

RADARS® System
Buprenorphine
2012 Annual Meeting
College on Problems of Drug
Dependence

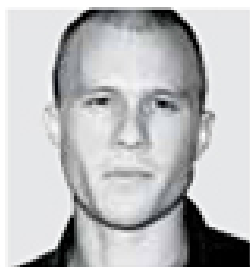
Richard Dart, MD, PhD
Director – Rocky Mountain Poison and Drug Center
Professor, University of Colorado, Department of Emergency
Medicine



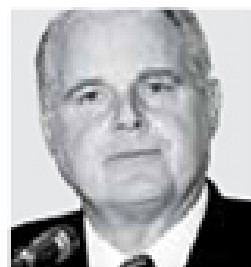
Opioids and the Stars

Some celebrities have been publicly linked with use of these powerful painkillers (in several cases, with more than one such medication).

Reported past users of OxyContin, generic oxycodone, or Percocet (which consists of oxycodone and acetaminophen):



Heath Ledger
(actor; oxycodone was in his blood when he died)



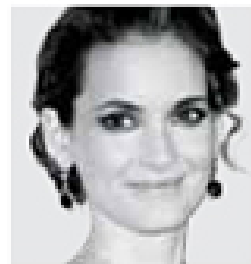
Rush Limbaugh
(radio talk show host)



Courtney Love
(singer)



Cindy McCain
(businesswoman, wife of Sen. John McCain)



Winona Ryder
(actress)



Steven Tyler
(singer, *American Idol* judge)

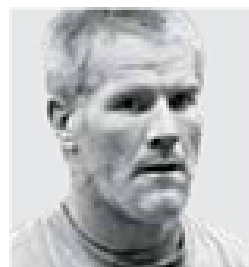
Reported past users of hydrocodone, which is chemically similar to oxycodone, including Vicodin (which consists of hydrocodone and acetaminophen)



Jamie Lee Curtis
(actress)



Eminem
(singer)



Brett Favre
(retired football star)



Walter Payton
(late football legend)



Matthew Perry
(actor)



Nicole Richie
(reality TV personality)

PHOTOS: ZUMA PRESS (LEDGER, TYLER); ETHAN MILLER/GETTY (LIMBAUGH); JIM SPELLMAN/GETTY (LOVE); RONALD MARTINEZ/GETTY (FAVRE); STEVE GRANITZ/GETTY (CRITCHIE, PERRY, RYDER); JOHN BIEVER/GETTY (PAYTON); ALLEN BEREZOVSKY/GETTY (CURTIS); FRAZER HARRISON/GETTY (MCCAIN); SAM SNAP/GETTY (EMINEM)

Objectives

- How has availability of buprenorphine expanded?
- Is Suboxone an abuse deterrent formulation?
- Misuse and abuse of buprenorphine in high risk populations
- What happens to innocent bystanders?



What is the RADARS[®] System?

- History
 - 2006, Acquired by Denver Health and Hospital Authority
 - Multiple pharmaceutical subscribers
 - Independent program
 - Denver Public Safety Net Hospital for 150 years
 - State sanctioned independent authority
- Purpose
 - Measure rates of misuse, abuse and diversion of prescription drugs



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STEM 10th ANNIVERSARY



**Poison
Center**

Acute Events
49 Centers
46 States

Drug Diversion

Criminal Justice
280 investigator
50 states

**Opioid Tx
Program
(OTP)**

Patients in Tx
73 programs
33 states



**Survey of Key
Informants'
Patients (SKIP)**

Patients in Tx
125 practices
50 states

**College
Survey**

2000 students
50 States
3x each year

StreetRx

www.streetrx.com

Users/Buyers
Crowdsourcing
50 states

RADARS[®]
SYSTEM



RADARS[®] System Process

Adding the Denominator



Numerators compiled by each program

Two Denominators:

1. Population

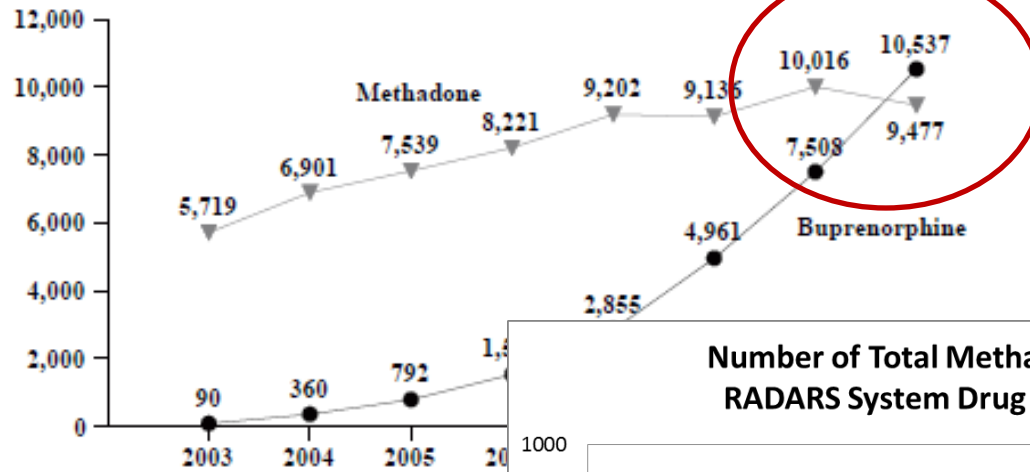
Tried and true - Disease burden on whole population
Does not account for drug availability

