

# The Changing Landscape of Prescription Opioid Abuse and Misuse: A North American Epidemic



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# Faculty/Presenter Disclosure

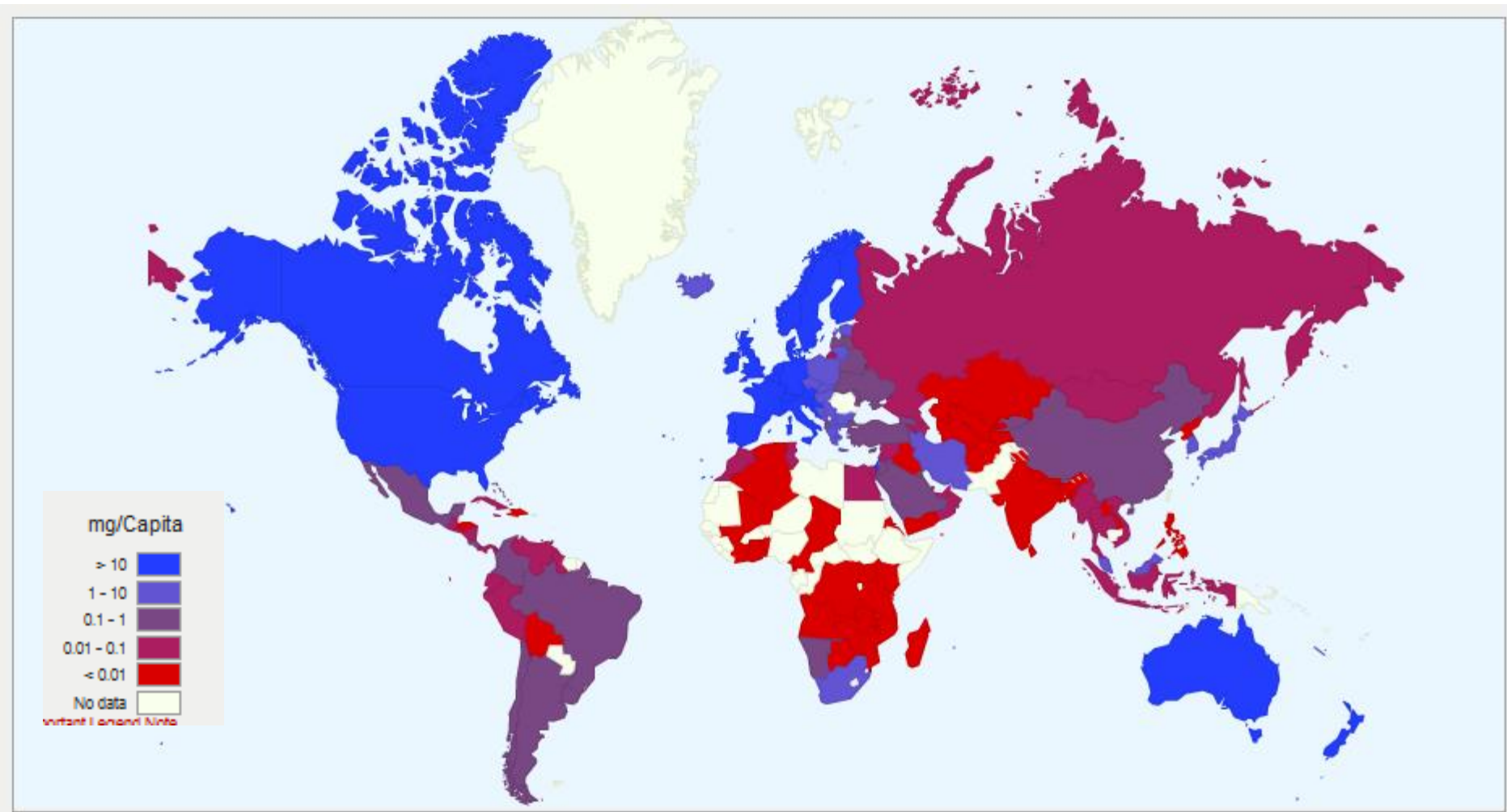
- **Faculty:** Richard C. Dart
- **Relationships with commercial interests:**
  - **Grants/Research Support:** McNeil Consumer Healthcare, BTG Pharma, RADARS® System.
  - **Speakers Bureau/Honoraria:** Same as Grants, Paid to Denver Health
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  - **Other:** Employee of Denver Health and Hospital Authority

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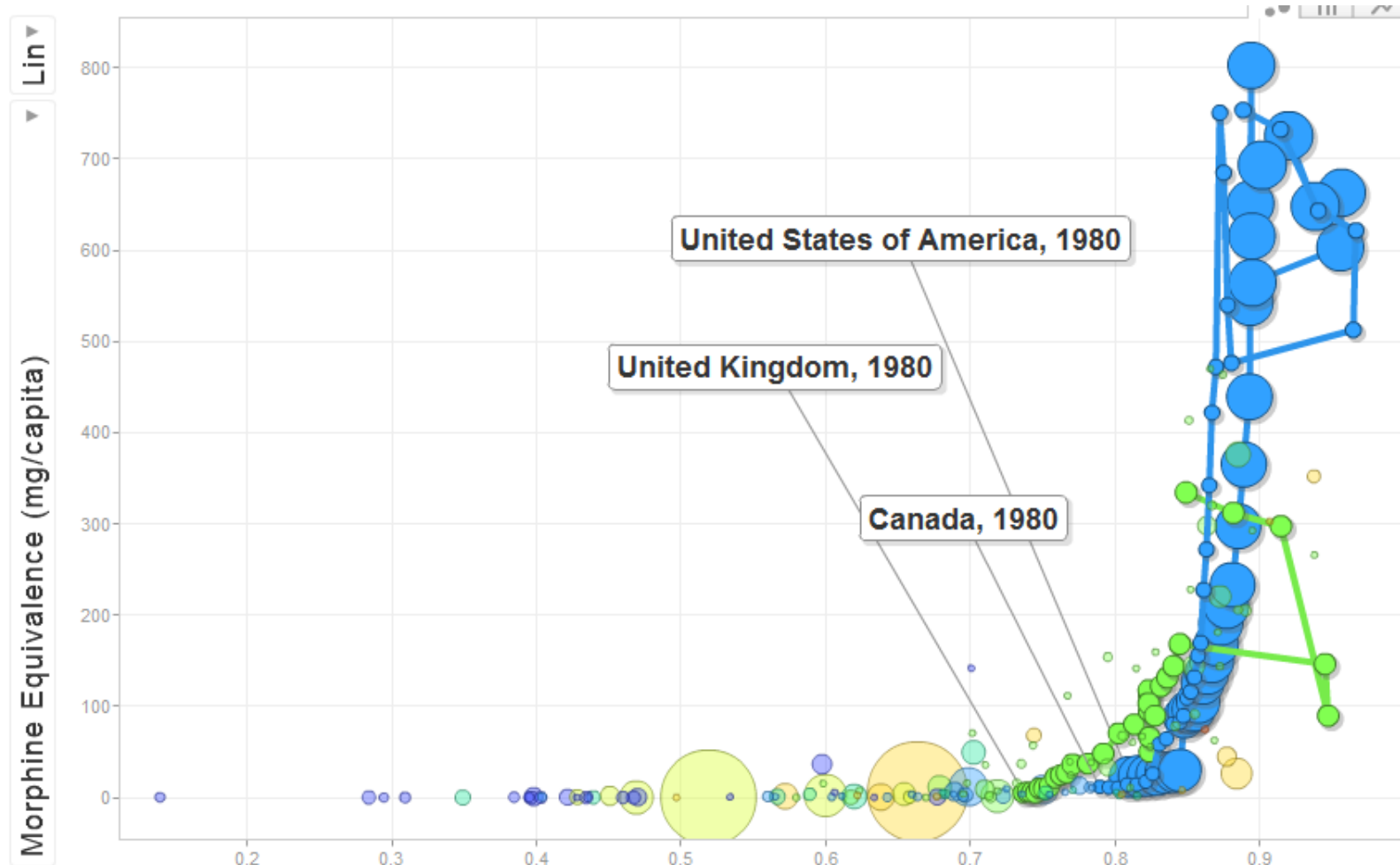
- This program has received financial support from [None] in the form of [Not applicable].
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- **Potential for conflict(s) of interest:**
  - Denver Health and Hospital Authority owns and operates the RADARS System, which is funded largely by subscriptions from pharmaceutical manufacturers of prescription opioids and stimulants.

