

The Intersection of Two Public Health Problems: the Under Treatment of Pain and the Abuse and Misuse of Pain Medications

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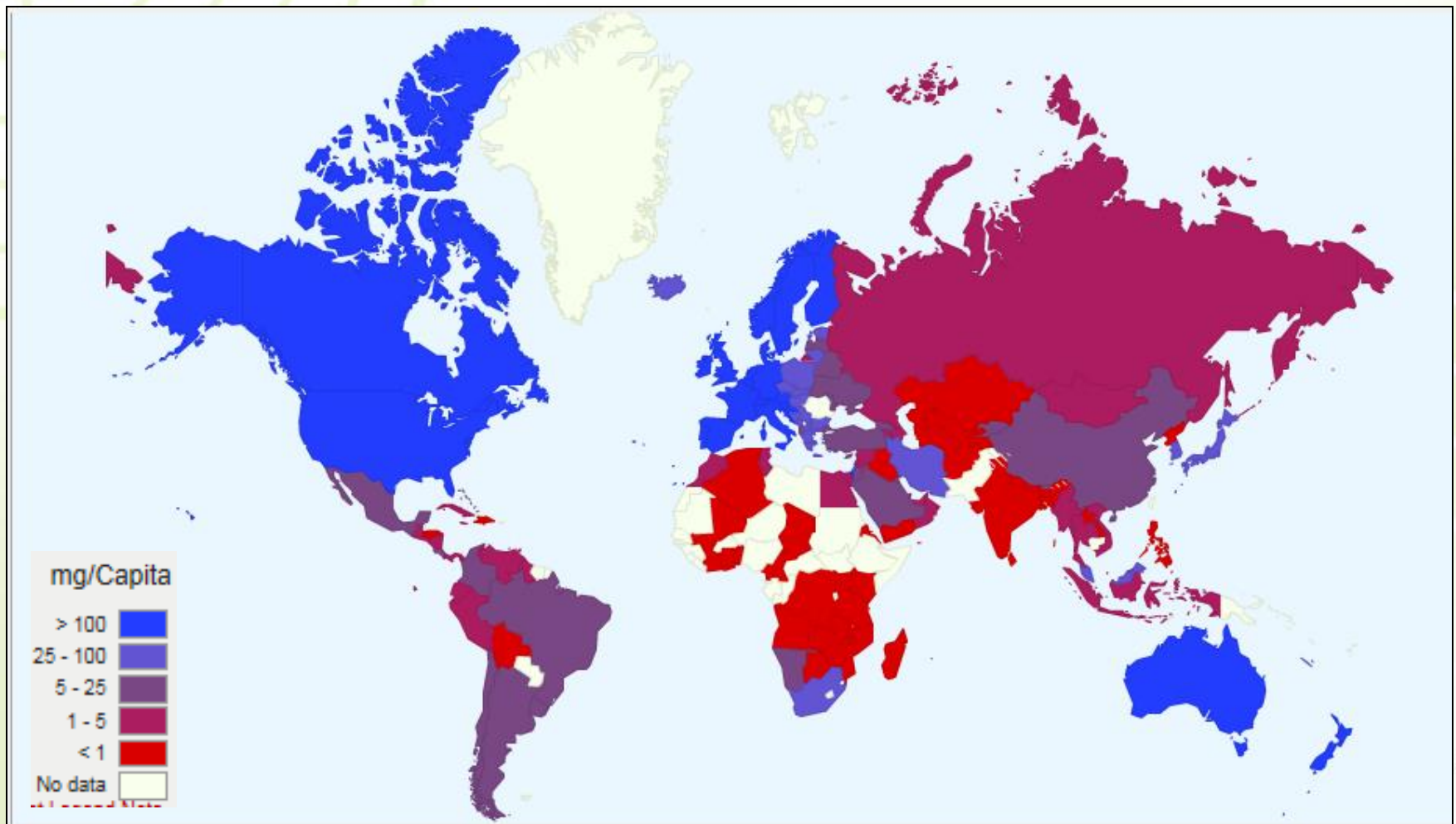
Professor of Emergency Medicine, University of Colorado



