

ICPE: What Have We Learned About the Impact of Policies in North America?



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Montreal, Canada

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Competing Interest Statement

History

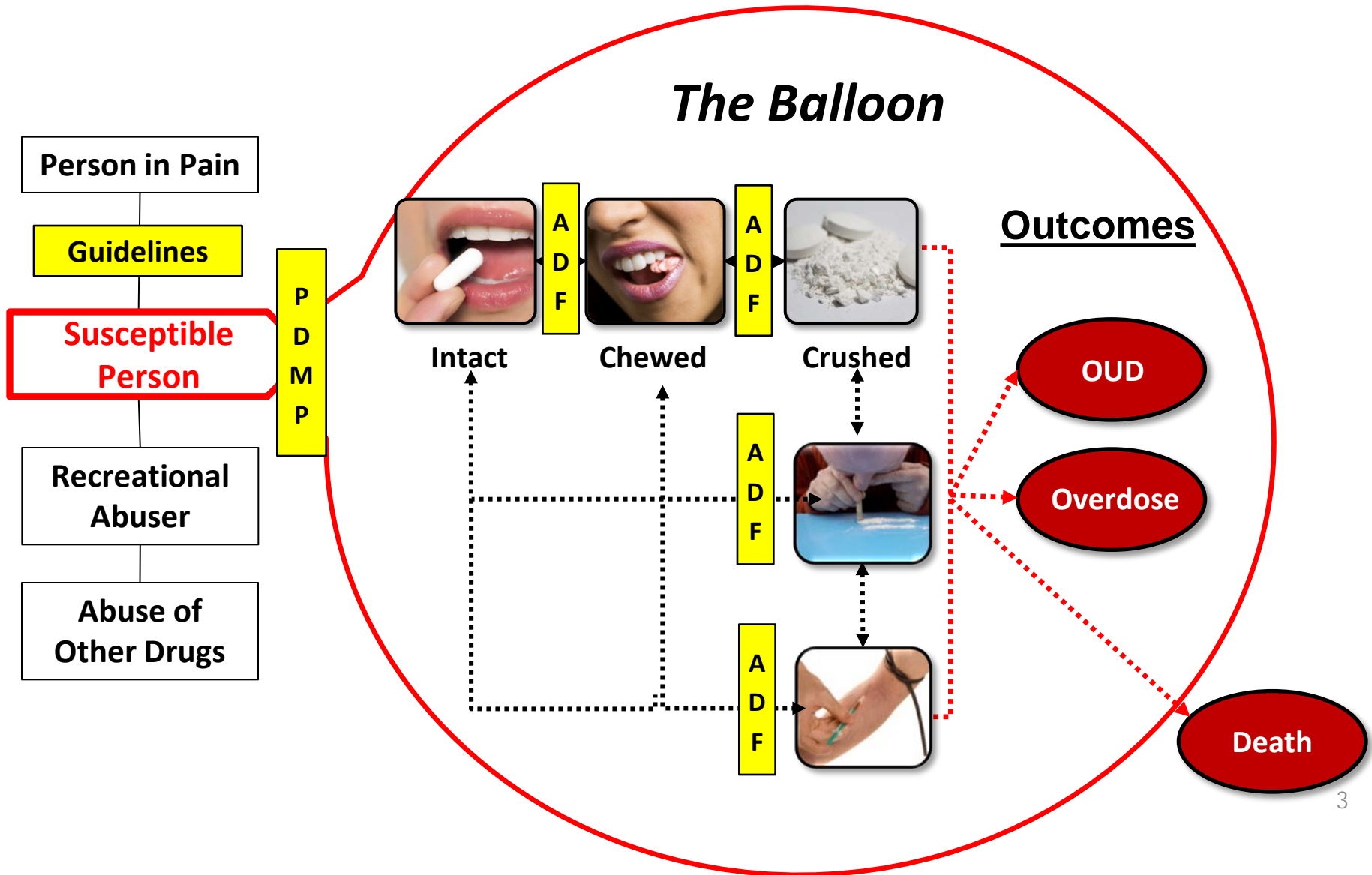
- 2002, launched by Purdue Pharma L.P.
- 2006, independent ownership by Denver Health and Hospital Authority
 - Denver Public Hospital for 150 years
 - State sanctioned independent authority