# Opioid Consumption Map

## Morphine Equivalents, mg/capita, 2010

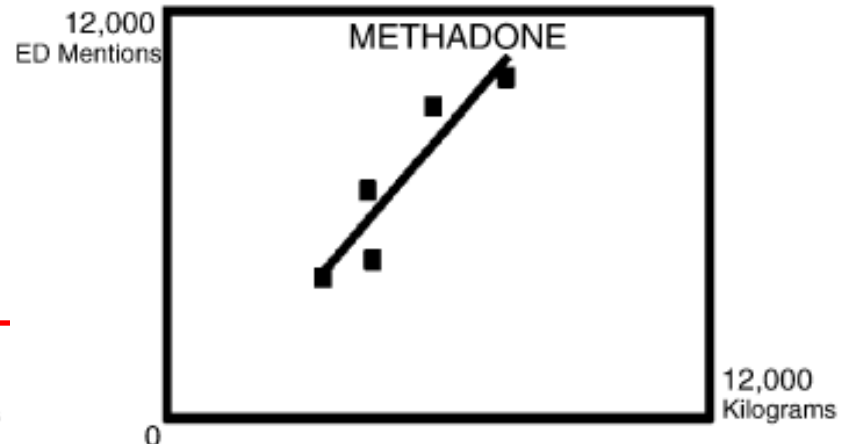
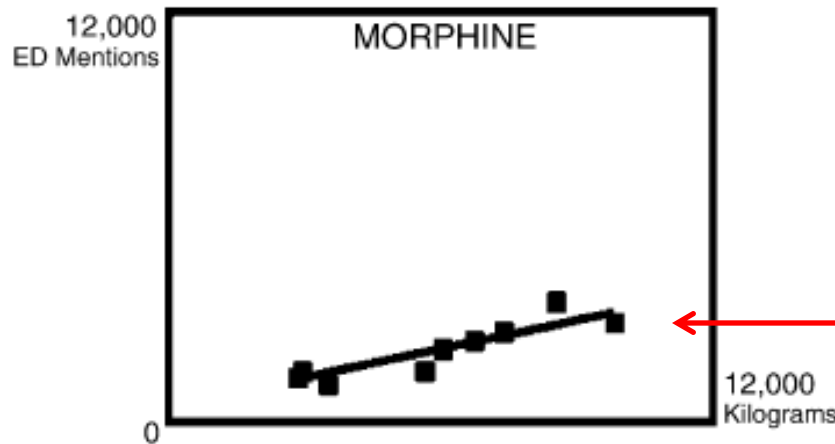
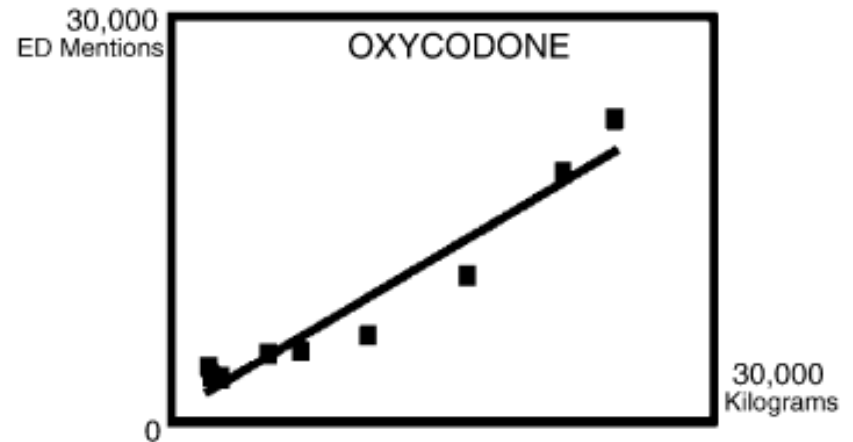
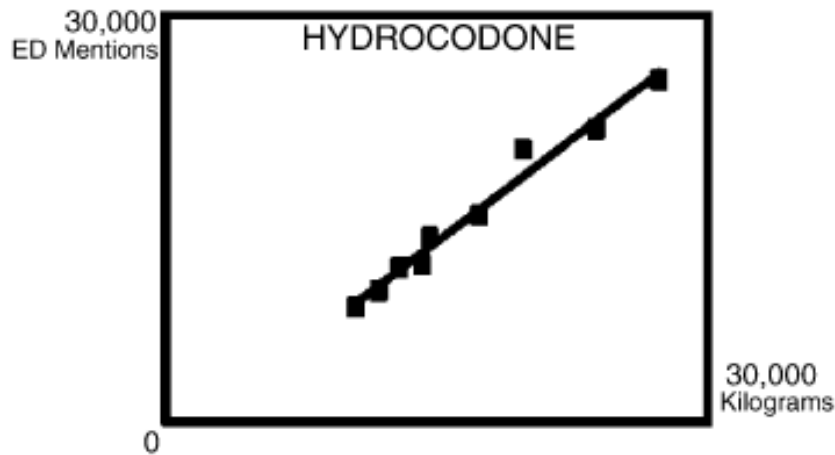


# Total Pharmaceutical Opioid Consumption 1980 – 2010, Morphine Equivalents per capita



# More Drug Production = More Drug Abuse

## But - the Slope Varies by Drug



## *First Do No Harm*

- Prescription opioid-related deaths doubled in just over 10 years in Ontario... (Fischer & Argento, 2012).
- British Columbia – death rate from opioid prescriptions drug in one region (2.7 per 100,000 persons) is similar to that of the number of residents killed in any given year in motor vehicle accidents (Corneil, Elefante, May-Hadford, Goodison, & Harris, 2012),
- Centre for Addiction and Mental Health in Toronto, 37% received opioids from physician prescriptions, 26% from both a prescription and “the street,” and 21% from the street (Sproule, Brands, Li, & Catz-Biro, 2009).