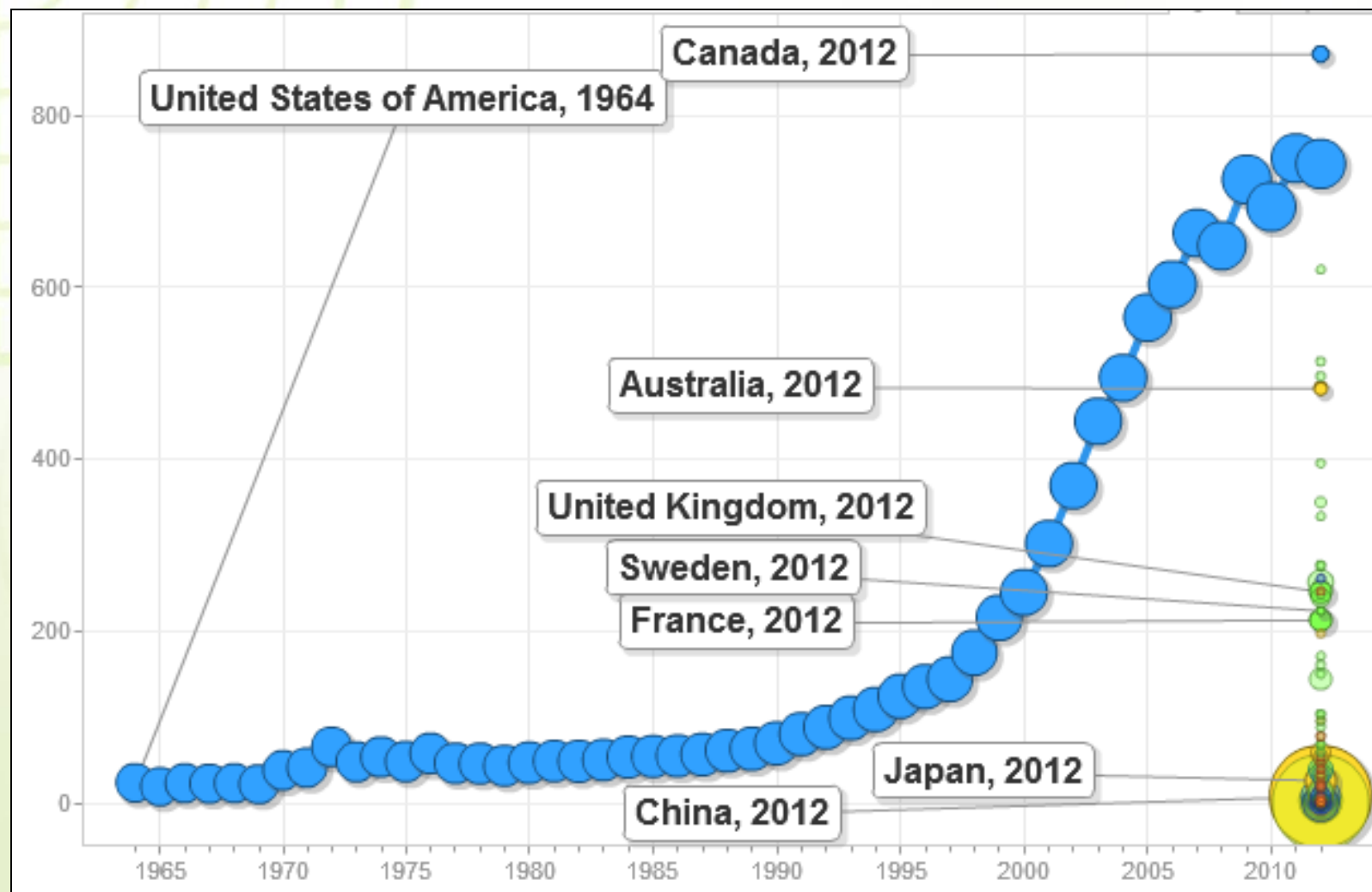
Outline

- Describing the epidemic
- Data
- Framework for addressing the challenge
 - Yes, some patients will be come addicted (Juurlink)
 - First, we are making progress (Dart)
 - Why? Multiple interventions.
 - Some are harsh
 - Some interfere with appropriate care of chronic pain
 - How to we incorporate these lessons?