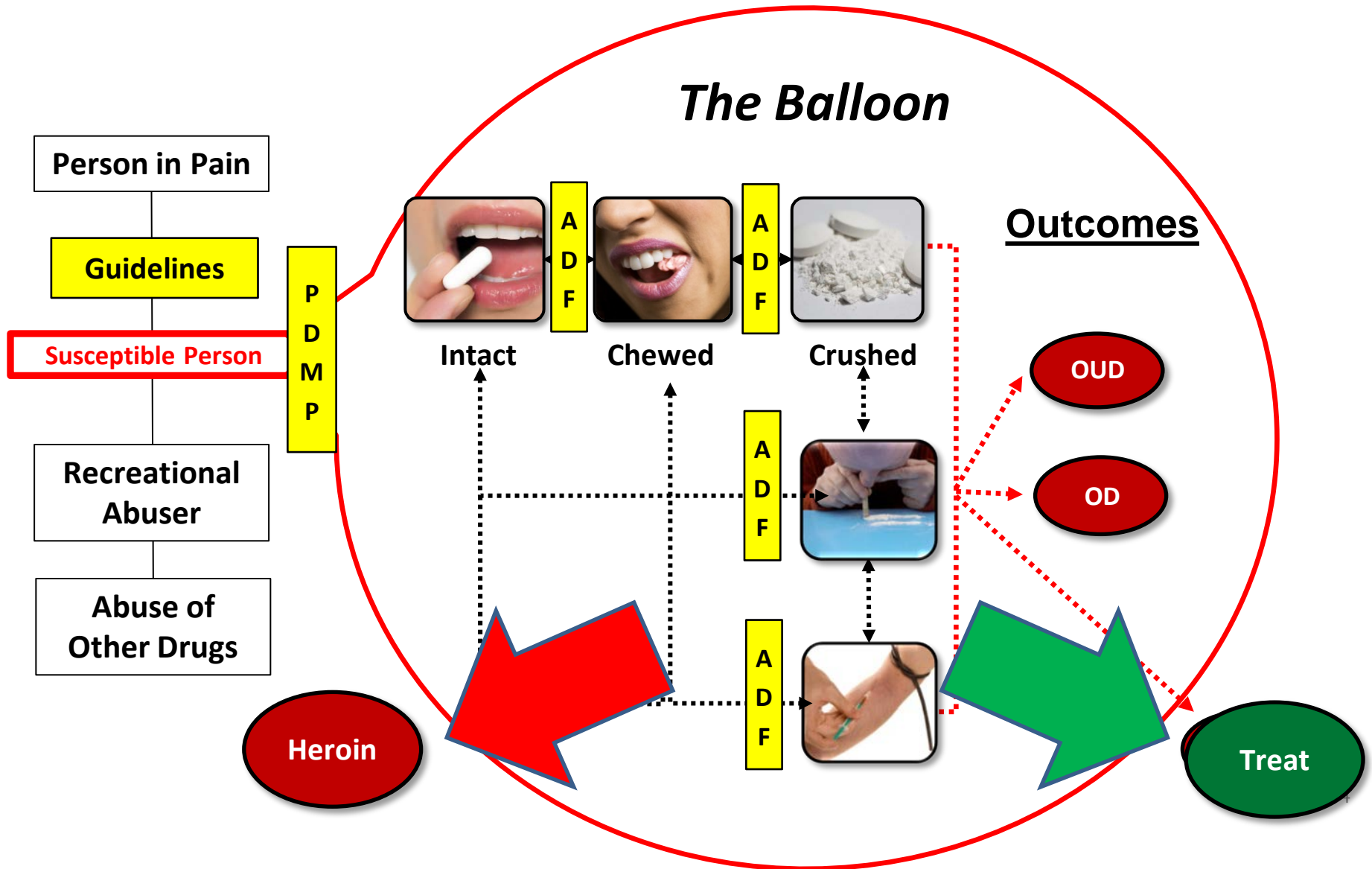
Conflict of Interest Statement

- Many manufacturers of prescription opioids or stimulants as well as federal agencies 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.