**Table 3**      **Average annual percent change in the opioid-related poisoning death rate according to age group by gender, population 20 years of age or over, Québec, 2000 to 2009**

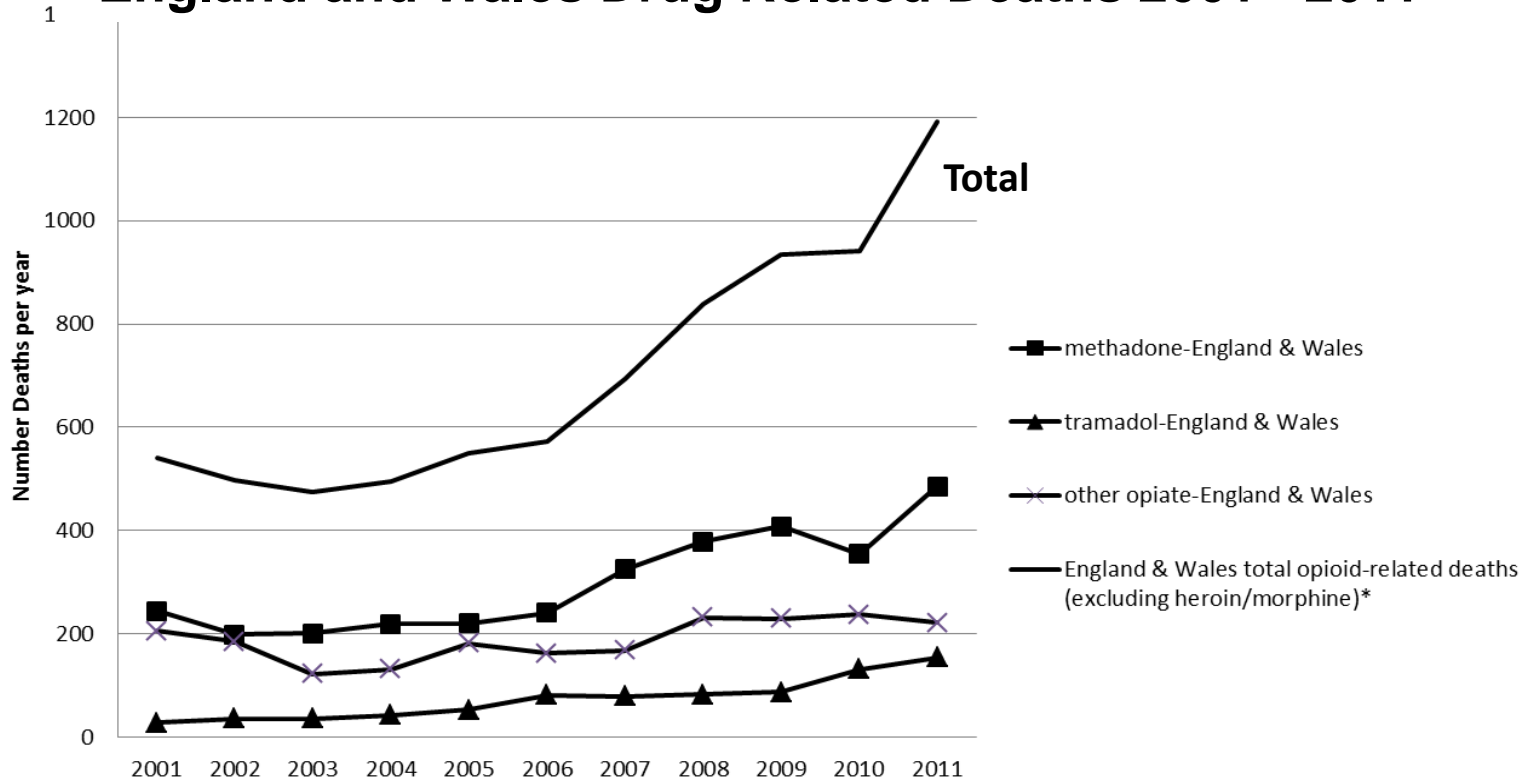
<b>Men</b>		<b>Segment</b>	<b>AAPC<sup>†</sup></b>	<b>95% CI</b>
20-34 years		2000 to 2009	+3.3%	(-1.8% to +8.8%)
35-49 years		2000 to 2009	+7.5%*	(+4.4% to +10.6%)
50-64 years		2000 to 2009	+20.9%*	(+13.0% to +29.4%)
65 years and over		-	-	-
<b>Women</b>				
20-34 years		2000 to 2009	+5.4%	(-4.4% to +16.3%)
35-49 years		2000 to 2009	+9.5%*	(+5.6% to +13.5%)
50-64 years		2000 to 2009	+13.7%*	(+5.9% to +22.0%)
65 years and over		2000 to 2009	+7.1%*	(+0.1% to +14.5%)

\* = statistically significant at the 5% level (p < 0.05) according to the asymptotic normal approximation.



# Prescription Opioid Deaths

## England and Wales Drug Related Deaths 2001 - 2011



\*Note: heroin and morphine are reported as one category in the data from England, Wales and Scotland; since the focus of this analysis is on prescription opioids, that category was not included in this analysis.

# Canadian Pain Strategy

## *First Do No Harm*

- Phase 1: Develop *First Do No Harm: Responding to Canada's Prescription Drug Crisis* (the Strategy)
  - Prevention
  - Education
  - Treatment
  - **Monitoring and Surveillance**
  - Enforcement
- Phase 2: Implement the recommendations
- Phase 3: **Complete an impact evaluation of the *Strategy's* implementation**
  - How? What measures are needed and available?