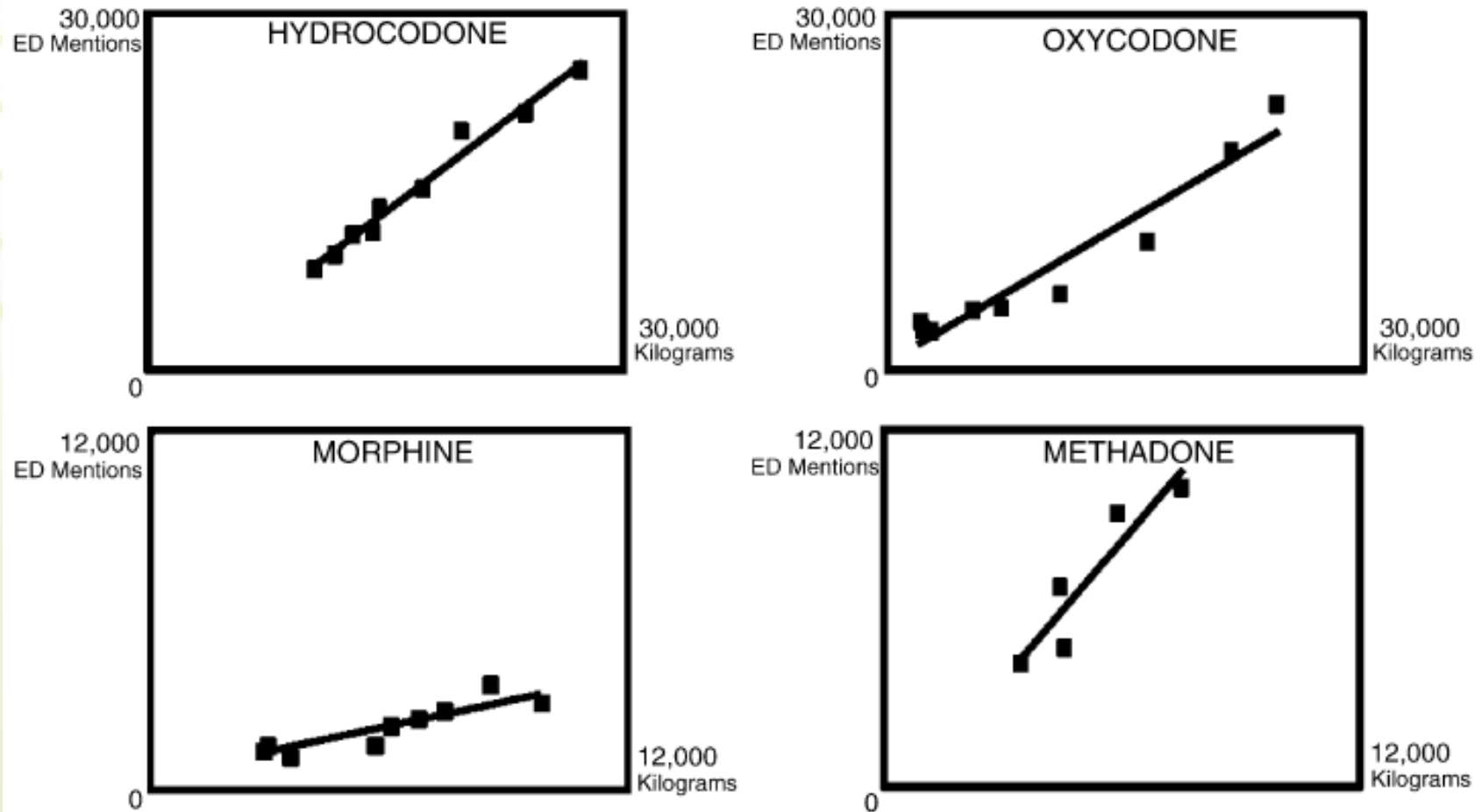
Opioid Consumption (ME/capita), 2010



Prescription Opioid Consumption, 1964 - 2010

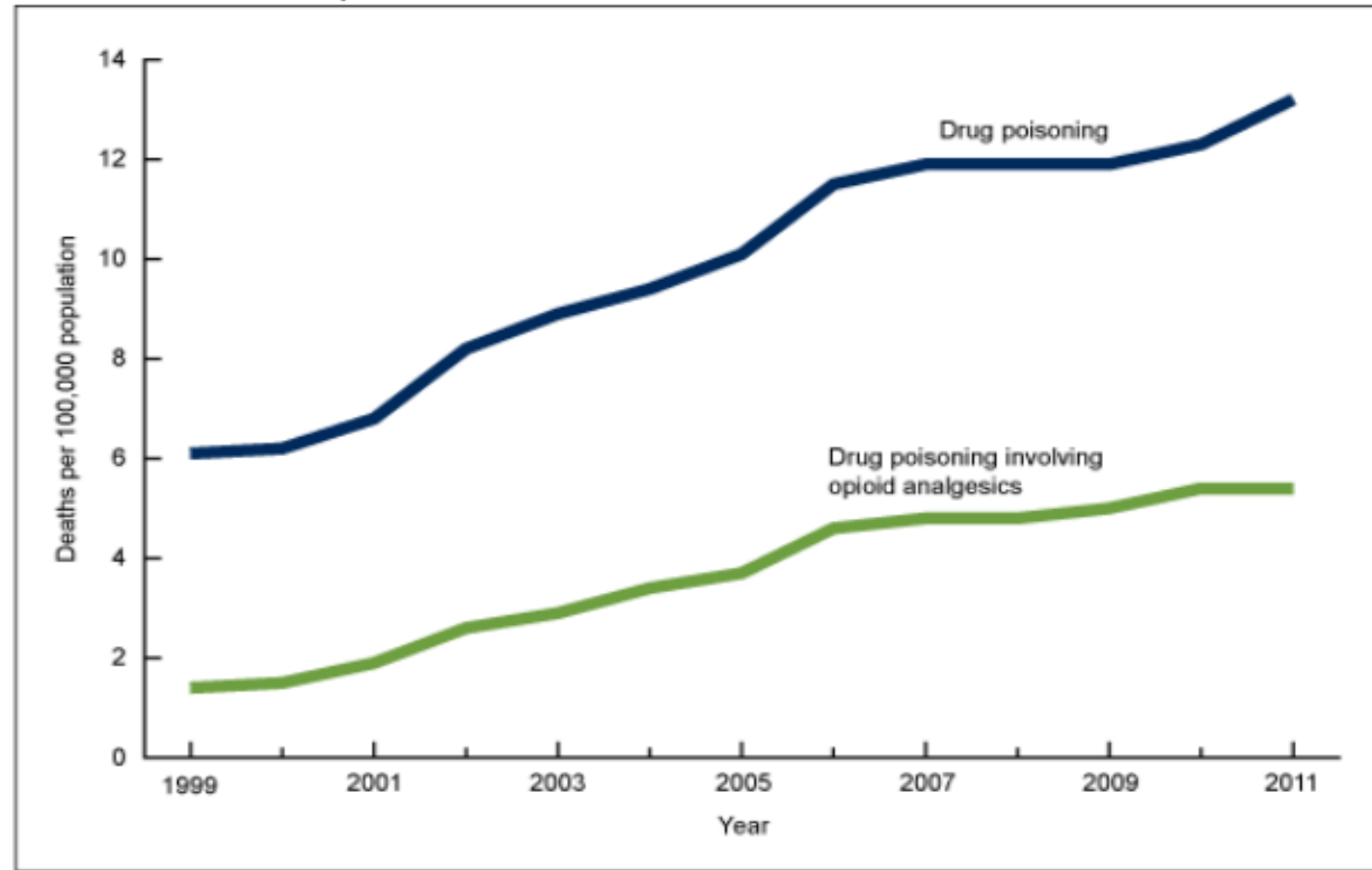


More Drug Production = More Drug Abuse But - the Slope Varies by Drug



