

41ST EAPCCT

CONGRESS | 25-28 MAY 2021

VIRTUAL MEETING

LIVE AND ON-DEMAND SESSIONS | POSTERS | VOTING TOOLS | CHAT ROOMS
...AND A LOT MORE!



European Association of
Poisons Centres and Clinical Toxicologists

Web Monitoring Tools to Monitor Trends in Prescription Medicine Misuse

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Competing Interests

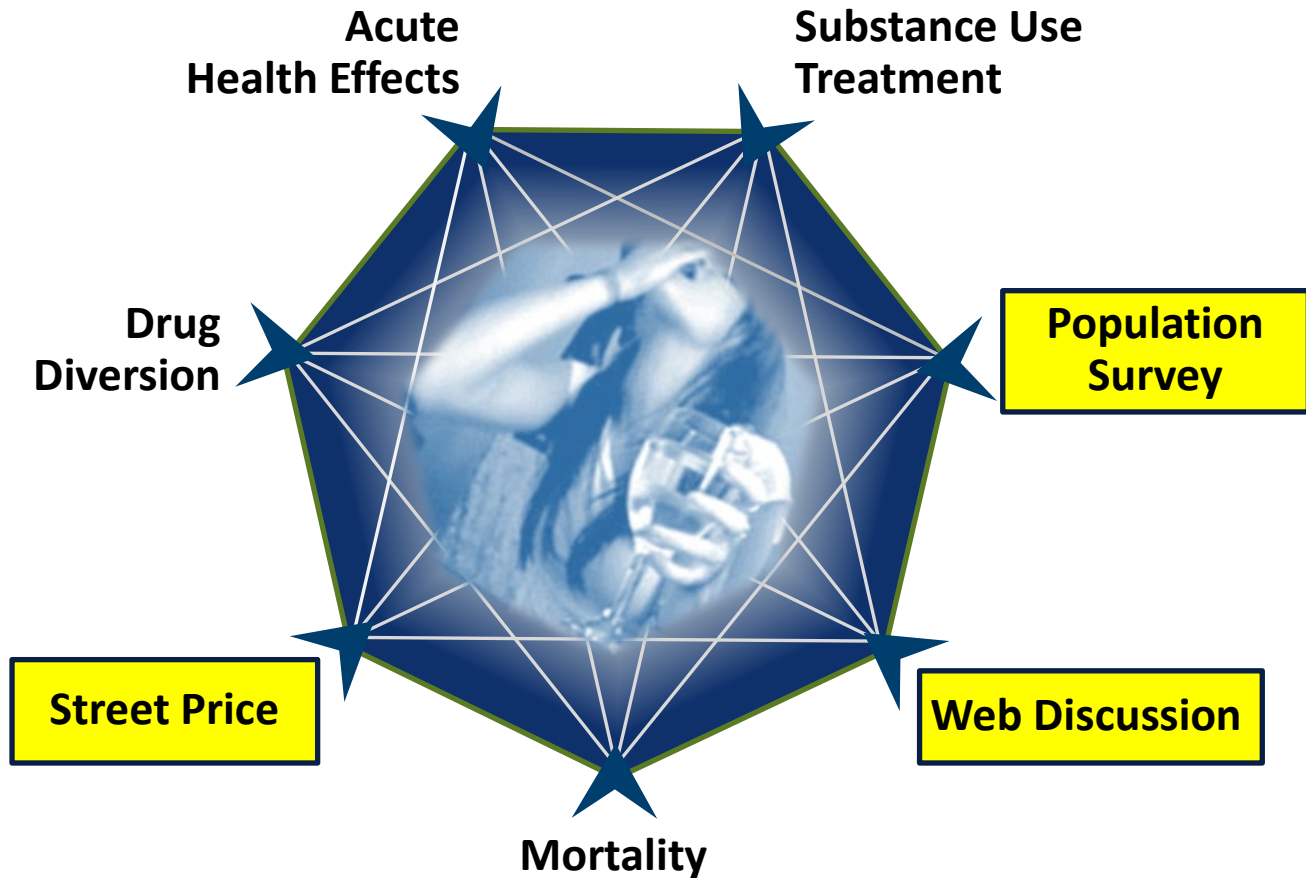
RADARS[®] System is supported by subscriptions from pharmaceutical manufacturers, government and nongovernment agencies for surveillance, research and reporting services.

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Real World Evidence and Triangulation

Triangulation

More reliable answers by integrating results from several different approaches, each with different and unrelated key sources of potential bias





WORLD WIDE WEB VS INTERNET

World wide web vs internet - what's the difference?