# What is the RADARS<sup>®</sup> System?

- History
  - Denver Public Safety Net Hospital for 150 years
    - State sanctioned independent authority
  - Created 2001 by Purdue Pharma
  - 2006, Denver Health and Hospital Authority (DHHA)
  - Independent program
  - Multiple pharmaceutical subscribers
- Conflict of interest statement
  - None, other than running system for DHHA as noted above

# Mosaic Surveillance for Surveillance of Prescription Drug Abuse

## Acute Events

49 Poison  
centers  
46 states

## Drug Transactions

Criminal Justice  
250 agencies  
49 states

## Entering Treatment

OTP  
75 programs  
37 states

## Entering Treatment

SKIP  
155 practices  
47 states

## New Initiates

College Survey  
2000 students  
50 states

## Illicit Market Price

StreetRx.com  
Users/Buyers  
50 states

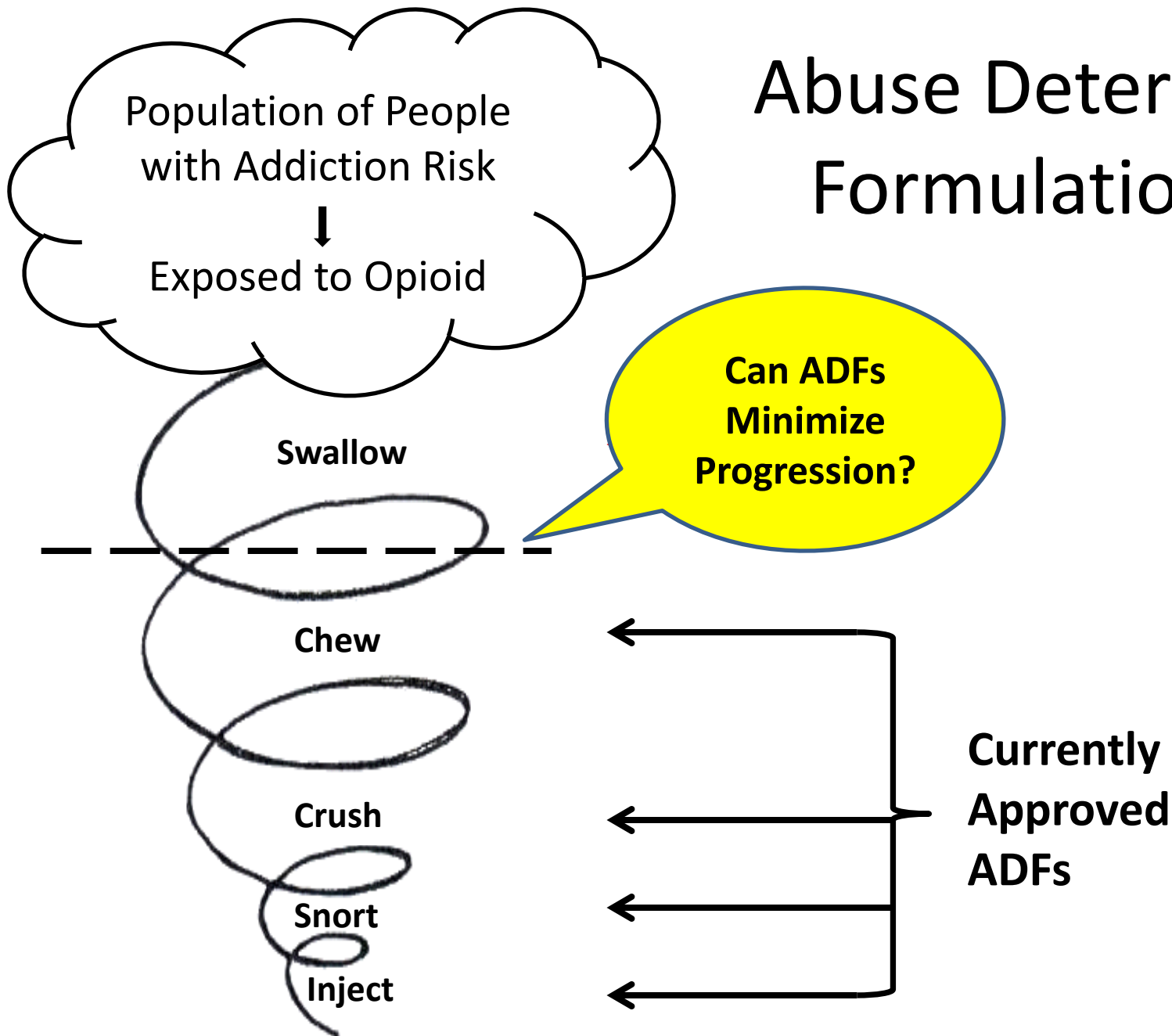


# Abuse Deterrent Formulations in the United States

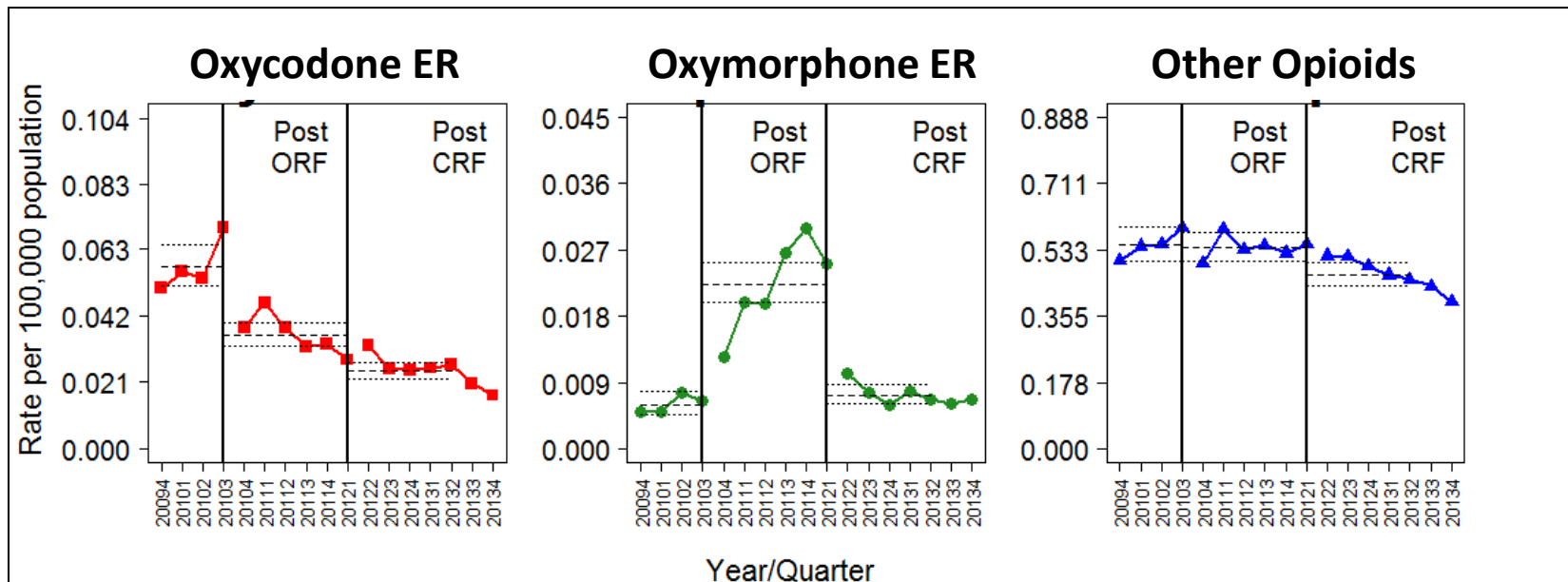
OxyContin, Opana ER, Exalgo, Oxecta, Nucynta ER