Progression of Prescription Opioid Abuse

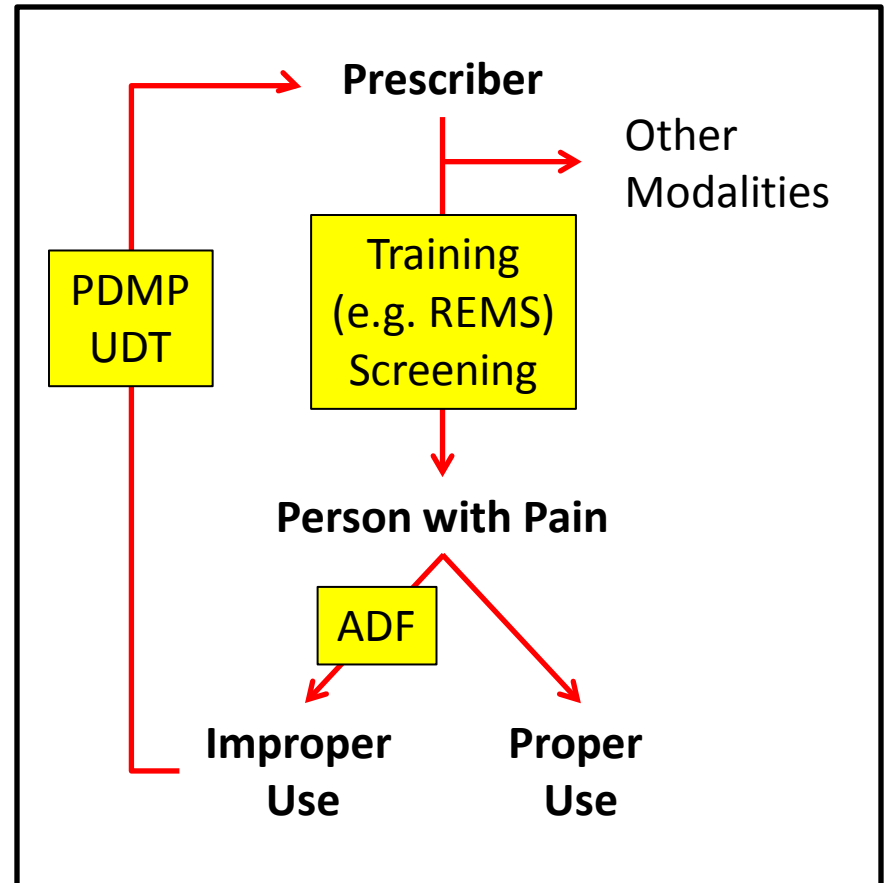


Progression of Prescription Opioid Abuse



A Prescriber Needs Several Tools to Treat Chronic Pain

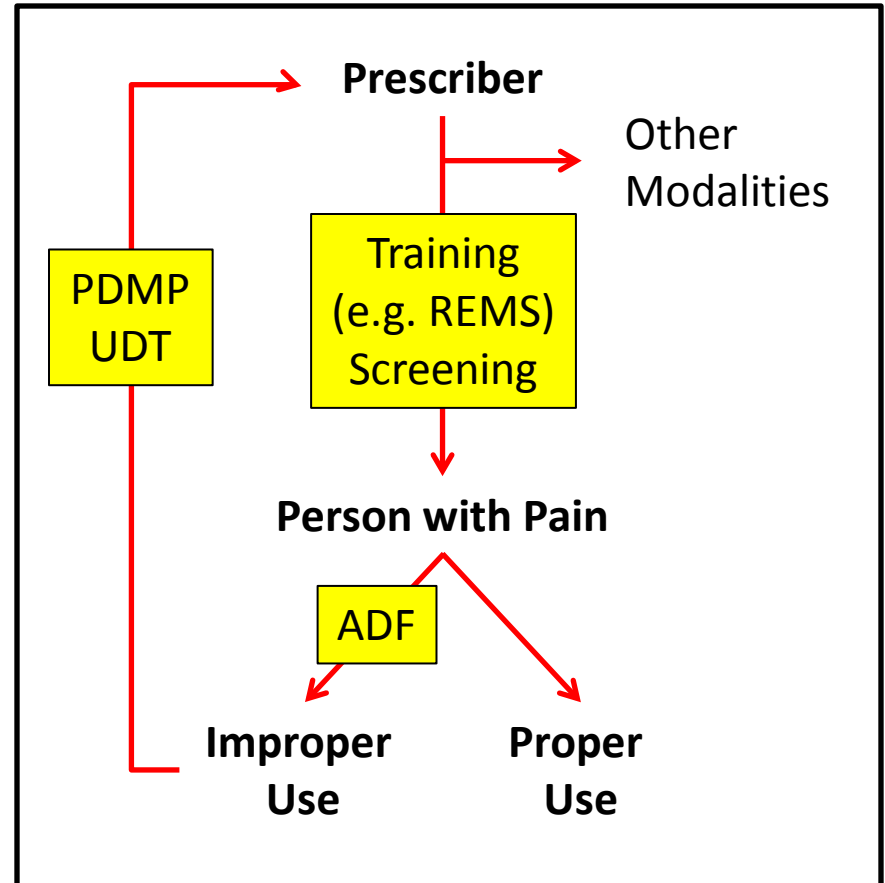
- **Interventions**
 - Training
 - ADF
 - PDMP
 - Urine Drug Testing
 - Law Enforcement
- Which of these have the most data to support their use?



A Prescriber Needs Several Tools to Treat Chronic Pain

- **Interventions**

- **Training**
- **ADF**
- **PDMP**
- **Urine Drug Testing**
- **Law Enforcement**



Do abuse deterrent opioid formulations work?

Richard C. Dart, MD, PhD; Janetta L. Iwanicki, MD; Nabarun Dasgupta, PhD;
Theodore J. Cicero, PhD; Sidney H. Schnoll, MD, PhD

- *Does the introduction of an opioid analgesic with abuse deterrent properties result in reduced overall abuse of the drug in the community?*
- Analgesics with FDA approved labelling for abuse deterrent properties (hydrocodone, morphine, oxycodone)
- Results categorized using Bradford-Hill criteria.

Dart, et al. J Opioid Manage 2017: In press

Bradford-Hill AB. The Environment and Disease: Association or Causation? *Proc Royal Soc Med.* 1965;58:295–300.

Systematic Review

- 45 articles containing original data
- Dart, Iwanicki, Dasgupta, Cicero, Schnoll

Hill Factor	Description
Strength (effect size):	Effect size positive, ranging from 27% to 90% reduction in a measure of abuse.
Consistency (reproducibility):	Strikingly similar results in 3 different countries after reformulation in 2010 (US), 2012 (Canada), 2014 (Australia)
Specificity	Variety of comparators used – all significantly different from reformulated oxycodone ER
Temporality	Reduction in a variety of endpoints after introduction of reformulated oxycodone ER
Plausibility	FDA Categories 1-3
Coherence	All results to date are coherent with Category 1-3 studies
Biological Gradient, Experiment, Analogy: N/A	
Additional Criteria	
Confounding and/or Bias	No plausible alternative explanation for events at 3 different times in 3 different countries