🕒 11 Mar 2019

Most of us use the words web and internet to mean the same thing but they're actually quite different.

The world wide web, or web for short, are the pages you see when you're at a device and you're online.

But the internet is the network of connected computers that the web works on, as well as what emails and files travel across.

Think of the internet as the roads that connect towns and cities together. The world wide web contains the things you see on the roads like houses and shops.

And the vehicles are the data moving around - some go between websites and others will be transferring your emails or files across the internet, separately from the web.

The Web as a Research Tool

- Web as recruitment method
 - StreetRx
- Web as communication method
 - Survey of Nonmedical Use of Prescription Drugs
- Web as a data lode for mining
 - Surface Web
 - Deep Web
 - Dark Web

Web as a Recruitment Tool – www.StreetRx.com

streetRx latest street prices for prescription drugs

Choose country: USA

Register Log In

Latest Prices • PAST 2 WEEKS

See what others paid

eg. dilauid california

Search

Did you get a good deal? Submissions are anonymous

* Name of drug

* Formulation

* Price per unit

Please choose a drug to see formulation options

Continue

Map of the United States showing drug submission locations (orange dots).

\$10	Molly, gram powder	Rate: \$ \$ \$ \$ \$
Jan 29 2018	New York	
\$2	lorazepam, 1mg pill	Rate: \$ \$ \$ \$ \$
Jan 29 2018	Long beach, Washington	
\$0.50	methadone oral solution, 1mg/mL	Rate: \$ \$ \$ \$ \$
Jan 29 2018	syrup/liquid Cincinnati, Ohio	
\$1.50	Ativan, 1mg pill	Rate: \$ \$ \$ \$ \$
Jan 29 2018	Clinton Township, Michigan	
\$20	Xtampza ER, 18mg pill	Rate: \$ \$ \$ \$ \$
Jan 29 2018	Ashland, Kentucky	
\$10	Norco, 10mg/325mg pill	Rate: \$ \$ \$ \$ \$
Jan 29 2018	San Diego, California	
\$10	hydrocodone IR pill, 7.5mg/650mg pill	Rate: \$ \$ \$ \$ \$
Jan 29 2018	Kansas City, Missouri	
\$5	Adderall, 20mg pill	Rate: \$ \$ \$ \$ \$
Jan 29 2018	Franklin, Indiana	
\$5	Adderall, 20mg pill	Rate: \$ \$ \$ \$ \$
Jan 29 2018	philadelphia Pa, Pennsylvania	
\$5	hydrocodone, 5mg/325mg pill	Rate: \$ \$ \$ \$ \$
Jan 29 2018	Baltimore, Maryland	
\$10	Adderall, 20mg pill	Rate: \$ \$ \$ \$ \$
Jan 29 2018	Fort Lauderdale, Florida	
\$5	oxycodone / acetaminophen tablet (generic Percocet, Percodan, Ty, 2.5mg/325mg pill	Rate: \$ \$ \$ \$ \$
Jan 29 2018	Toronto, Ohio	
\$10	Tylenol No. 3, 30mg/300mg pill	Rate: \$ \$ \$ \$ \$
Jan 29 2018	Madisonville, Kentucky	

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Google

StreetRx France, Germany, Spain, Italy, UK

streetRx Aktuelle Straßenpreise für illegale Arzneimittel und verschreibungspflichtige Medikamente

Land wählen Deutschland

Google Translate

Registrieren Einloggen

Sehen, was andere bezahlt haben

+
-
+

e.g. suboxone berlin

Suchen

€ Hast du gut eingekauft?

alle Meldungen sind anonym

* Name des Medikaments

* Formulierung
(z.B., Tablette, Ampulle)

Bitte wählen Sie ein Medikament zur Formulierung Optionen zu sehen

* Preis pro Einheit
(z.B., Tablette, Ampulle)