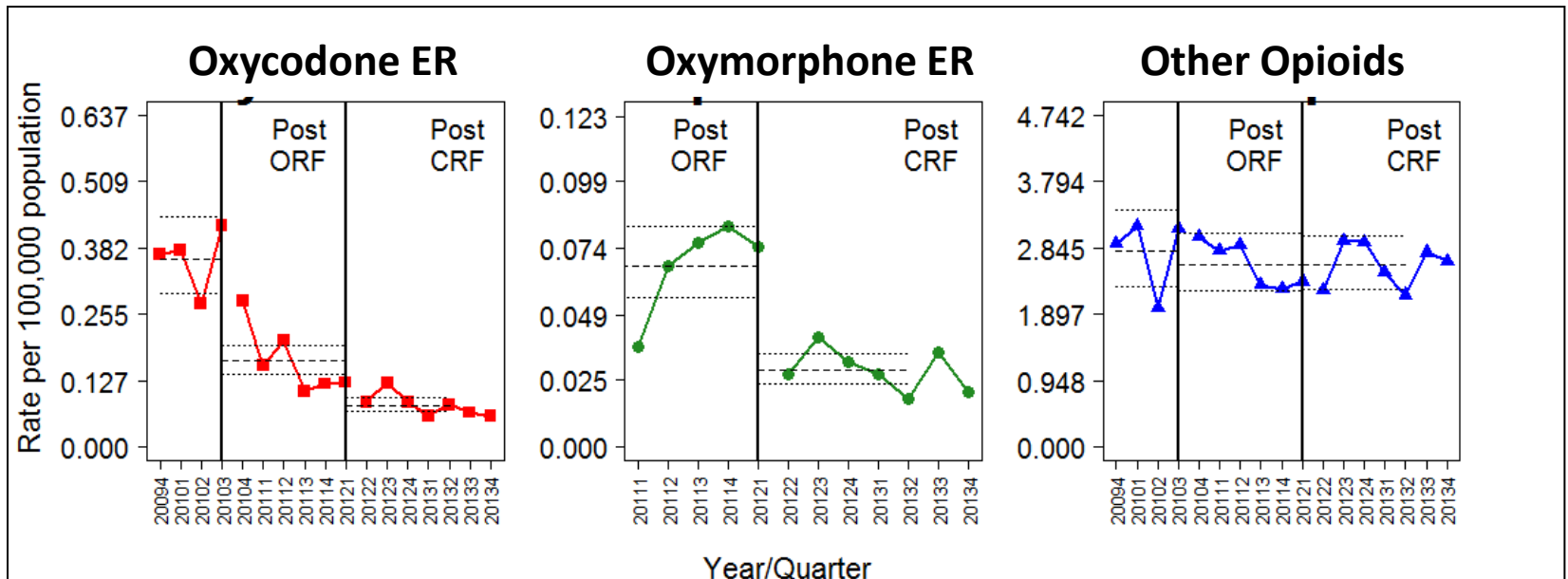
# Abuse Deterrent Formulations



# Poison Center Program Population Rate, 2009-2013



# Drug Diversion Program Population Rate, 2009-2013

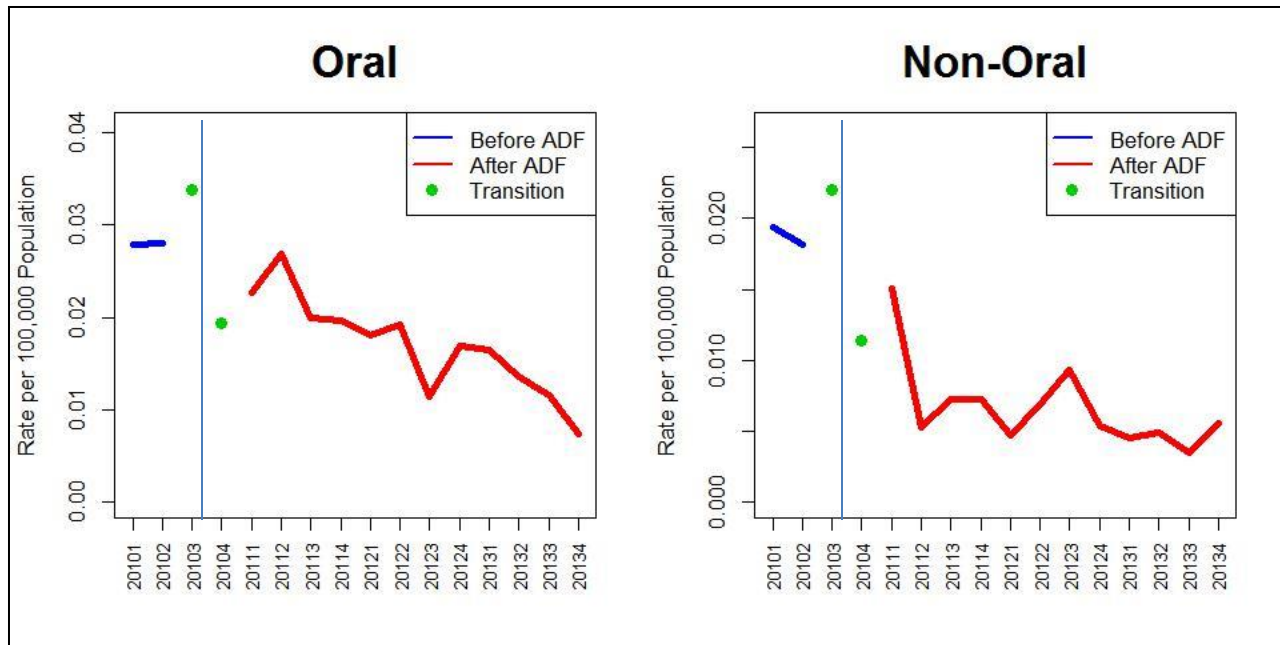


\*Other opioids excluding ER oxycodone and ER oxymorphone.