Systematic Review

Hill Factor	Description
Strength (effect size):	Effect size varied by study, ranging from 27% to 90% reduction in a measure of abuse.
Consistency (reproducibility):	Decrease in measures of abuse was strikingly similar results in 3 different countries after reformulation in 2010 (US), 2012 (Canada), 2014 (Australia)
Specificity	Variety of comparators used – all significantly different from reformulated oxycodone ER
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Specificity	Variety of comparator drugs were used – consistently different from reformulated oxycodone ER
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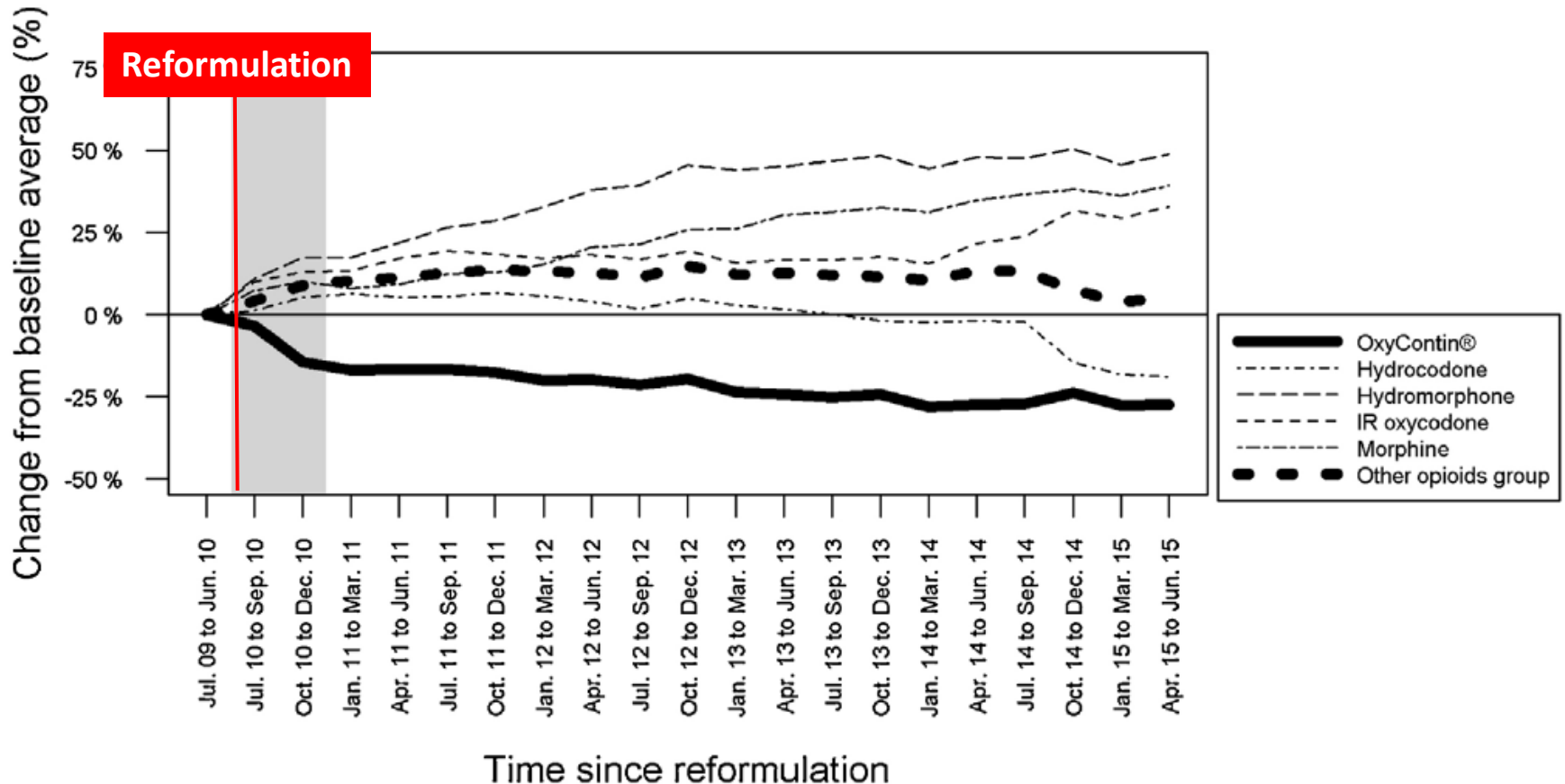
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Temporality	Reduction in a variety of endpoints temporally related to introduction of reformulated oxycodone ER
Plausibility	FDA Categories 1-3 (human abuse liability studies)
Coherence	All results to date are coherent with Category 1-3 studies
Biological Gradient, Experiment, Analogy: N/A	
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Plausibility	FDA Categories 1-3
Coherence	All results to date are coherent with Category 1-3 studies
Biological Gradient, Experiment, Analogy: N/A	
Additional Criteria	
Confounding and/or Bias	No alternative explanation that plausibly explains similar events at 3 different times in 3 different countries specific to oxycodone ER

Opioid Analgesic Prescriptions Dispensed in the United States, April 1, 2009 to June 30, 2015