€

Weiter

Land wählen Deutschland

Die aktuellen Preise

€20 Mai 14 2021	OxyContin, 40mg Pille Ansbach, Bayern	Einschätzen: € € € € €
€5 Mai 14 2021	alprazolam, 1mg Pille Karlsruhe, Baden-Württemberg	Einschätzen: € € € € €
€20 Mai 14 2021	Oxycodon, 80mg Pille Lügde, Nordrhein-Westfalen	Einschätzen: € € € € €
€200 Mai 13 2021	Tilidin, 5.5mg/mL Sirup/Flüssigkeit Hessen, Hessen	Einschätzen: € € € € €
€15 Mai 13 2021	Tilidin, 5.5mg/mL Sirup/Flüssigkeit Berlin, Berlin	Einschätzen: € € € € €
€10 Mai 13 2021	Fentanyl, 100mcg Pille Baden-Württemberg	Einschätzen: € € € € €
€1 Mai 13 2021	Lyrica, 75mg Pille Koblenz, Rheinland-Pfalz	Einschätzen: € € € € €
€15 Mai 12 2021	Subutex, 8mg Pille Heidelberg, Baden-Württemberg	Angemessene € € € € €

Über StreetRx

StreetRx ist ein einzigartiges, durch die Prinzipien des Crowdsourcing inspiriertes, Programm das den Straßenwert von Verschreibungsmitteln und gesetzwidrigen Rauschmitteln identifiziert und verfolgt. StreetRx sammelt vom Nutzer überwiesene Daten mit deren Hilfe es eine landesweite Karte der Straßenpreise einer Vielzahl verschiedener Rauschmittel erstellt.

StreetRx Nutzer können anonym Beiträge veröffentlichen, anschauen und bewerten, wobei