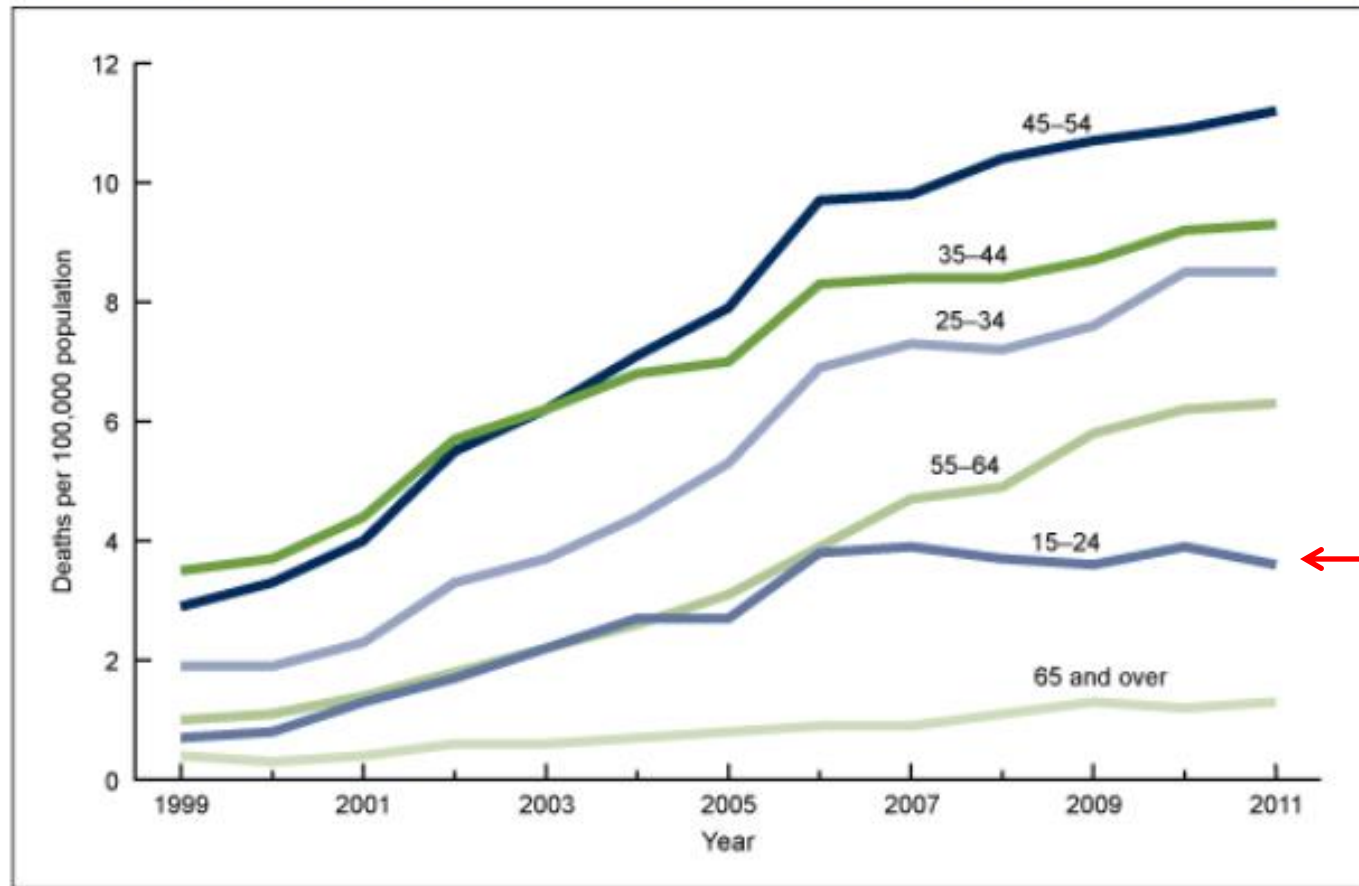
Age-adjusted drug poisoning and opioid analgesic poisoning death rates: US, 1999-2011

Figure 1. Age-adjusted drug-poisoning and opioid-analgesic poisoning death rates: United States, 1999–2011