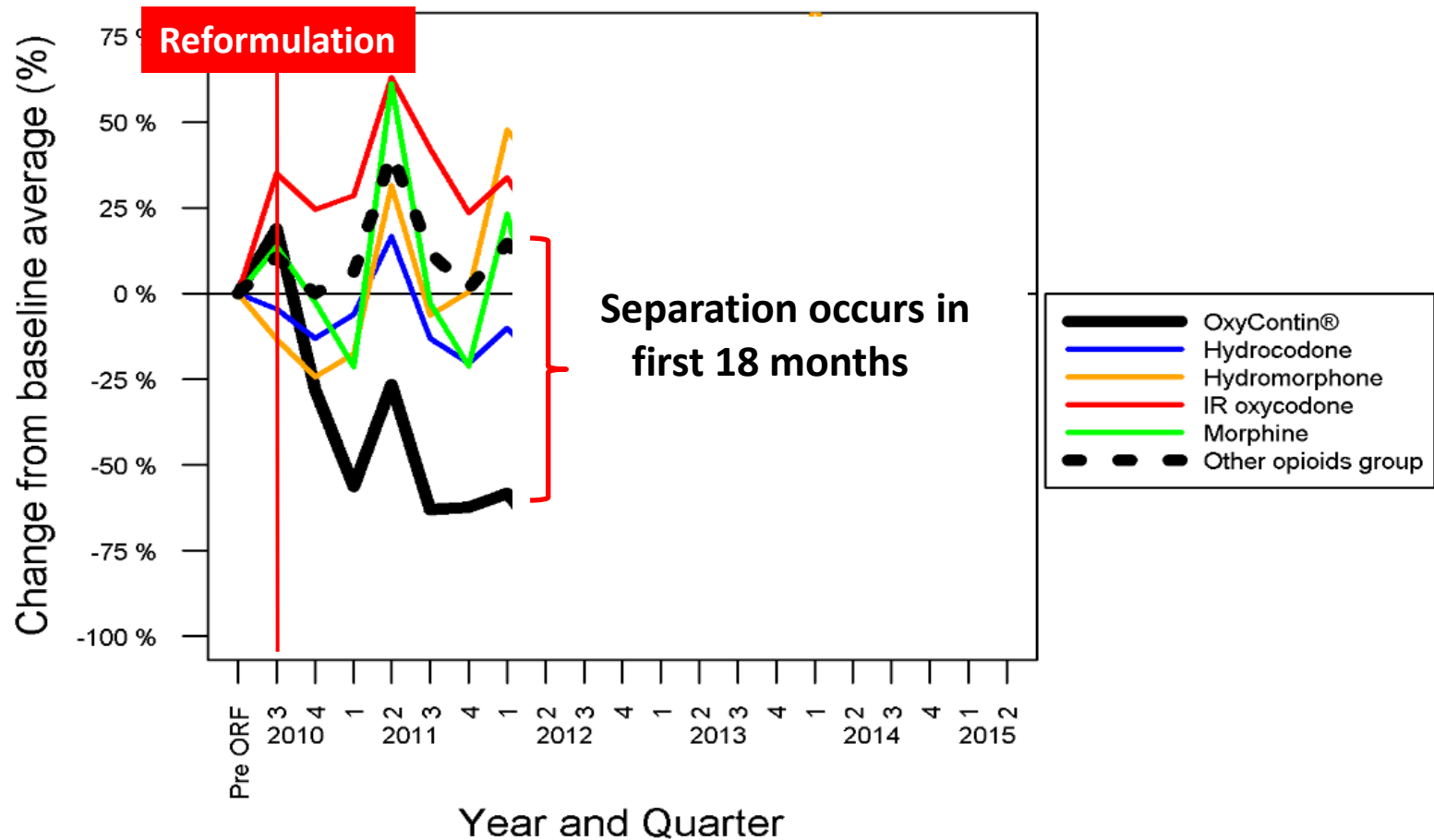


Severtson SG, et al. Drug Alcohol Depend 2016;168:219–229

RADARS Opioid Treatment Program

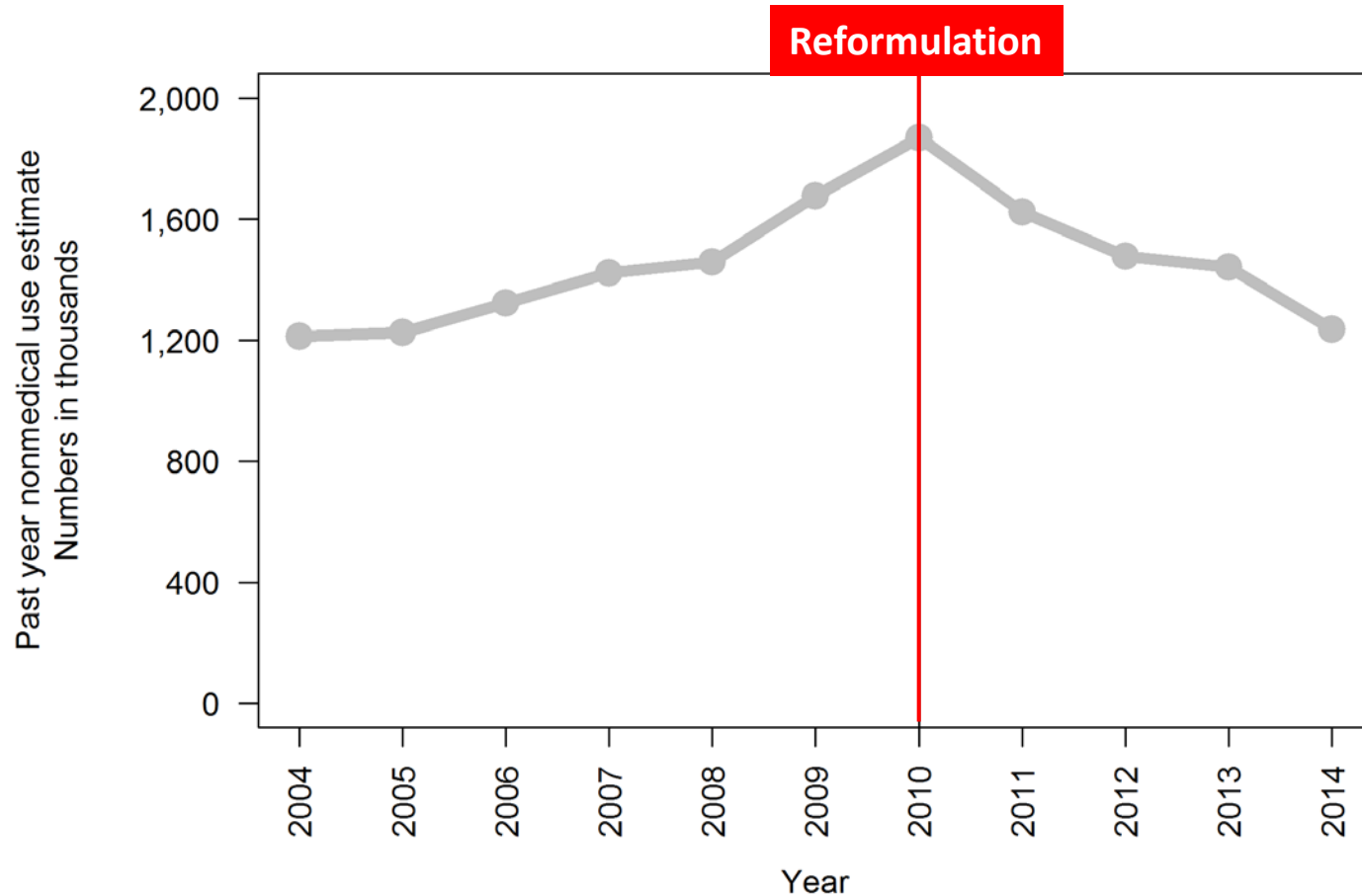