Startseite

Über uns

Blog

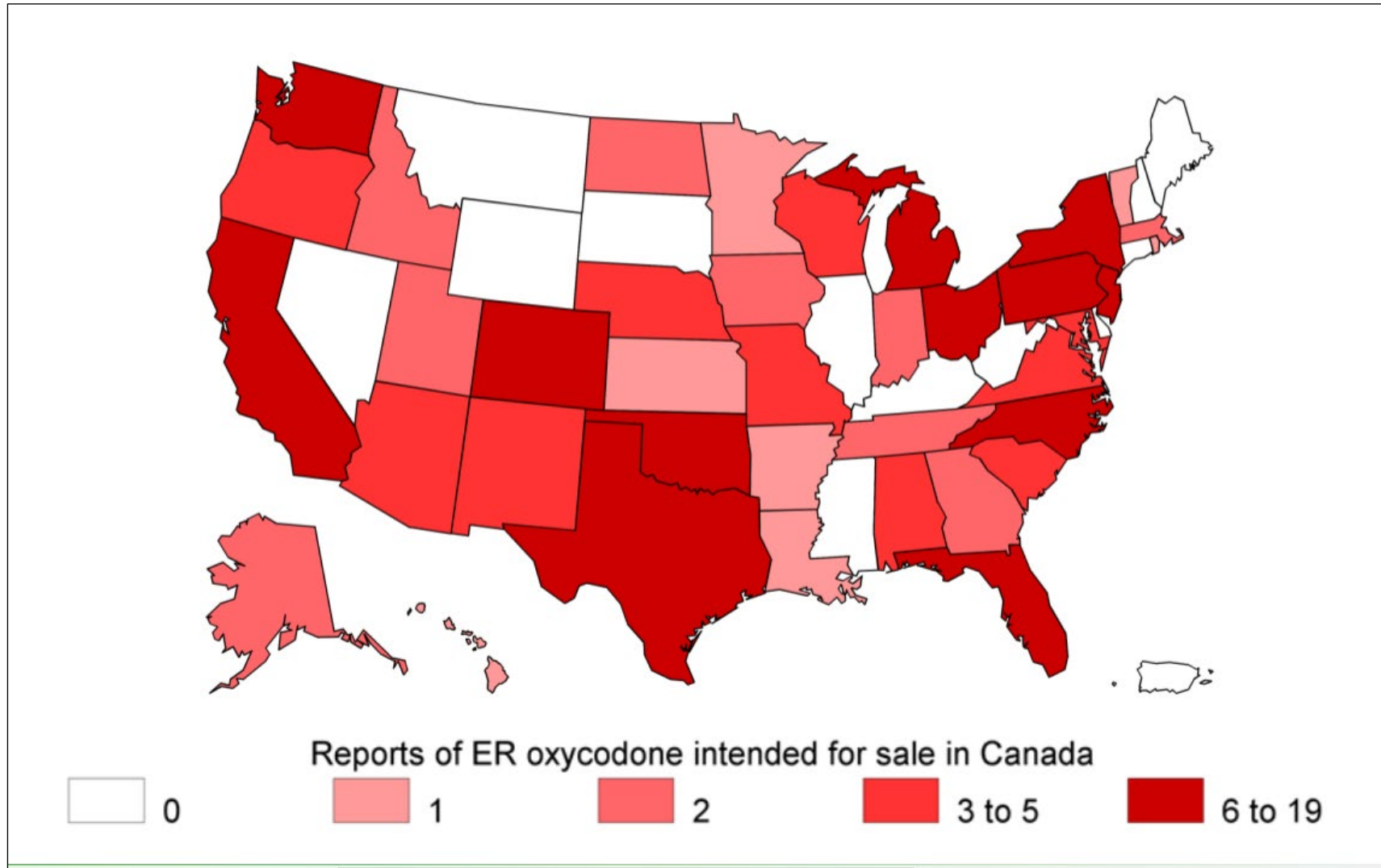
externe Ressourcen

Haftungsausschluss

Seitenverzeichnis

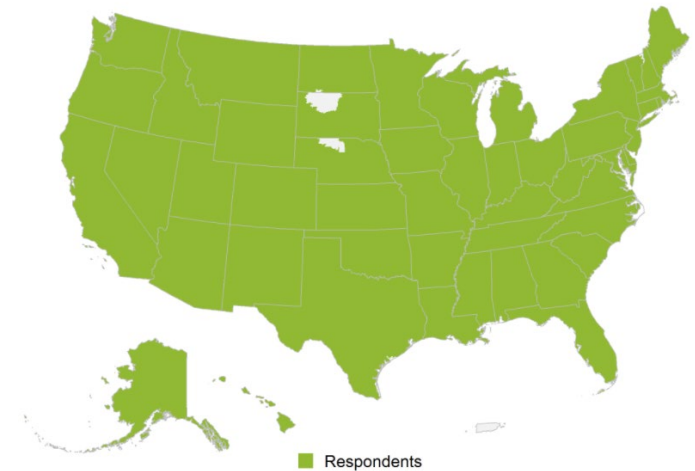
Kontakt

StreetRx: Canadian Product for Sale in the US



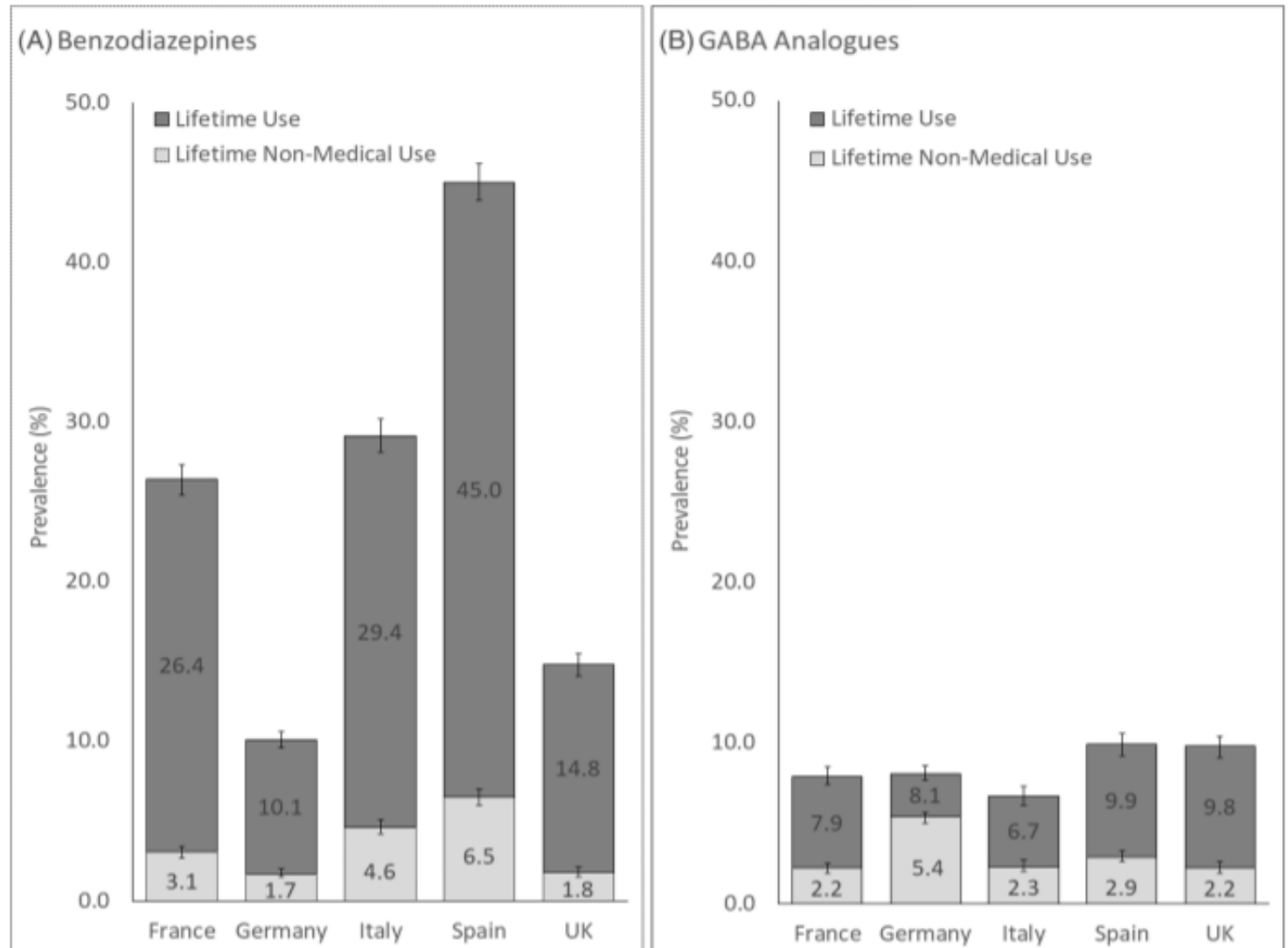
Web as a Communication Tool

- Nonmedical Use of Prescription Drugs (NMURx)
 - Web-based survey of 60,000 people per year