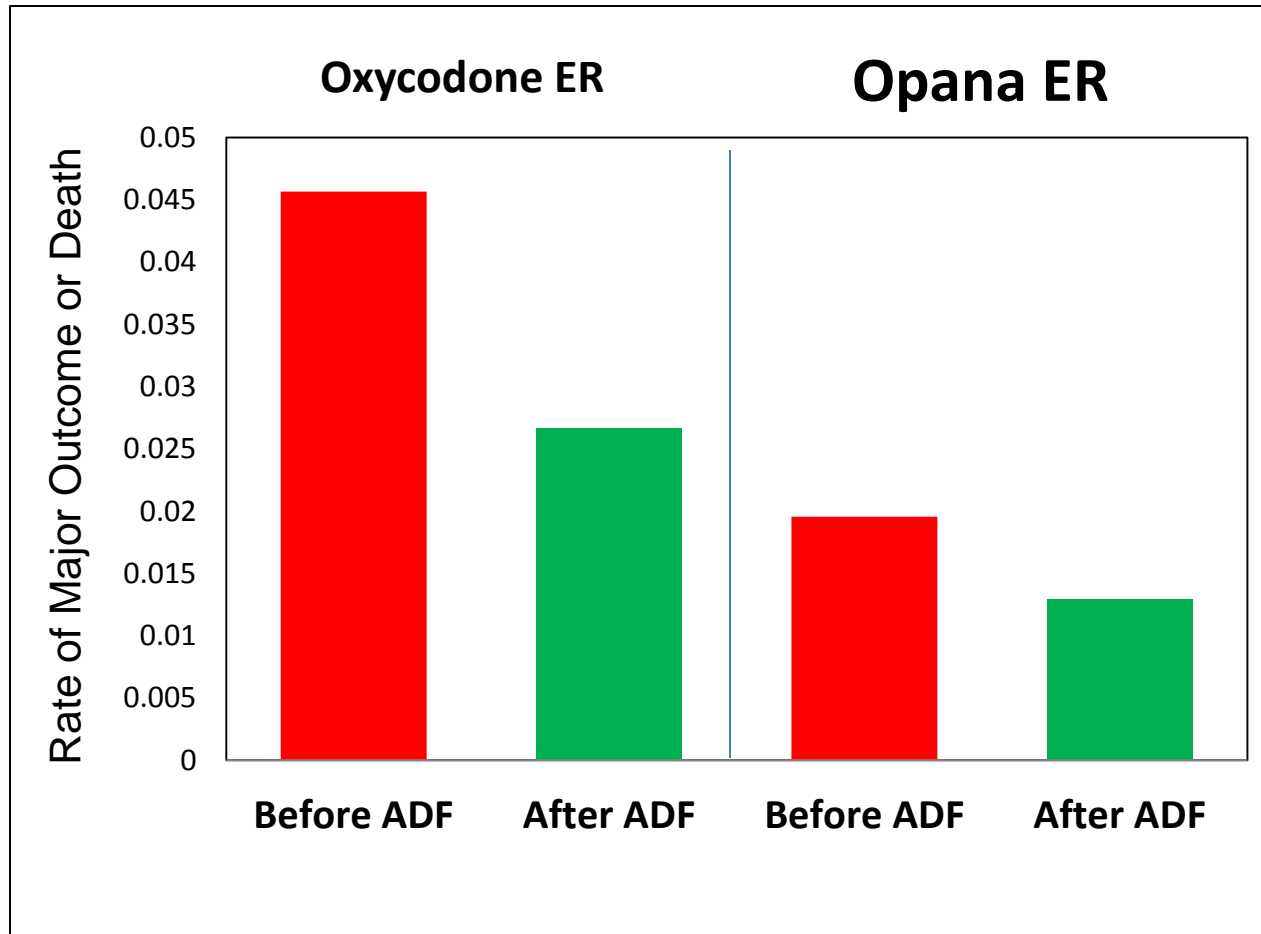


# Poison Center Program

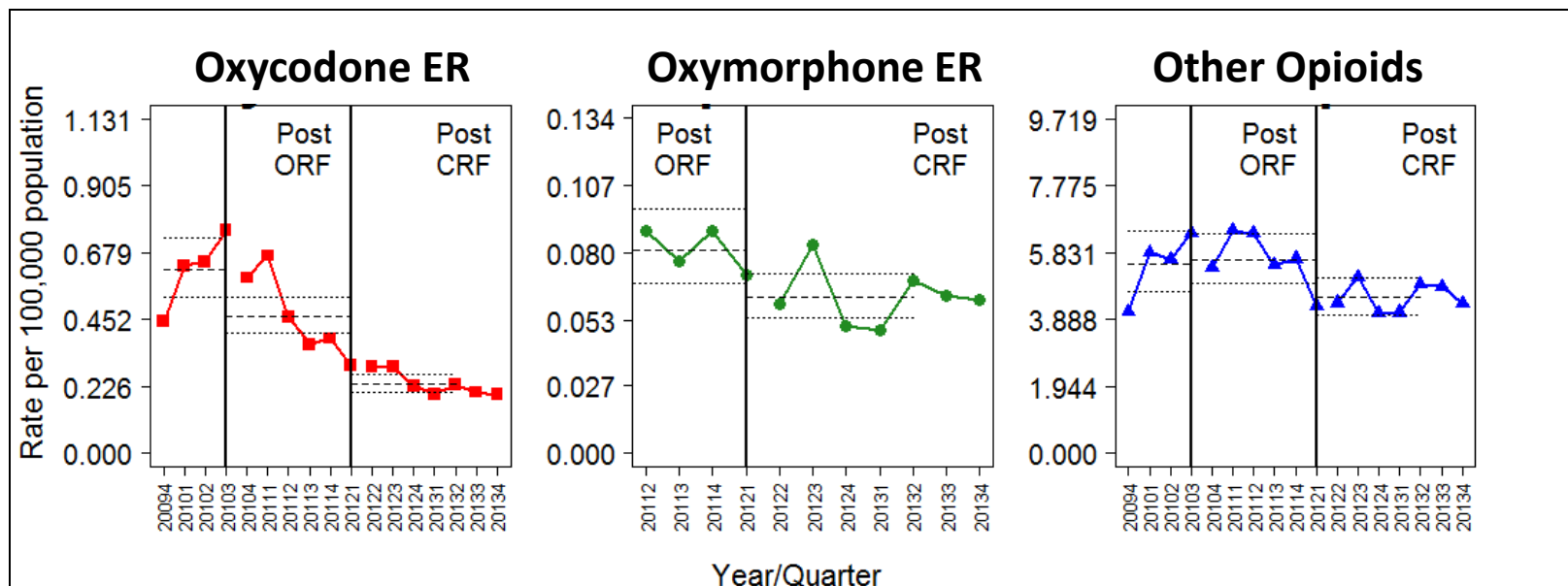
## Route of Administration, OxyContin



# Case Outcome in Poison Center Program – Major Outcome or Death



# Treatment Programs 2009-2013



# StreetRx.com

Submissions are anonymous

## DID YOU GET a good deal?

Name of drug\*

City  State\*

\$ Price\*

Show me:

**Latest prices**

Drug	Location	Price	Date	Rating
Adderall, 10mg pill	Fort Lauderdale, Florida	\$4	Jan 18	Rate:

Submissions are anonymous

## DID YOU GET a good deal?

Name of drug\*

City  Province\*

\$ Price\*

Show me:

**Latest prices**

Drug	Location	Price	Date	Rating
Percocet, 5mg pill	London, Ontario	\$5	Jan 17	Rate: \$ \$ \$ \$ \$
Apo-Oxycodone CR (imprinted APO OXD), 30mg pill	Calgary, Alberta	\$90	Jan 17	Rate: \$ \$ \$ \$ \$
Ritalin, 10mg pill	Ontario	\$10	Jan 16	Rate: \$ \$ \$ \$ \$
Adderall XR, 10mg pill	Boston, Canada	\$2	Jan 15	Rate: \$ \$ \$ \$ \$
Adderall XR, 10mg pill	Boston, Canada	\$2	Jan 15	Rate: \$ \$ \$ \$ \$
clonazepam, 0.5mg	Peterborough, Ontario	\$10	Jan 14	Rate: \$ \$ \$ \$ \$

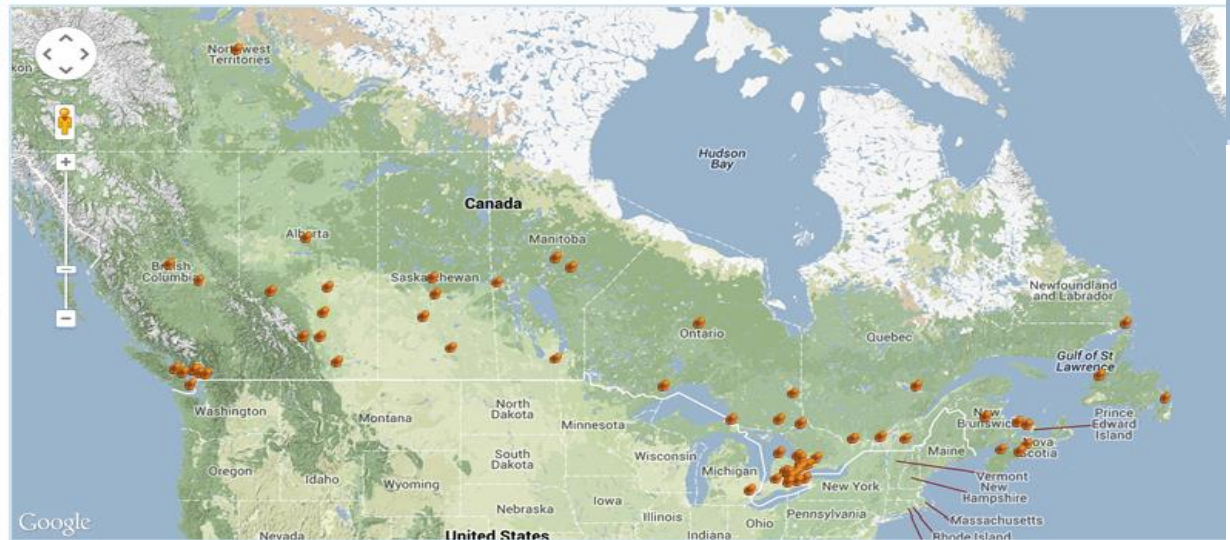
See what **OTHERS** paid

e.g. dilaudid california



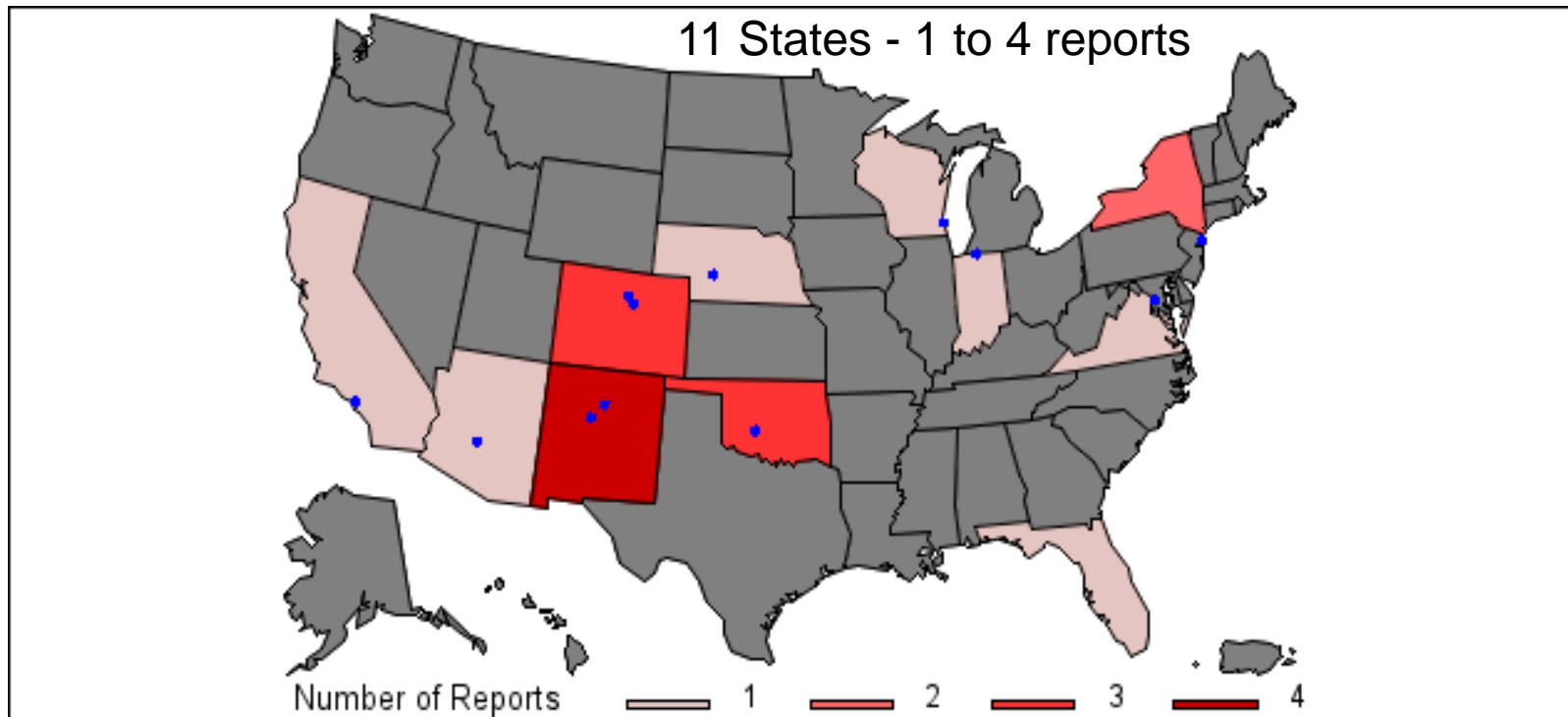
See what **OTHERS** paid

e.g. oxy toronto



# US StreetRx

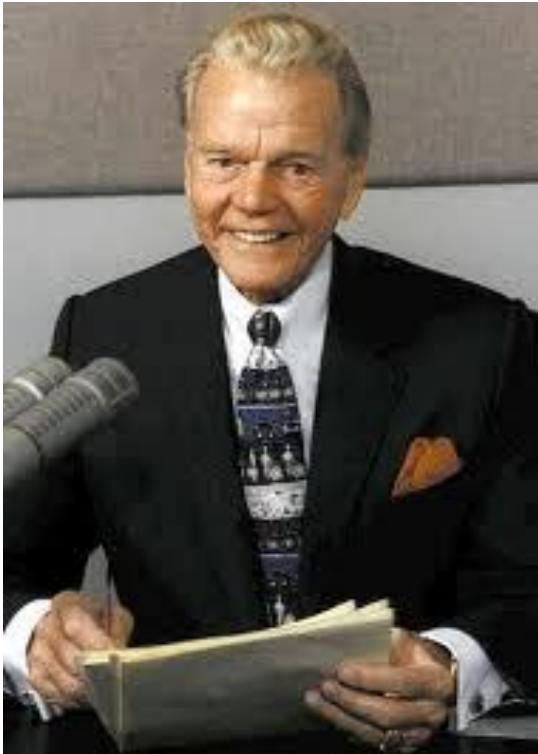
## Endorsement of Canadian Products in United States



