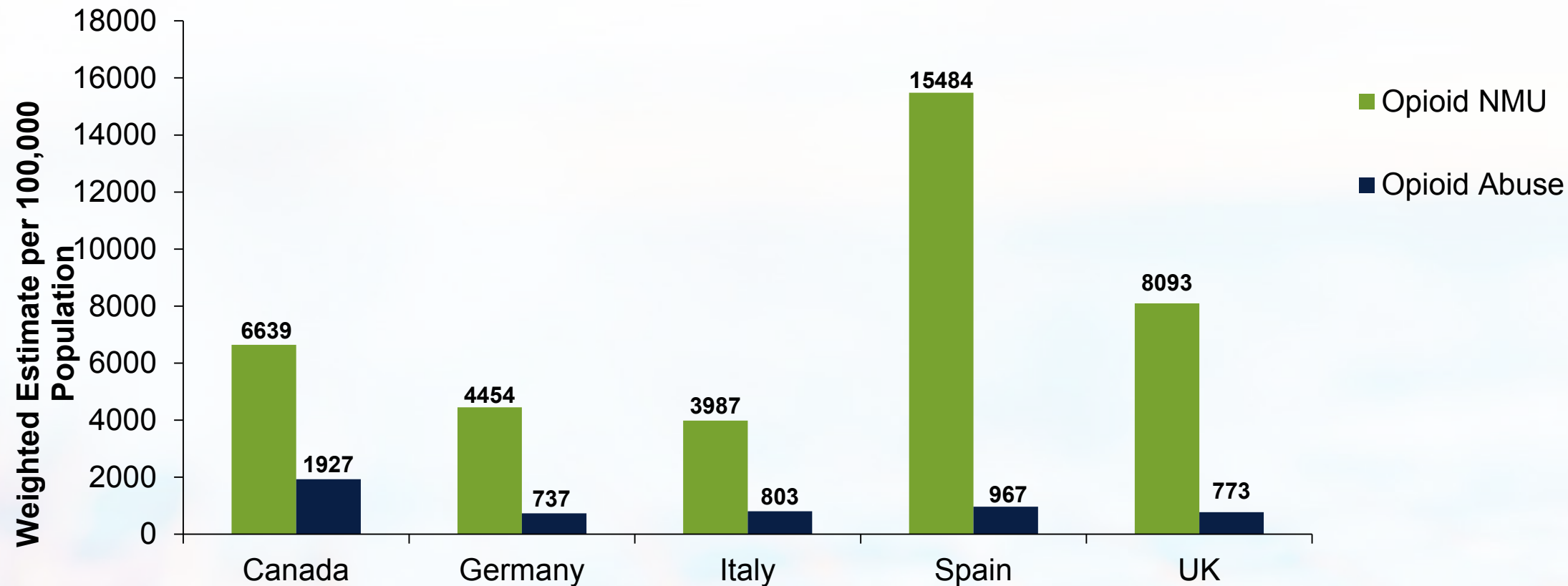
- An online, cross-sectional survey that assesses prescription and illicit drug use in the general adult population
- 10,000 - 30,000 unique individuals twice annually
- Same survey
 - Canada
 - United Kingdom
 - Germany
 - France
 - Spain
 - Italy

The Global Mosaic of Nonmedical Use: 10,000 foot view

- Survey of Nonmedical Use of Prescription Drugs
 - Standardized survey in multiple countries
 - Allows direct cross-country comparisons
 - Each country has a “fingerprint” of patterns of nonmedical use
- Prevalence by class of drug
- Gives an initial idea of what the country-by-country trends are