Opioid analgesic poisoning death rates by age group: US, 1999-2011

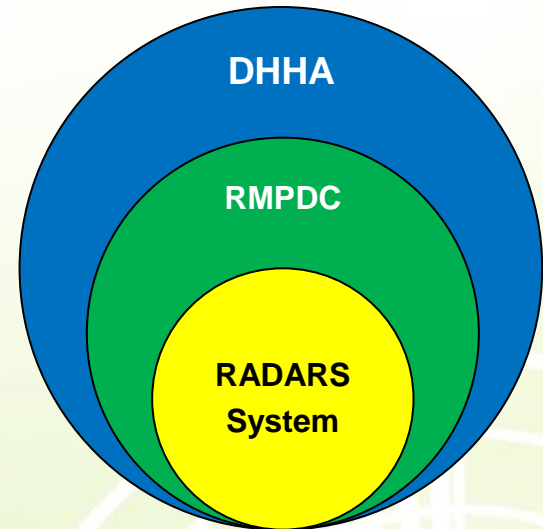
Figure 4. Opioid-analgesic poisoning death rates, by age group: United States, 1999–2011



What About Prescription Opioid Abuse in 2014?

What is the RADARS® System?

- 2002, Purdue Pharma
- 2006, Denver Health and Hospital Authority
 - Rocky Mountain Poison and Drug Center
 - Denver Public Hospital for 150 years
 - State sanctioned independent authority
- Most companies with an opioid product on the US market are subscribers.



Conflict of Interest Statement

- Most manufacturers of prescription opioids or stimulants subscribe to RADARS System.
- RADARS System is the property of Denver Health and Hospital Authority, a political subdivision of the State of Colorado.
- Subscribers receive information, but do not participate in developing the System, data collection, or analysis of the data. They do not have access to the raw data.
- Employees are prohibited from personal financial relationships with any company.

Mosaic Surveillance of Prescription Drug Abuse

Acute Health Events

49 Poison centers
46 states
456,610 cases
491,874 opioid mentions

Drug Transactions

Criminal Justice
260 agency; 49 states
145,090 cases with
146,786 opioid mentions

Entering Treatment

Opioid Tx Program
66 programs; 34 states
41,031 cases with
183,573 opioid mentions

Entering Treatment

SKIP
109 practices, 45 states
10,214 cases with
64,678 opioid mentions

New Initiates

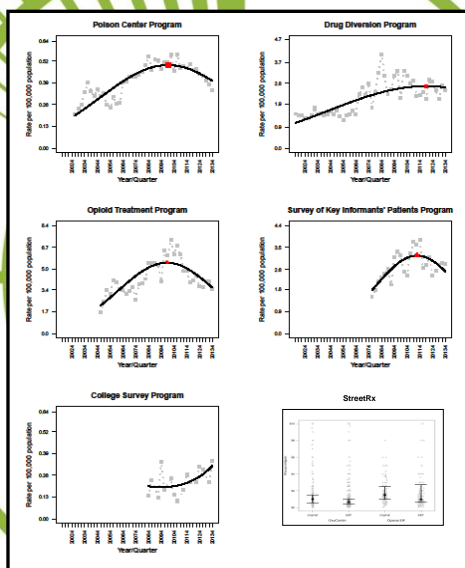
College Survey
2000 students, 50 state
3,564 cases with
11,871 opioid mentions