2. Unique Recipients of Dispensed Drug (URDD)

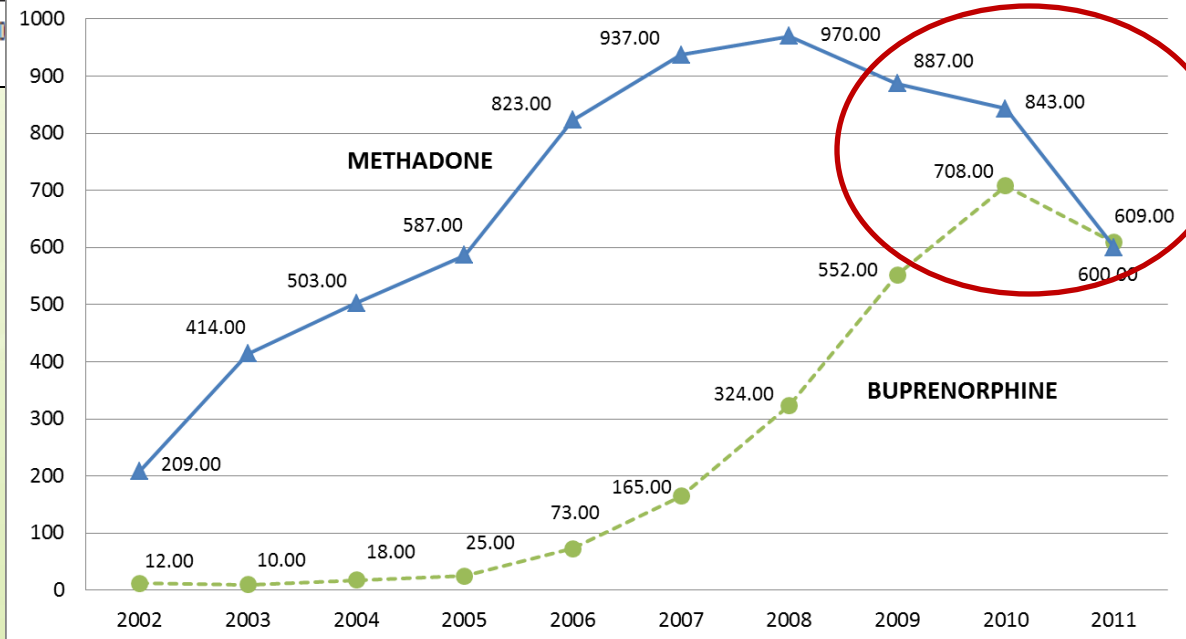
Number of unique people filling prescription for drug
Accounts for availability of drug in community
Relates events to corresponding patient benefit
Alternatives – pill count, total mgs of drug