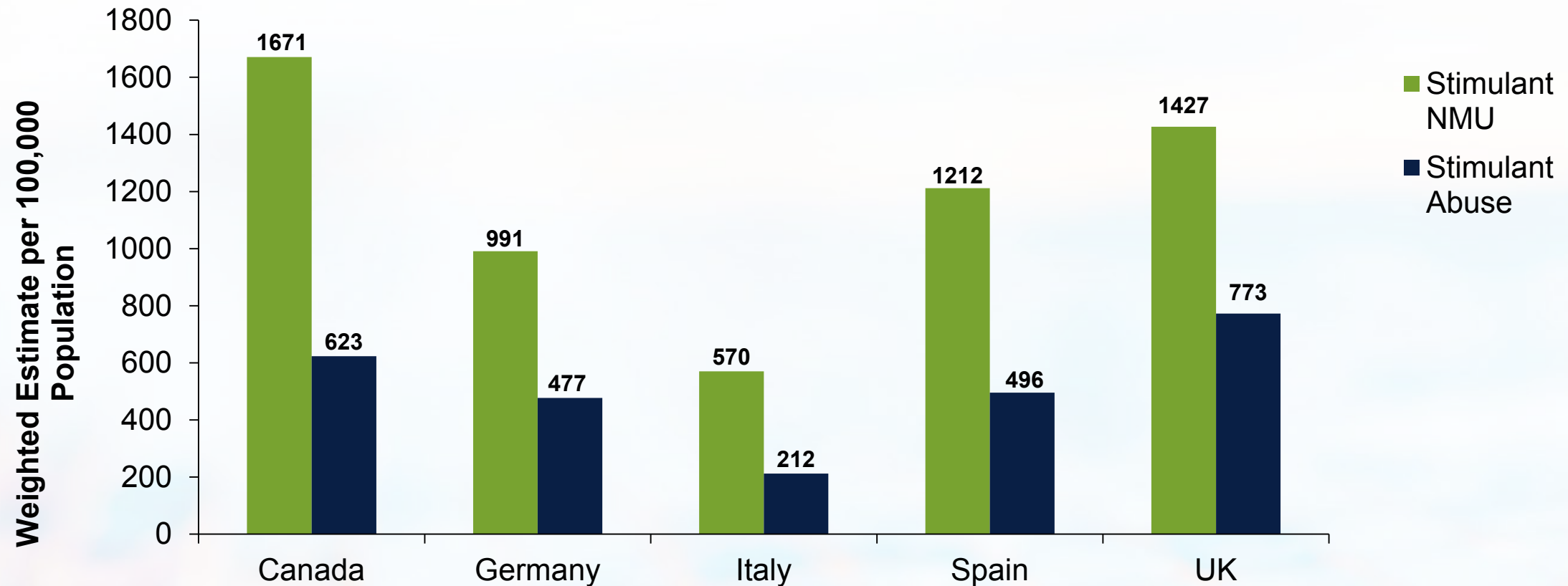
The Global Mosaic of Nonmedical Use: 10,000 foot view

NMURx 2018 Prescription Opioids



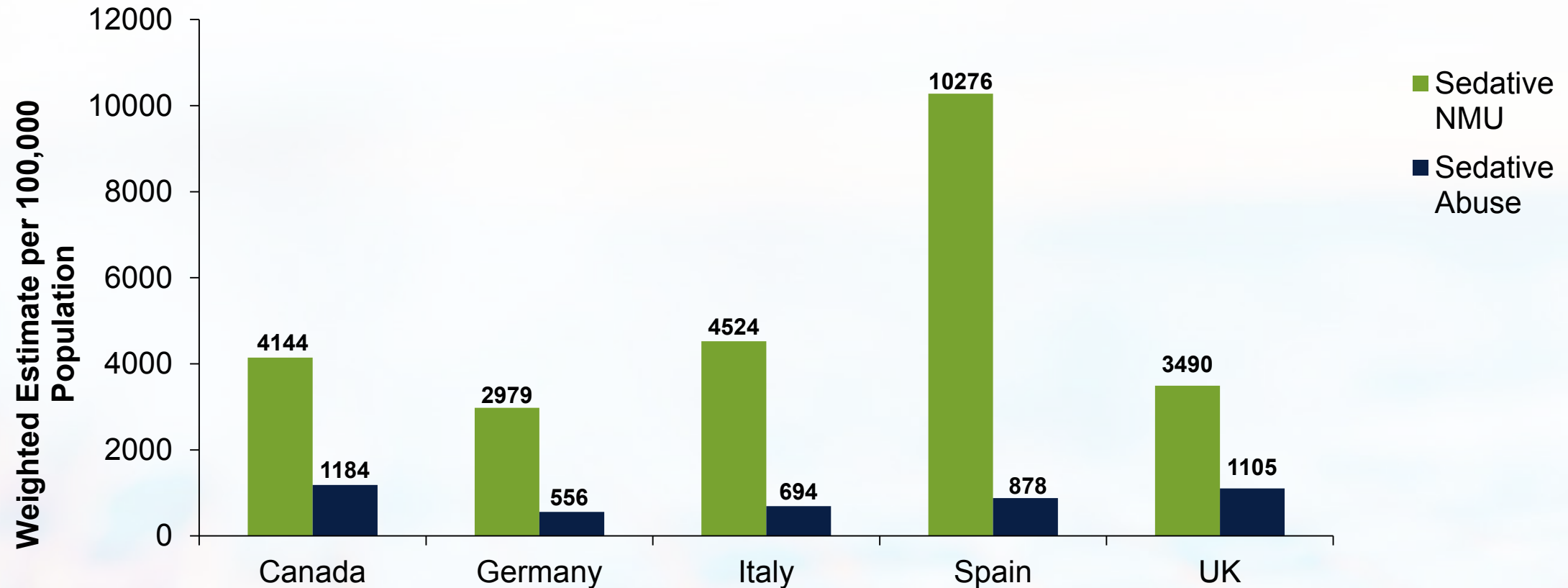
The Global Mosaic of Nonmedical Use: 10,000 foot view