Illicit Market Price

StreetRx.com
Users/Buyers, 50 states
8,441 price entries for
an opioid

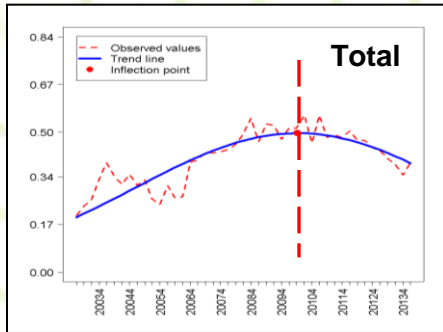
Web Monitoring

> 150 million sites
monitored
> 35,000 posts
coded for analysis

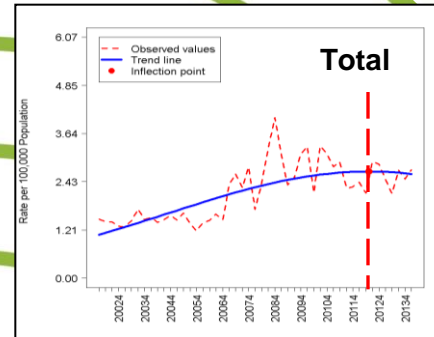


Opioid Analgesic Trends in the United States, 2014 Q1

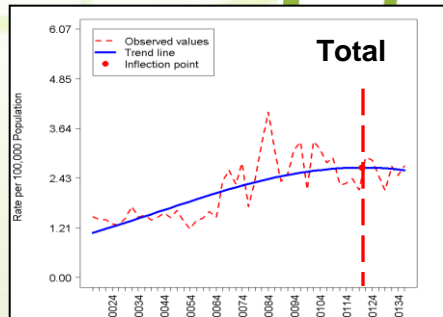
Poison Center Program



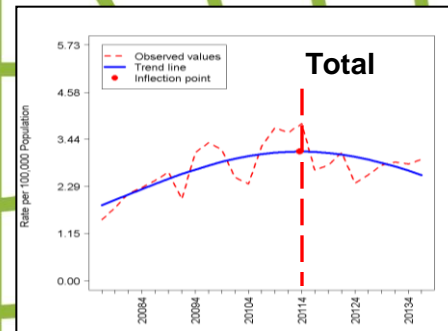
Drug Diversion Program



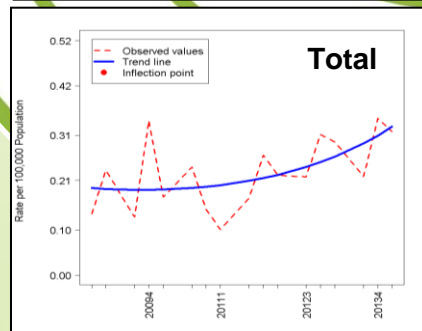
Opioid Treatment Program



Survey of Key Informant Patients



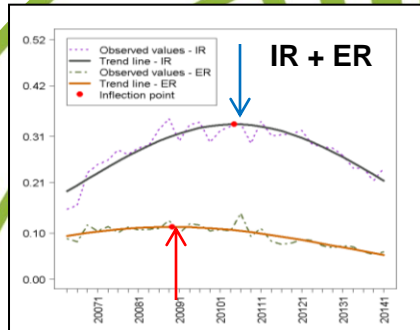
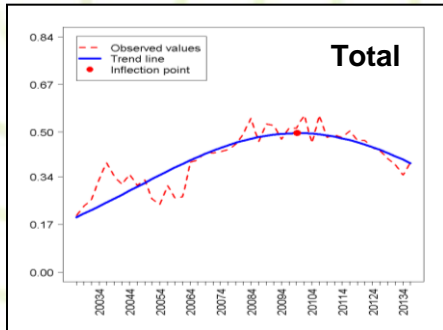
College Survey Program



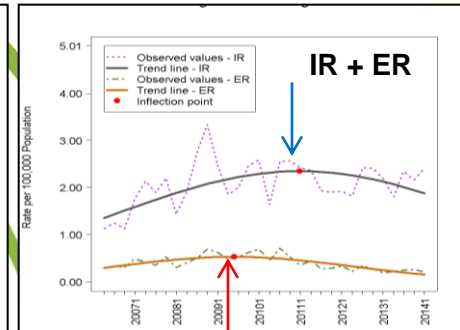
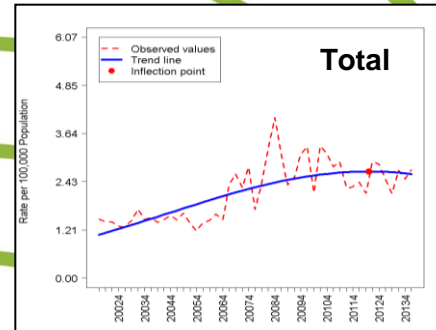
Analgesic group:
oxycodone,
hydrocodone,
hydromorphone,
fentanyl,
morphine, and
tramadol

Opioid Analgesic Trends in the United States, 2014 Q1

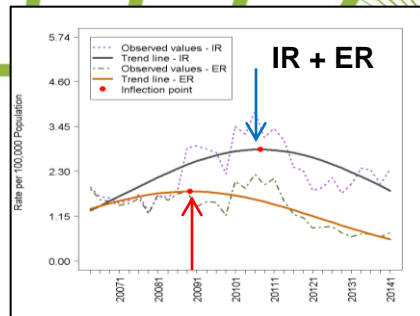
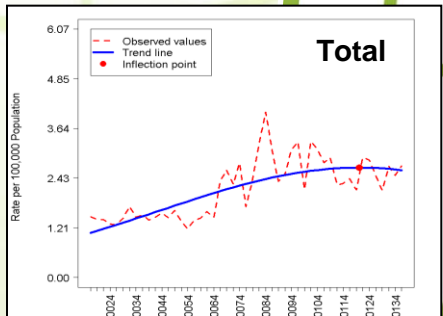
Poison Center Program



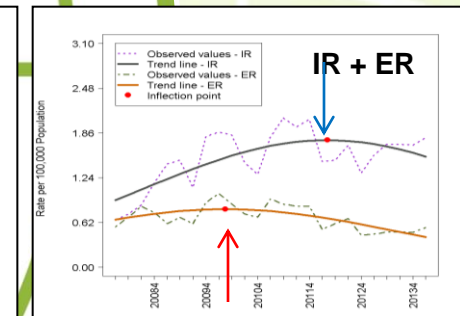
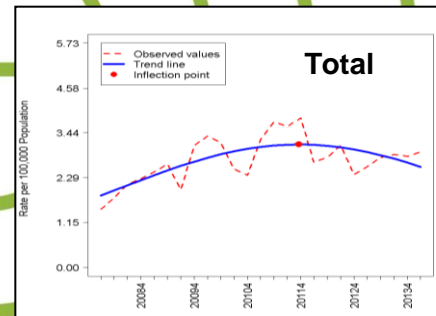
Drug Diversion Program