# Oxycodone ADF in US and Canada

Formulation	United States	
	Number reports	Reported Median Price per mg, US Dollar (range)
<b>Crushable “Old OxyContin”</b>		
<b>Apo-Oxycodone CR</b>	24	1.00 (0.15 – 16.80)
<b>OxyContin®</b>	93	1.00 (0.06 – 10.00)
<b>Co-Oxycodone CR</b>	11	1.00 (0.30 – 4.00)
<b>Teva-Oxycodone CR</b>	4	0.88 (0.10 – 3.75)
<b>Average</b>		<b>1.00</b>
<b>Abuse Deterrent “New OxyContin”</b>		
<b>Oxycodone ER (OxyContin in US, OxyNEO in Canada)</b>	277	0.63 (0.03 – 10.00)
<b>Average</b>		<b>0.63</b>

# The Rest of the Story...

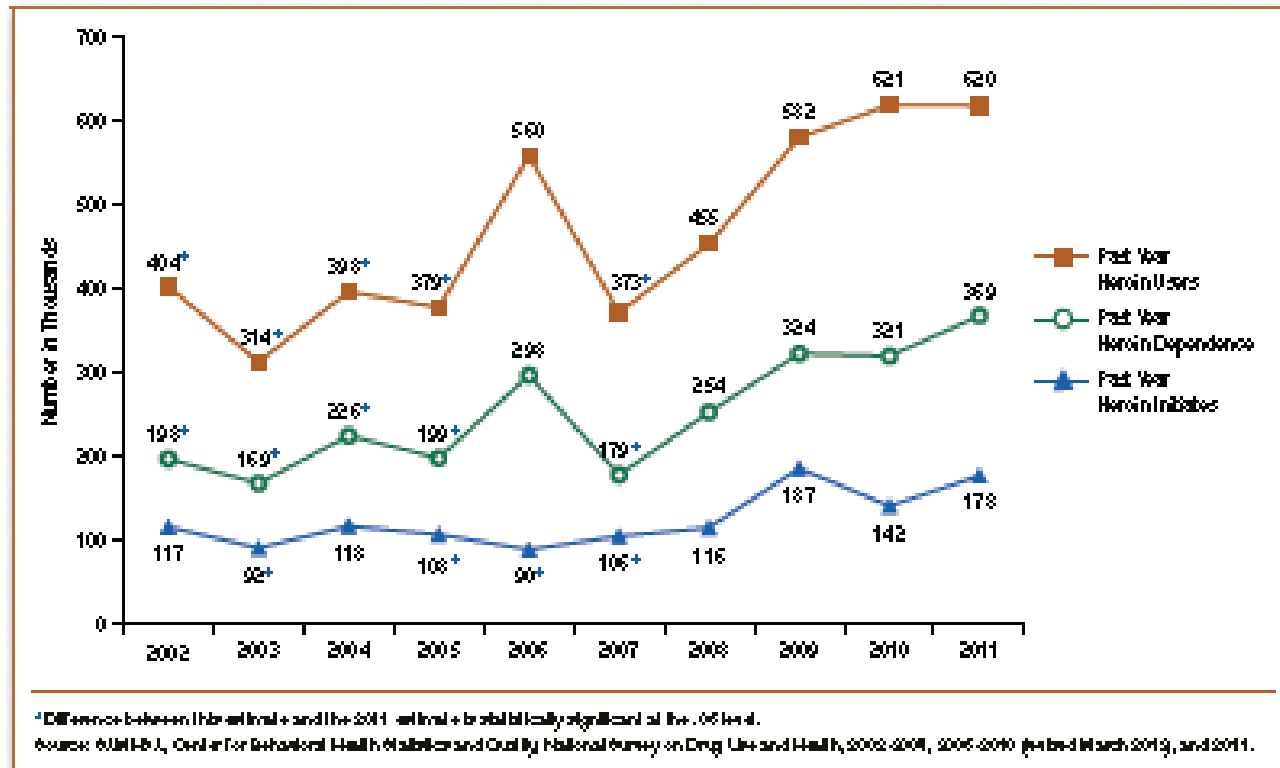


- Abuse Deterrent Formulations may work...
  - Draft document issued by U.S. FDA – January 2013
  - OxyContin allowed labeling
  - Not recognized on Canadian products
- What are the effects on outcome?

# SAMHSA CBHSQ Data Review, 2013

## Past Year Heroin Users, Heroin Dependence and Heroin Initiates

Figure 1. Past Year Heroin Users, Heroin Dependence, and Heroin Initiates among Persons Aged 12 or Older: 2002-2011





# Patient Activism

## **Government asked to boost generic OxyContin supplies**

Brand-name oxycodone was pulled off the market in 2012

[CBC News](#) Posted: May 19, 2014 4:38 PM ET Last Updated: May 19, 2014 4:43 PM ET

- The federal government must intervene to end shortages of generic versions of the addictive painkiller OxyContin, says a Toronto man who relies on the drug.
- Small business owner Jim Burke has written Federal Health Minister Rona Ambrose to complain that the government is too focused on addiction and not focused enough on the needs of Canadians like himself who depend on the opioid drug oxycodone.
- Burke... has suffered chronic phantom limb pain since having his right leg amputated above the knee following a car accident.

# Other Changes on Horizon

- Many new products in development
- Influx of cheap heroin of high purity
- Natural cycles of substance abuse
- Many different interventions
  - Education, community involvement, prescription monitoring plans

# Canadian Surveillance

- StreetRx ([streetrx.com](http://streetrx.com))
- Drug Diversion
- Poison Center
- Web-based survey
- Web monitoring
- Pain patients?

# Changing Landscape Summary

- Numerous interventions changing abuse
- Expansion of market led to increased population of dependent patients
  - Constriction of availability may push patients to heroin – good or bad?
- Abuse deterrent formulations effective for the formulations that feature them
  - Will they slow the number of people entering the substance use disorder (SUD) pathway?
- Measurement of specific products is needed to identify the problem and to determine whether it is improving.