NMURx 2018 Prescription Stimulants



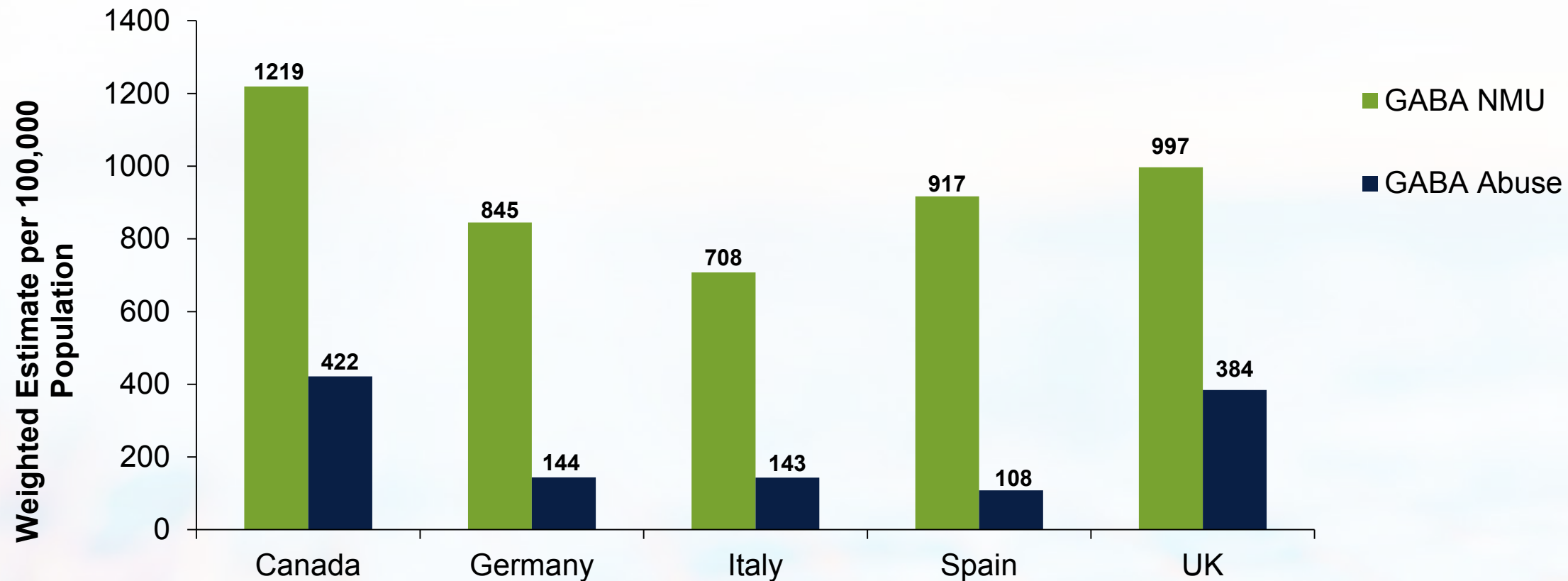
The Global Mosaic of Nonmedical Use: 10,000 foot view