Drugs Used in Past 30 Days, 2009 - 2015

- 115 Substance abuse treatment programs in 37 states

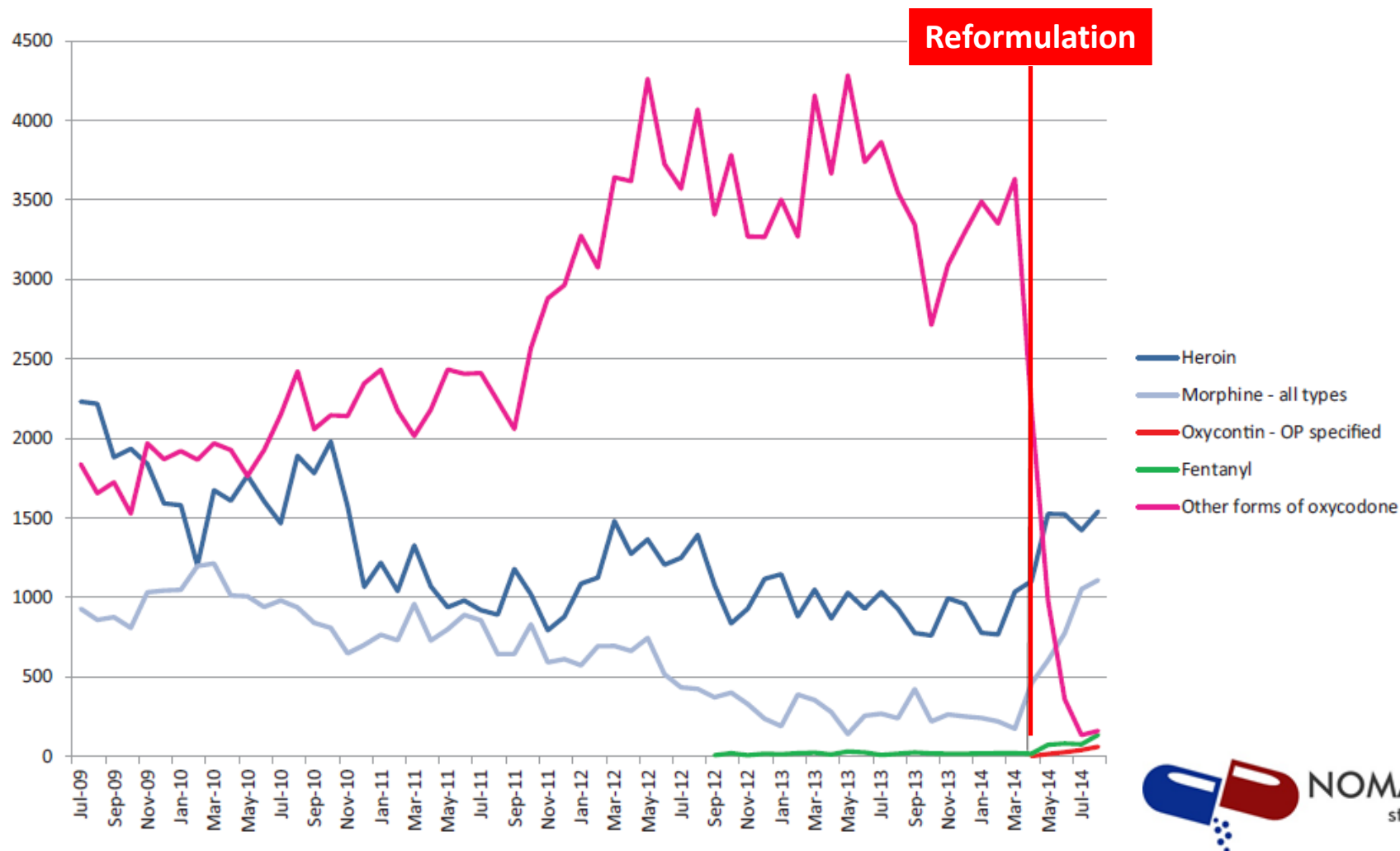


Past Year Nonmedical Use of OxyContin