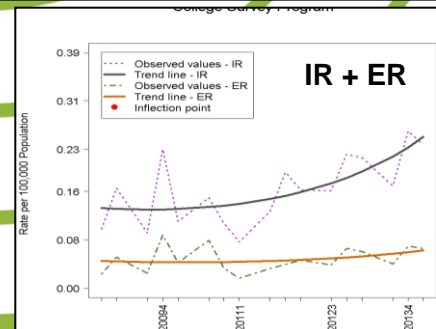
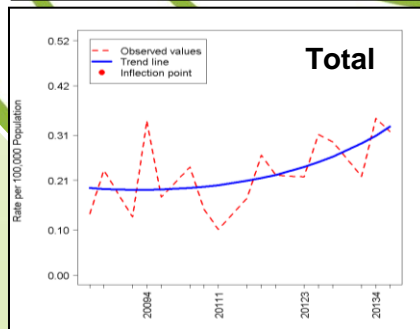
Opioid Treatment Program



Survey of Key Informant Patients



College Survey Program



Analgesic group:
oxycodone,
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StreetRx: Oxycodone ADF in US and Canada

Formulation	United States		Canada	
	Number reports	Reported Median Price per mg, US Dollar (range)	Number reports	Reported Median Price per mg, Canadian Dollar (range)
Crushable “Old OxyContin”				
Apo-Oxycodone CR	24	1.00 (0.15 – 16.80)	1	1.00 (NR)
OxyContin®	93	1.00 (0.06 – 10.00)	16	1.00 (0.54 – 6.00)
Co-Oxycodone CR	11	1.00 (0.30 – 4.00)	0	NR
Teva-Oxycodone CR	4	0.88 (0.10 – 3.75)	0	NR
Average		1.00		1.00
Abuse Deterrent “New OxyContin”				
Oxycodone ER (OxyContin in US, OxyNEO in Canada)	277	0.63 (0.03 – 10.00)	15	0.75 (0.38 – 1.40)
Average		0.63		0.75

What Caused the Change in Rates of Abuse?

- Law Enforcement
- Risk Evaluation and Mitigation Strategy (REMS)
- Abuse Deterrent Formulations (e.g. reformulated OxyContin)
- Prescription Monitoring Plans (PMP)
- Changes in Physician Prescribing Behavior
- Public education

Urban Solutions



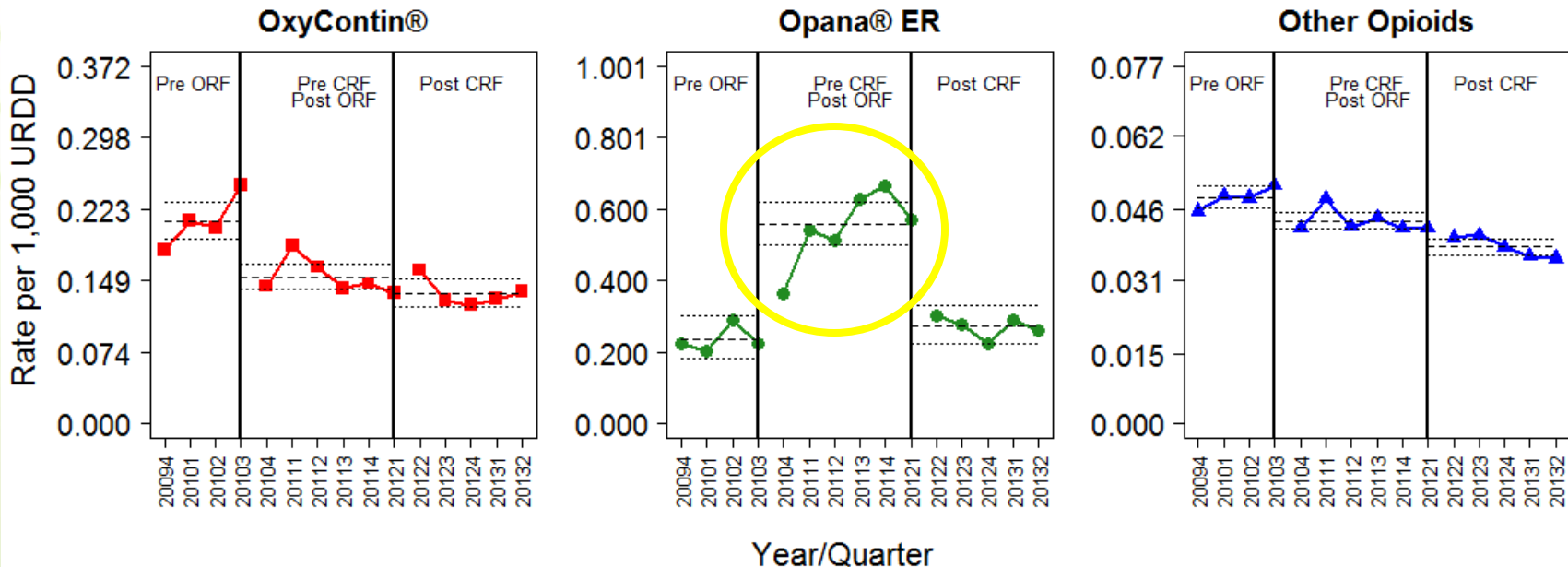
DARS®
SYSTEM



Poison Center Program (U.S.)