NMURx 2018 Sedatives



The Global Mosaic of Nonmedical Use: 10,000 foot view

NMURx 2018 GABA Drugs



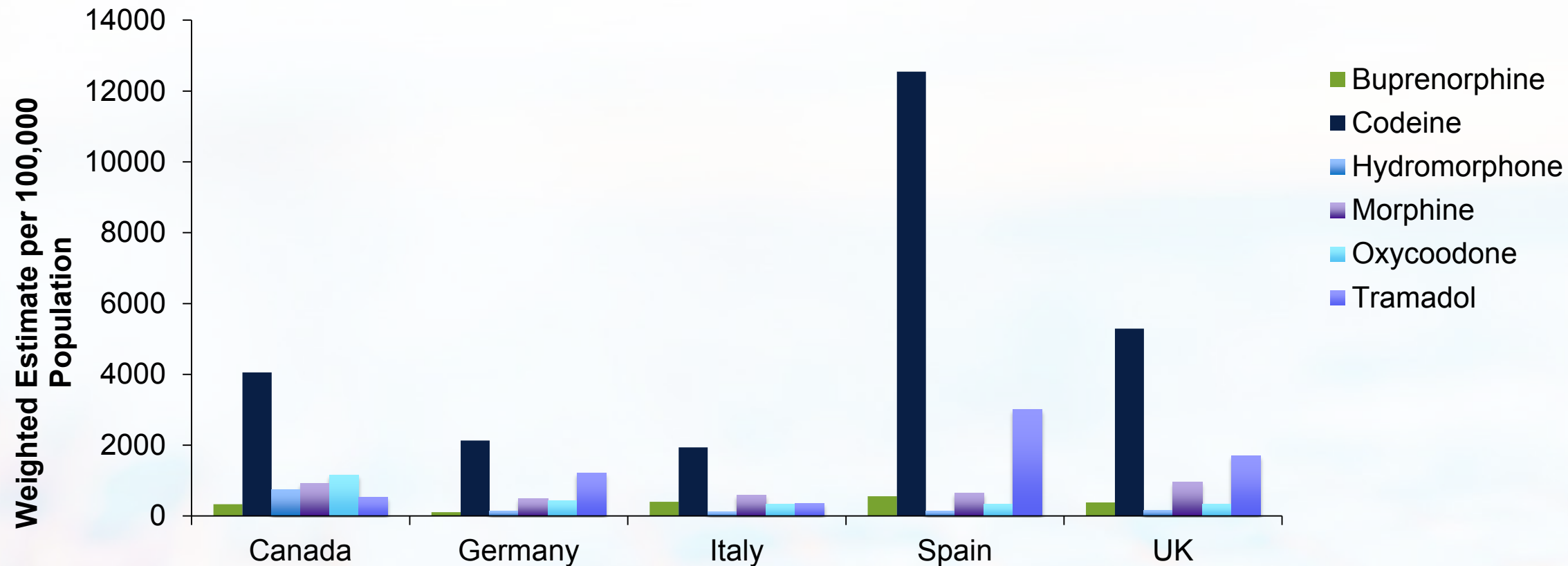
The Global Mosaic of Nonmedical Use: Zooming In

- Can zoom in within NMURx data for more detail:
 - By product
 - By geography
 - By behavior