National Survey Drug Use and Health, 2006–2014



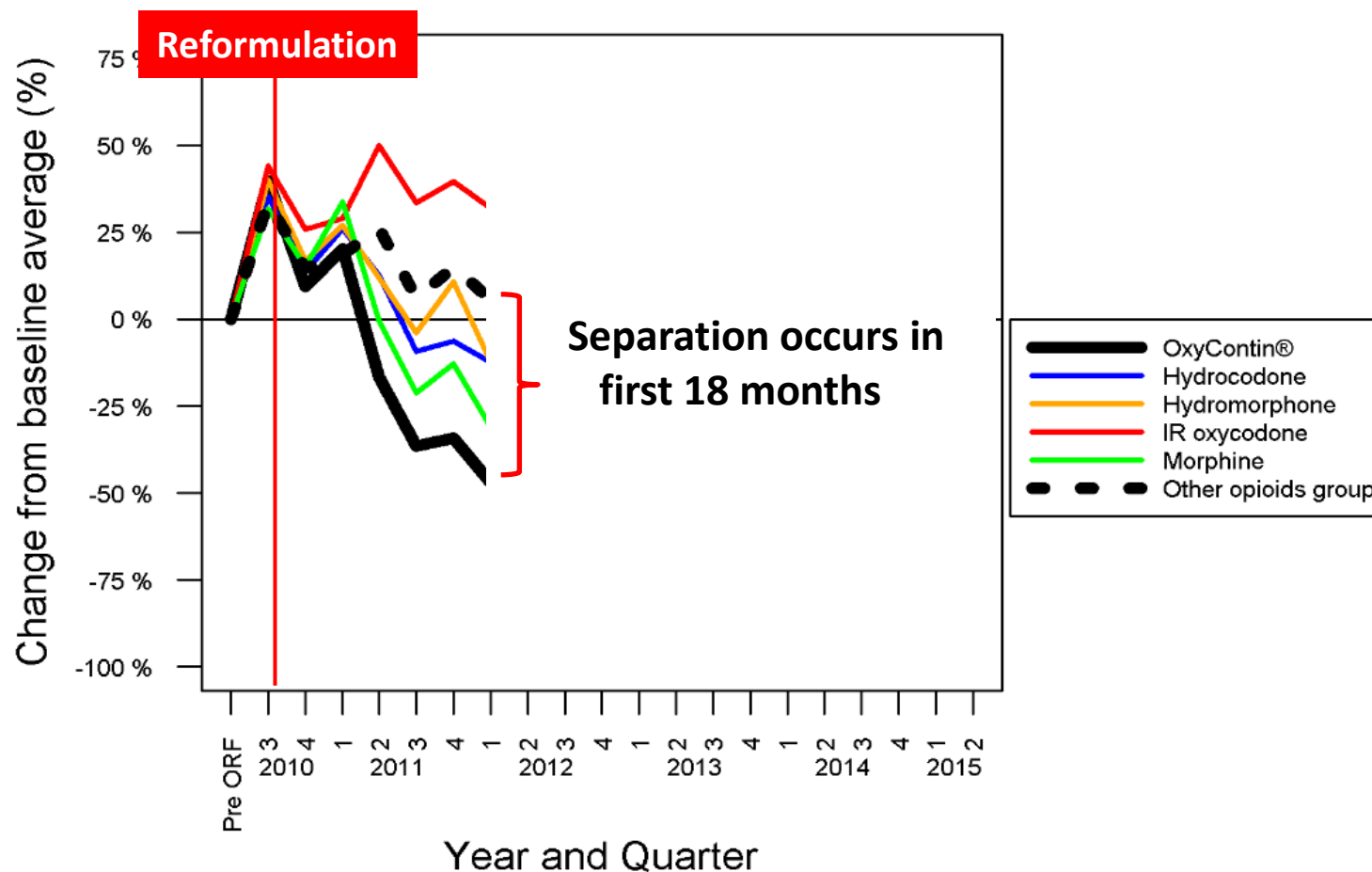
Sydney Medically Supervised Injecting Centre (MSIC), July 2009–August 2014