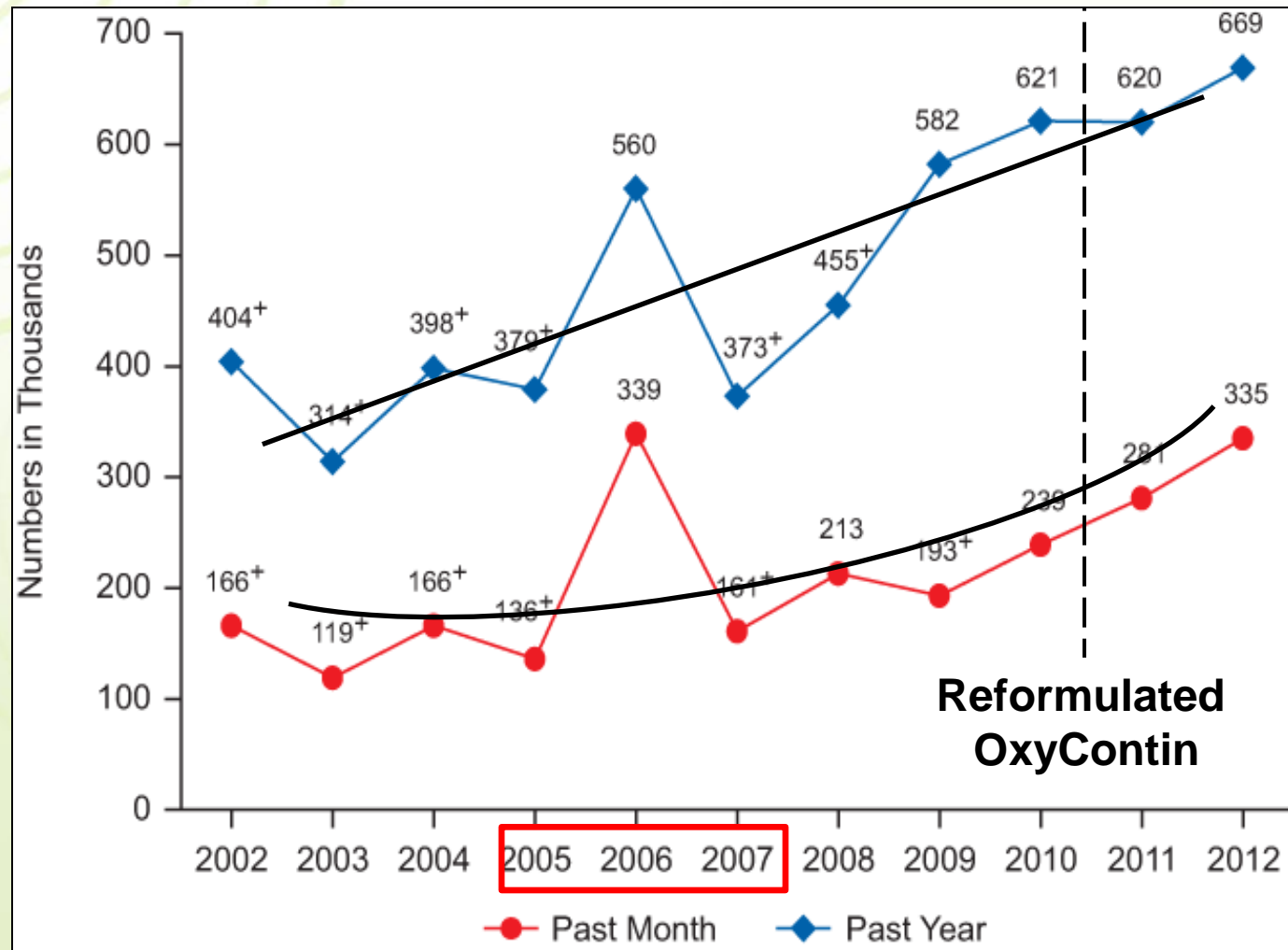
Contacts Involving Intentional Abuse

OxyContin®, Opana® ER, Other Opioids



Intentional abuse: an exposure resulting from intentional, improper or incorrect use of a substance where the victim was likely attempting to achieve a high, euphoric effect or some other psychotropic effect.

Heroin Endorsement – National Survey of Drug Uses and Health, 2002 - 2012



Conclusions

- Prescription drug abuse may be decreasing in the United States
- An established population of dependent or addicted people has developed.
- Squeezing the balloon - other drugs of abuse like heroin may be increasing
- Impact of legalized marijuana?

Collaborators

- Hilary L. Surratt, Drug Diversion Program, Nova Southeastern University
- Theodore J. Cicero, Survey of Key Informant Patients, Washington University
- Mark W. Parrino, Opioid Treatment Program, American Association for Treatment of Opioid Dependence
- S. Geoff Severtson, RADARS System
- Becki Bucher-Bartelson, RADARS System
- Jody L. Green, RADARS System