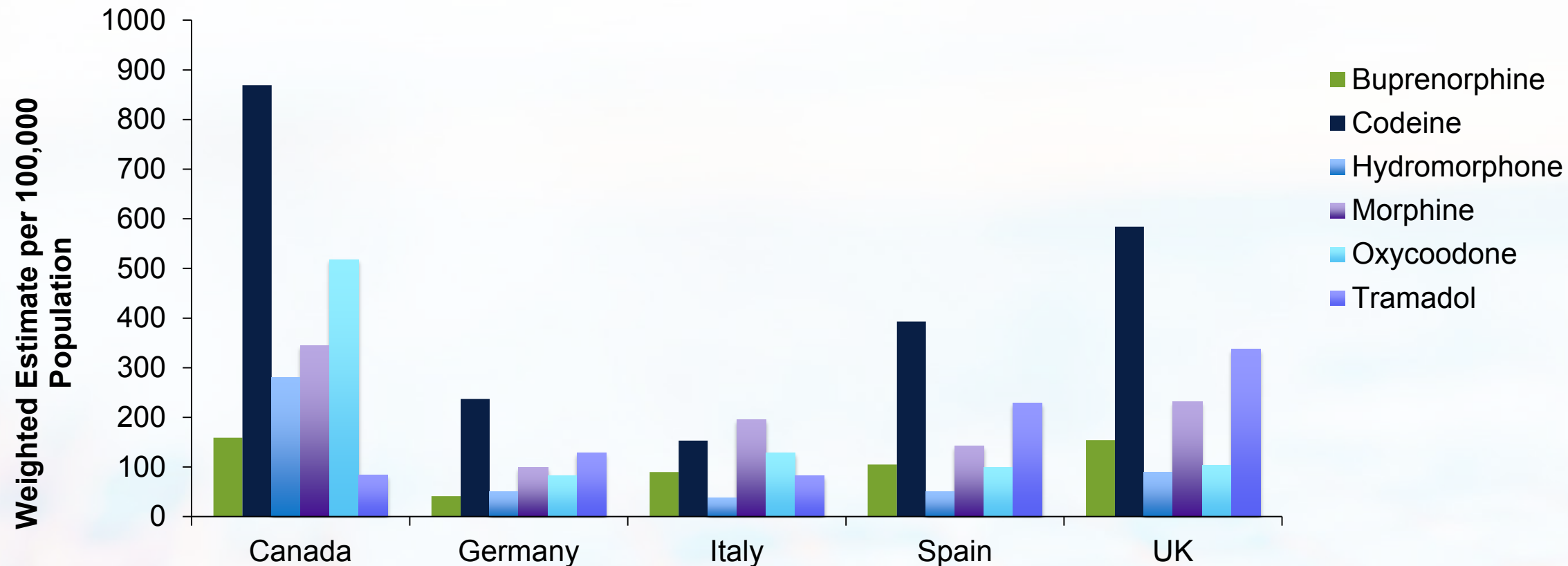
- Focusing on opioid APIs by country

The Global Mosaic of Nonmedical Use: Zooming In

NMURx 2018 Opioid Nonmedical Use by APIs



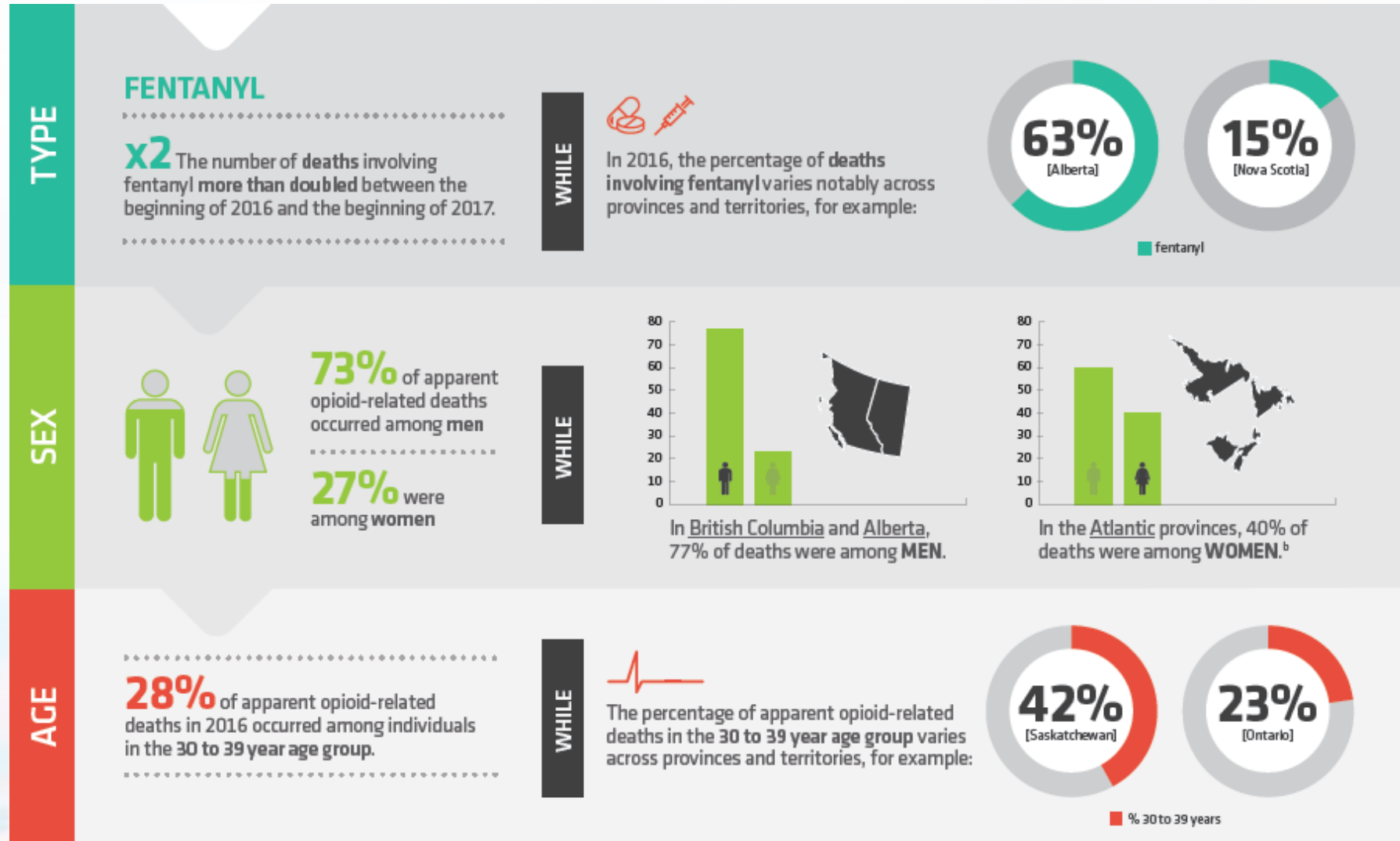
The Global Mosaic of Nonmedical Use: Zooming In NMURx 2018 Opioid Abuse by APIs