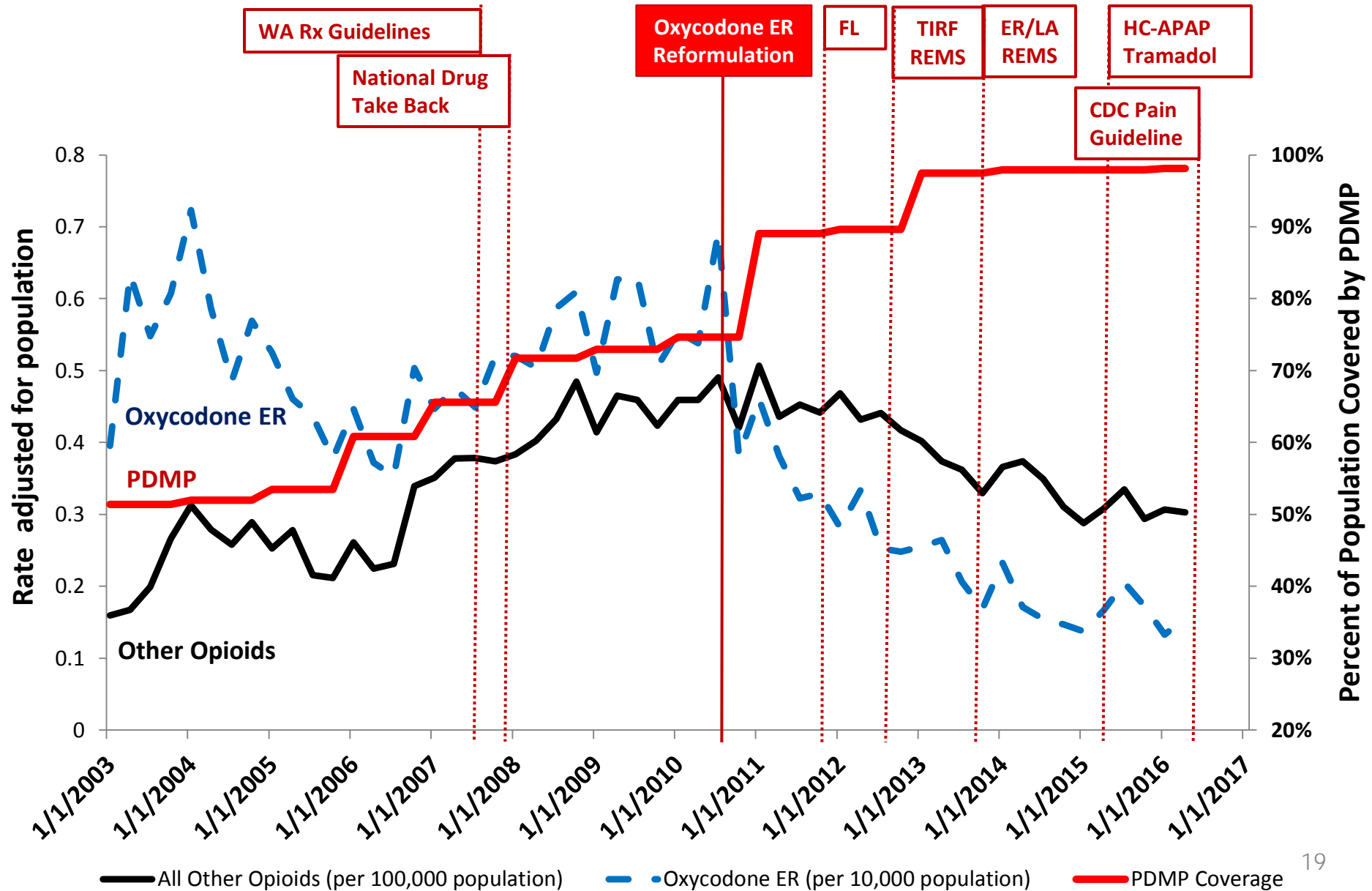
RADARS Drug Diversion Program

Drugs Involved, past 90 days, 2009 - 2015

- 250 law enforcement investigators in 49 states



Confounding Main Challenge to Interpretation of ADF Data



Problems with a Reactionary Agenda



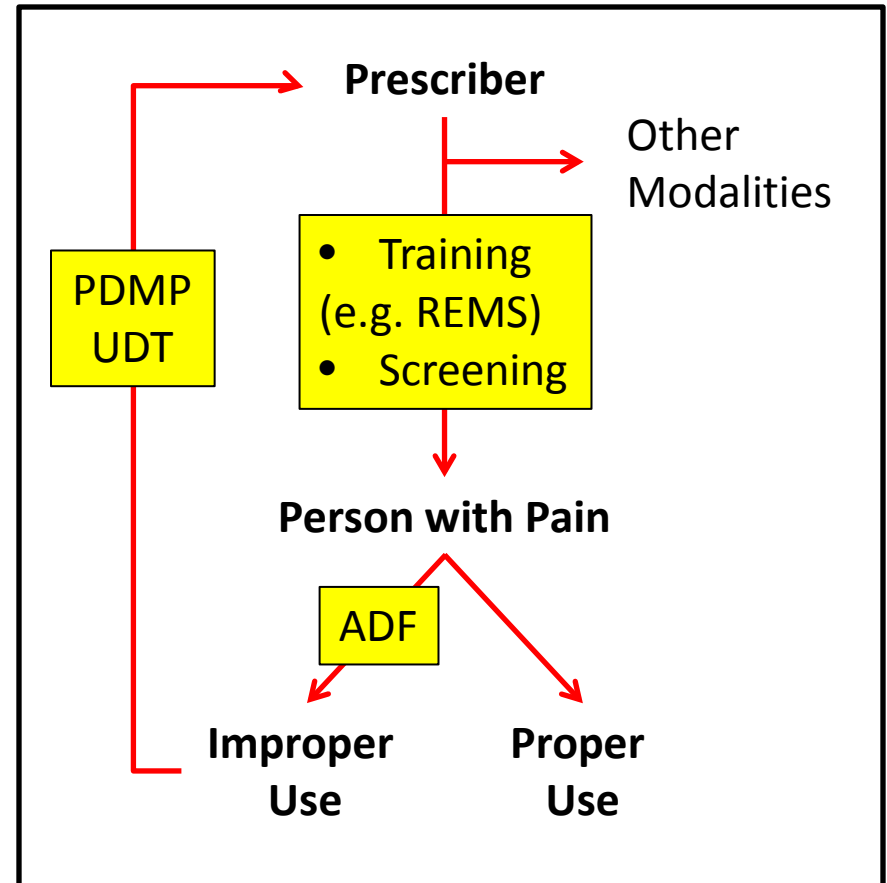
- “OxyContin is the Problem”
- “Heroin (fentanyl) is the Problem”
- **The core problem is human frailty and susceptibility to opioids (or perhaps to mind altering substances in general).**

Until we successfully address that issue, we will be limited to the Whack-a-Mole strategy.



Public Health Strategies

- Reduce demand
 - Healthy communities
 - ADFs
- Reduce supply
 - Appropriate prescribing
 - Prescriber training
- Intervene early
 - ADFs
 - PDMP
 - UDT
 - Substance Abuse Treatment programs
- Remember the patient



THANK YOU