- Non-medical use of prescription and over-the-counter medications.
 - Use in past year, 90 days, month, or week, reasons for non-medical use
 - Routes of administration for non-medical use,
 - Sources of the drug misused
 - Street price paid if the product was obtained through illicit channels.
- Validated tool



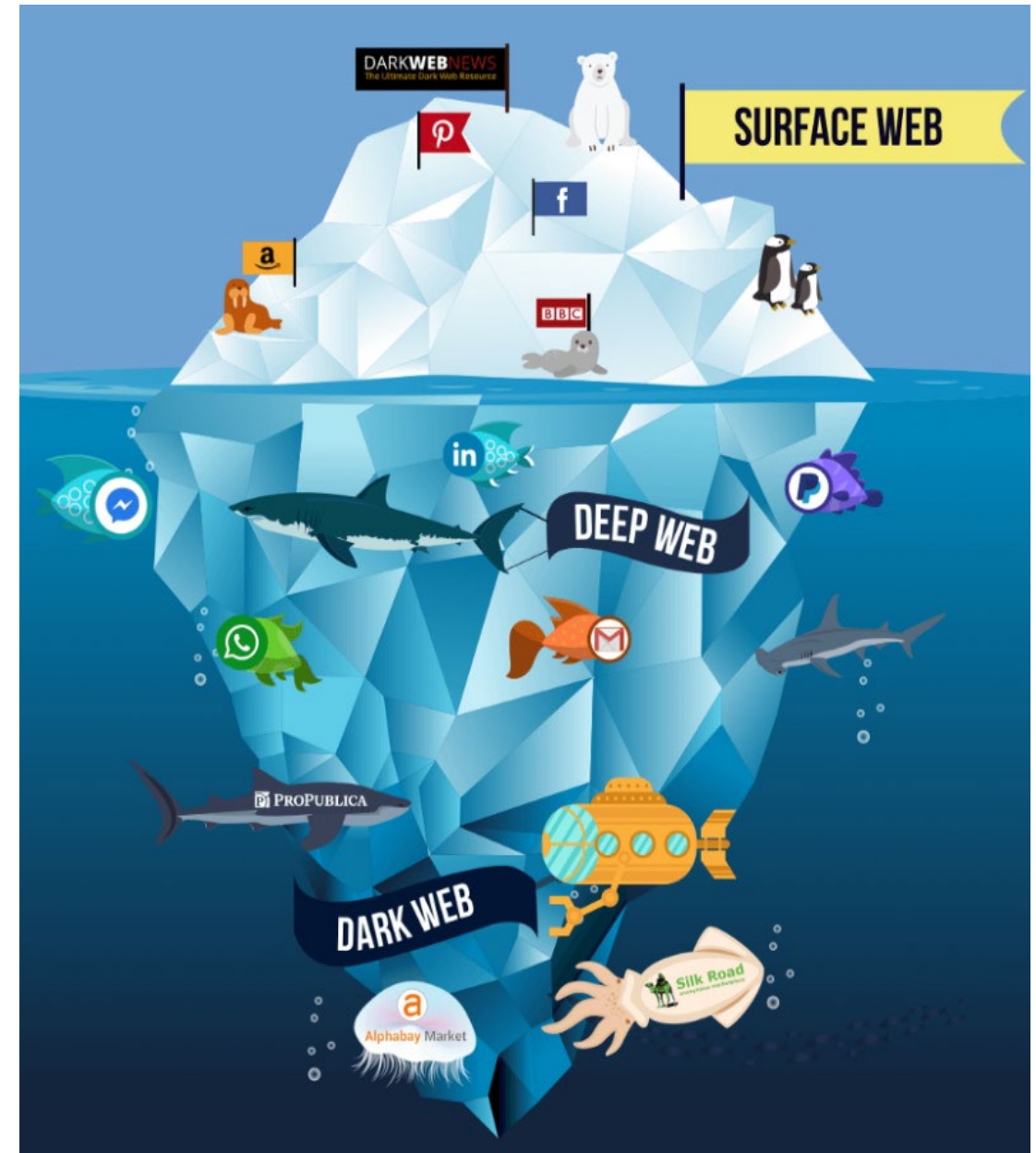
Prevalence and Use of BDZ and GABA Analogues in Europe