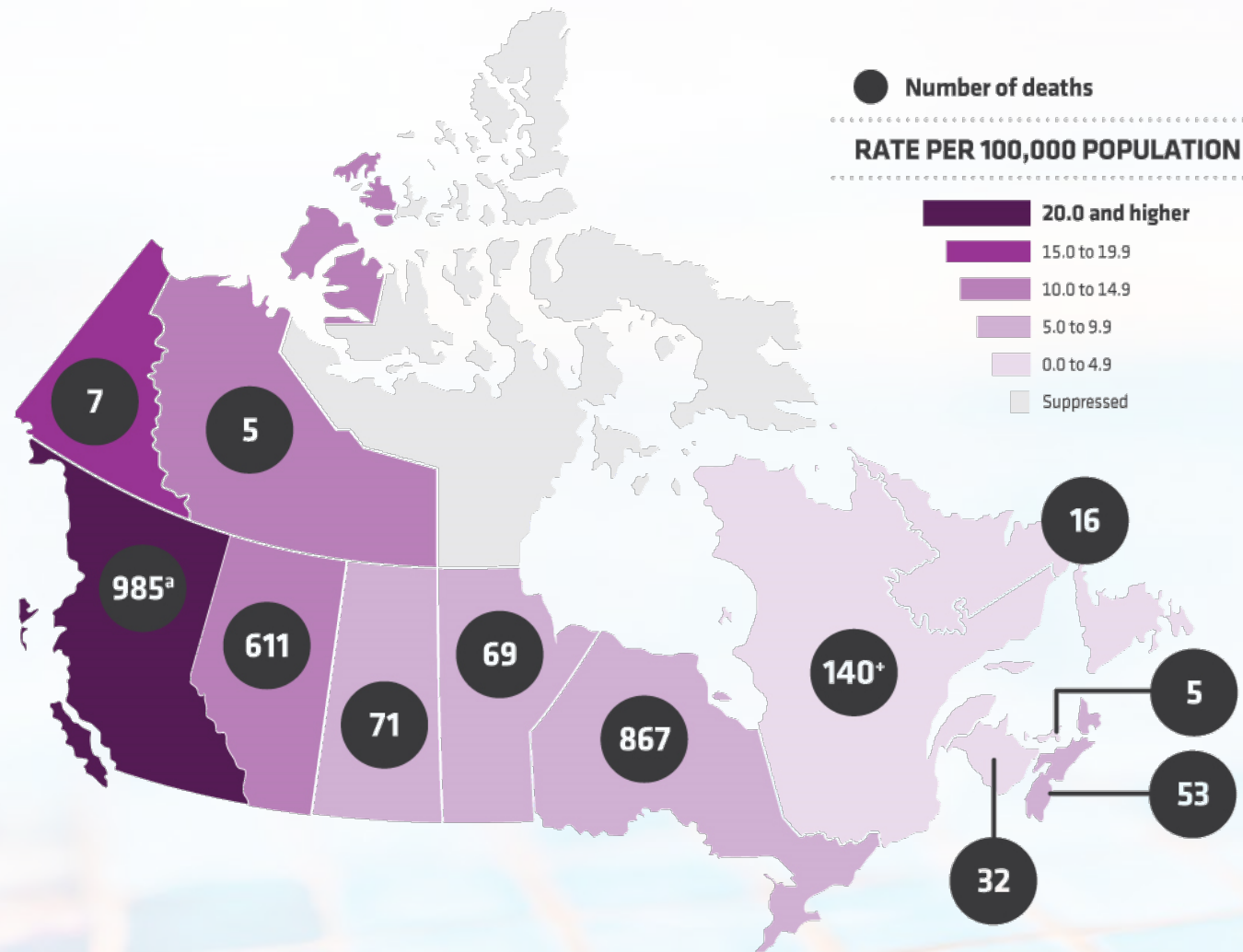
The Global Mosaic of Nonmedical Use: Zooming In by Country

- Detailed data within each country provides more clear patterns of use and opportunities for intervention
- Canada as a case study in prescription drug misuse beyond the US
- Presentations later today will include:
 - Canadian NMURx data with a focus on codeine
 - Canadian Drug Diversion data
 - Canadian Opioid Dependence Treatment Program data

Opioid Consumption in Canada



Opioid-Associated Mortality in Canada

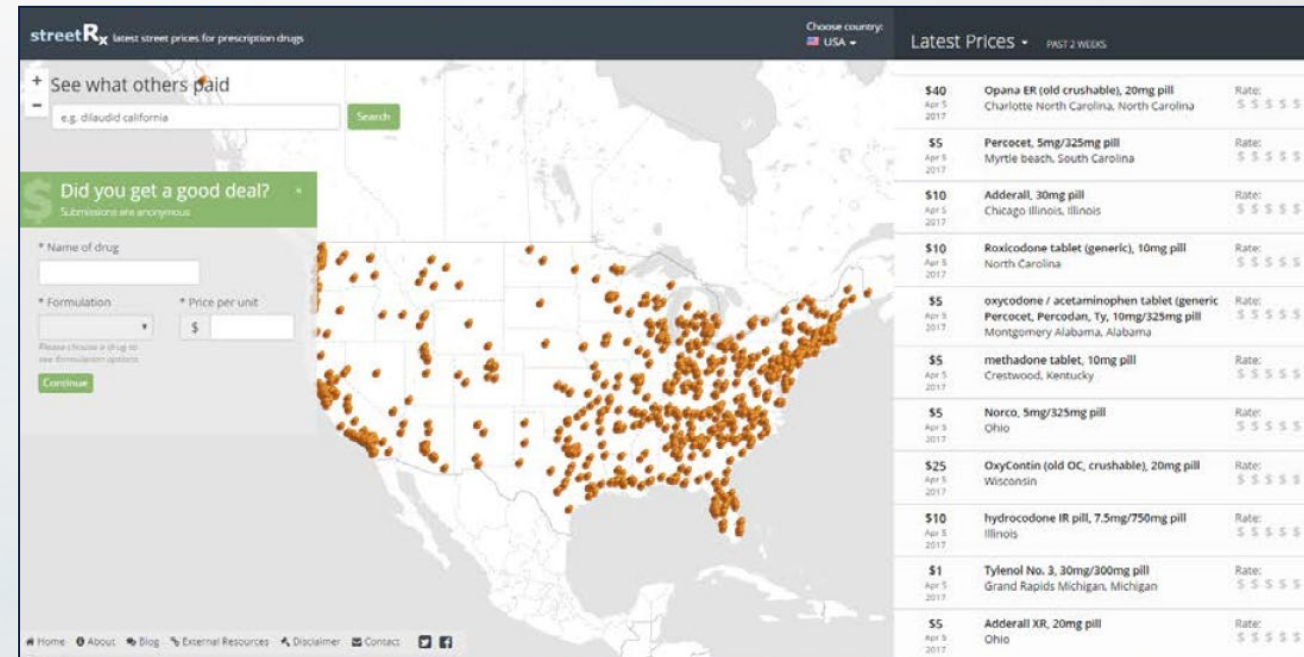


^a British Columbia reports unintentional deaths related to all illicit drugs including, but not limited to, opioids.
⁺ Expected to rise