- NMURx
 - Web-based survey
 - FR, DE, ES, IT, SP, UK
 - 10K – 15K respondents per country



Web as a Data Lode

- **Surface Web** | 5%
- **Deep Web** | 95%
 - Research
 - Legal
 - Financial
- **Dark Web**



Surface Web: Online Discussion Prescription Opioids NMU within the UK

TABLE 3 Number and proportion of mentions discussing specific themes for the drugs oxycodone, hydrocodone, buprenorphine and tramadol from 2014 to 2016

Theme	Oxycodone ^b n % (95% CIs)	Hydrocodone ^b n % (95% CIs)	Buprenorphine ^a n (%)	Tramadol ^b n % (95% CIs)
Information sharing				
Seeking information	169 4.6 (3.8, 5.5)	102 3.9 (3.1, 5.0)	261 (8.9)	241 3.1 (2.8, 3.5)
Sharing experience or opinion	3630 93.5 (91.4, 95.2)	2754 94.8 (93.7, 95.8)	2685 (91.5)	7555 98.0 (97.7, 98.3)
Drug advice	675 20.5 (18.1, 23.0)	442 15.5 (12.3, 19.3)	807 (27.5)	1069 14.0 (13.2, 14.8)
Side effects	373 9.6 (8.3, 11.0)	159 5.6 (4.6, 6.7)	415 (14.1)	1080 14.0 (13.3, 14.8)
Indicators of nonmedical drug use				
Abuse	148 4.4 (3.1, 6.0)	142 5.0 (3.3, 7.2)	158 (5.4)	89 1.2 (0.9, 1.4)
Endorsement of drug use	343 8.8 (7.4, 10.3)	397 14.1 (12.4, 16.0)	213 (7.3)	657 8.5 (7.9, 9.2)
Detoxification	191 5.1 (3.9, 6.6)	79 2.8 (2.0, 3.8)	563 (19.2)	310 4.0 (3.6, 4.5)
Diversion	276 8.1 (6.3, 10.1)	224 7.8 (6.5, 9.2)	121 (4.1)	302 3.9 (3.5, 4.3)
Polysubstance use	1578 44.0 (40.9, 47.0)	806 28.6 (25.0, 32.4)	1135 (38.7)	2713 35.4 (34.3, 36.5)

The Dark Web

- Not accessible except through special servers
- Two primary categories of data
 - Discussion boards - Similar to surface web content and not particularly unique
 - Cryptomarkets
 - Legal and illegal drug products
 - Counterfeit goods
 - Weapons, hacking sites, pornographic sites, and resources for bitcoin tumbling...
- Content of discussion board posts similar to surface to web

Dark Web Cryptomarket Analysis

- Information

- Source country, countries shipped to, products, dose, formulation, seller user handle, name of market, price
- Seller is often post misleading information

- Benefits

- Unique data source for describing the black-market trade of prescription and illicit drugs

- Limitations

- Cryptomarket data is unstructured
- Difficult to extract drug-specific content without manual review

Summary

- The Web: A important tool that provides unique qualitative data, not a purpose in itself
 - Research question first, then tool selection
- Also very useful for recruitment and communication of research subjects
 - www.StreetRx.com
 - NMURx
- One perspective, not the final answer – part of triangulation

Questions?

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