Innovations in Use of Current Data: StreetRx

<http://streetrx.com>

- Population
 - Any person with access to the internet
- Type of Cases
 - Utilize crowdsourcing methodology
 - Report street price paid for specific prescription drug



Innovations in Use of Current Data: StreetRx and Crossborder Trafficking

- Crowd-sourced real-time data on street prices for diverted drugs
- Able to choose from list of drugs that includes some not currently legal in the US or Canada
- Differences in both formulations and APIs available in each country
- Confirmatory questions regarding source and location of purchase

StreetRx Program (www.streetrx.com)

Did you get a good deal?
Submissions are anonymous

* Name of drug
Xartemis XR

* Formulation
pill/tablet

* Price per unit
\$


* Dose

* Date of Price (YYYY-MM-DD)
2015-01-15

City

* State

Looks Like



None of these

Not sure

Source of Price Information

Pharmacy price Bulk price (10+ at one time)

When did you last see a doctor?

Choose country: USA

USA

Canada (En)

Canada (Fr)

United Kingdom

España

France

Italia

Deutschland

Australia

Lowest Prices PAST 3 MONTHS

	Adderall, 10mg pill North Muskegon, Michigan	Rate: \$ \$ \$ \$ \$
	Ritalin LA (imprinted NVR), 10mg pill Killingworth, Connecticut	Rate: \$ \$ \$ \$ \$
	OxyContin (new OP, hard to crush), 30mg pill Las, Texas	Rate: \$ \$ \$ \$ \$
	Lyrica, 75mg pill Pennsylvania	Rate: \$ \$ \$ \$ \$
	Klonopin, 1mg pill California	Rate: \$ \$ \$ \$ \$
\$20 Jan 14 2015	Percocet, 10/325mg pill Sevierville, Tennessee	Rate: \$ \$ \$ \$ \$
\$10 Jan 14 2015	Percocet, 10/325mg pill Scranton, Pennsylvania	Rate: \$ \$ \$ \$ \$
\$3 Jan 14 2015	lorazepam, 0.5mg pill Canoga park, California	Rate: \$ \$ \$ \$ \$
\$5 Jan 14 2015	Adderall, 30mg pill Pittsburgh, Pennsylvania	Rate: \$ \$ \$ \$ \$
\$3 Jan 14 2015	Tylenol No. 4, pill Houston, Texas	Rate: \$ \$ \$ \$ \$
\$4 Jan 14 2015	oxycodone, 5mg pill Connecticut	Rate: \$ \$ \$ \$ \$
\$7 Jan 14 2015	Vyvanse, 30mg pill Keller, Texas	Rate: \$ \$ \$ \$ \$

Alabama


Choose country:
USA

Looks Like

You chose a product manufactured in Canada. Is that the product you intended to choose?

- ✓ Yes, I obtained it in the United States
- ✓ Yes, I obtained it in Canada
- ✗ No, this is not the correct product

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A map of the United States with numerous orange circular markers scattered across the landmass, representing product locations. The markers are more densely packed in the eastern and central regions.

Cross-Border Trafficking

- 97,914 reports during study timeframe
- Canadian-manufactured prescription oxycodone products was reported 433 times on US website
 - 351 (81%) products acquired in the US
 - 42 (10%) products acquired in Canada
 - 96% were crushable oxycodone
- Canadian website reported 20 hydrocodone and 5 oxymorphone purchases

Cross-Border Trafficking

- 25% cases reported in border states
- Popular destinations also well-represented
 - California, Florida
- Implications for policy in both countries
- More data needed on relative street prices and trafficking patterns

The Global Mosaic of Nonmedical Use: Conclusions

- Survey of Nonmedical Use of Prescription Drugs
 - Standardized survey in multiple countries
 - Allows direct cross-country comparisons
 - Each country has a “fingerprint” of patterns of nonmedical use
- Emerging patterns
 - Opioids and sedatives in Spain
 - Stimulants in UK
 - GABA drugs across countries

The Global Mosaic of Nonmedical Use: Conclusions

- Emerging patterns
 - Codeine is ubiquitous
 - Hydromorphone in Canada
 - Tramadol in UK and Spain
- Cross-border trafficking remains an issue
 - Both US drugs in Canada and Canadian drugs in US
 - Implications for policy in both countries

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