Buprenorphine Data Comparison RADARS System & CESAR Fax

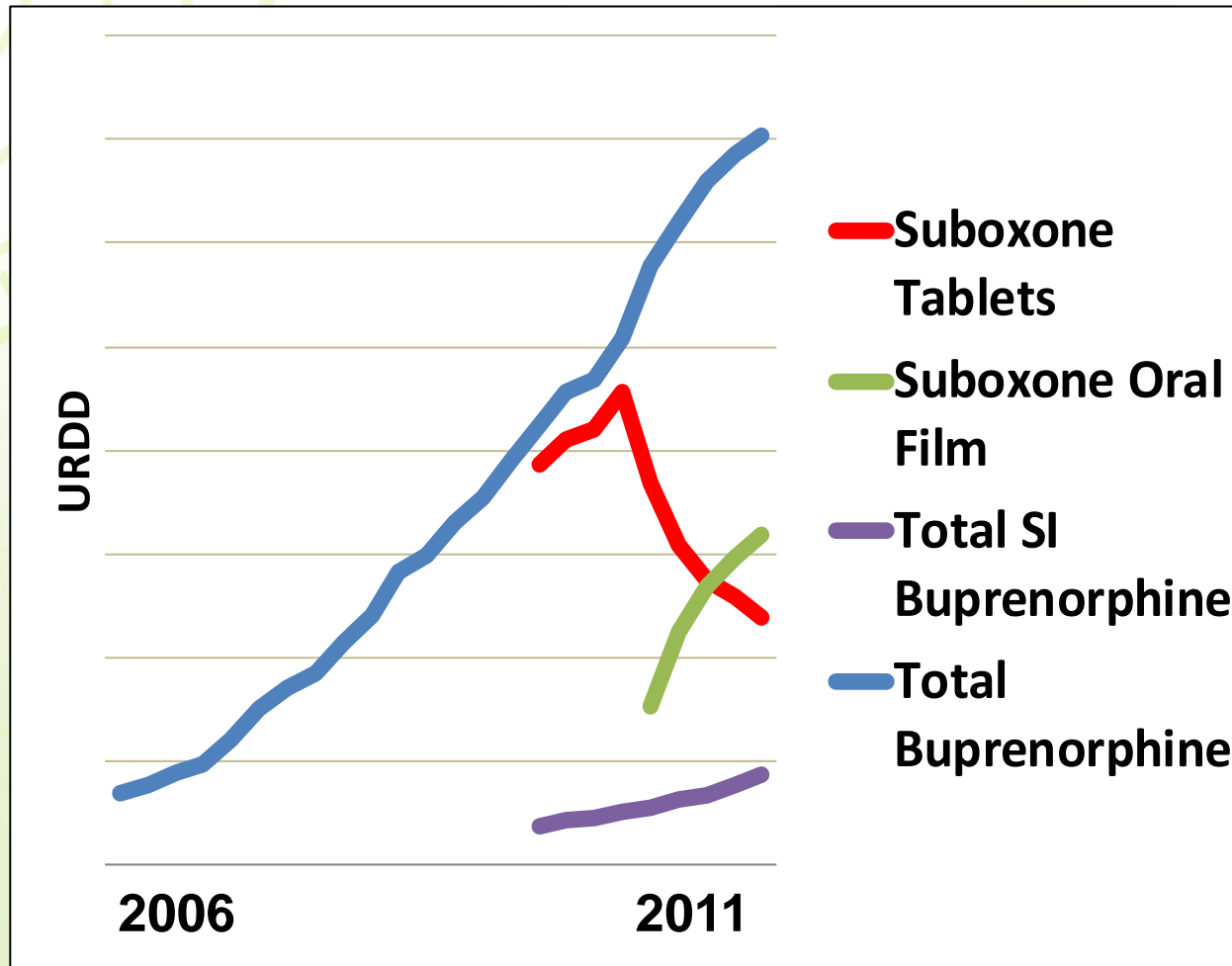
Estimated Number of Total Methadone and Buprenorphine Reports,
U.S. Law Enforcement-Seized Drug Exhibits Analyzed by Forensic Laboratories, 2003-2010



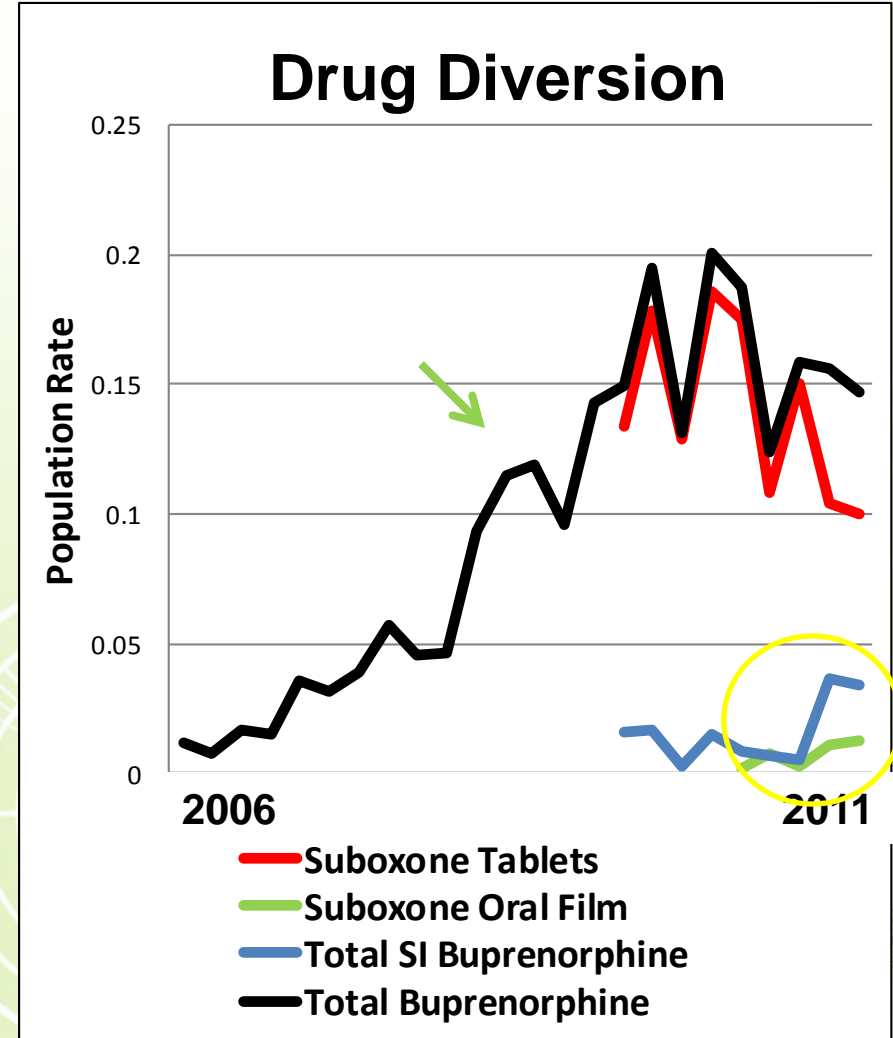
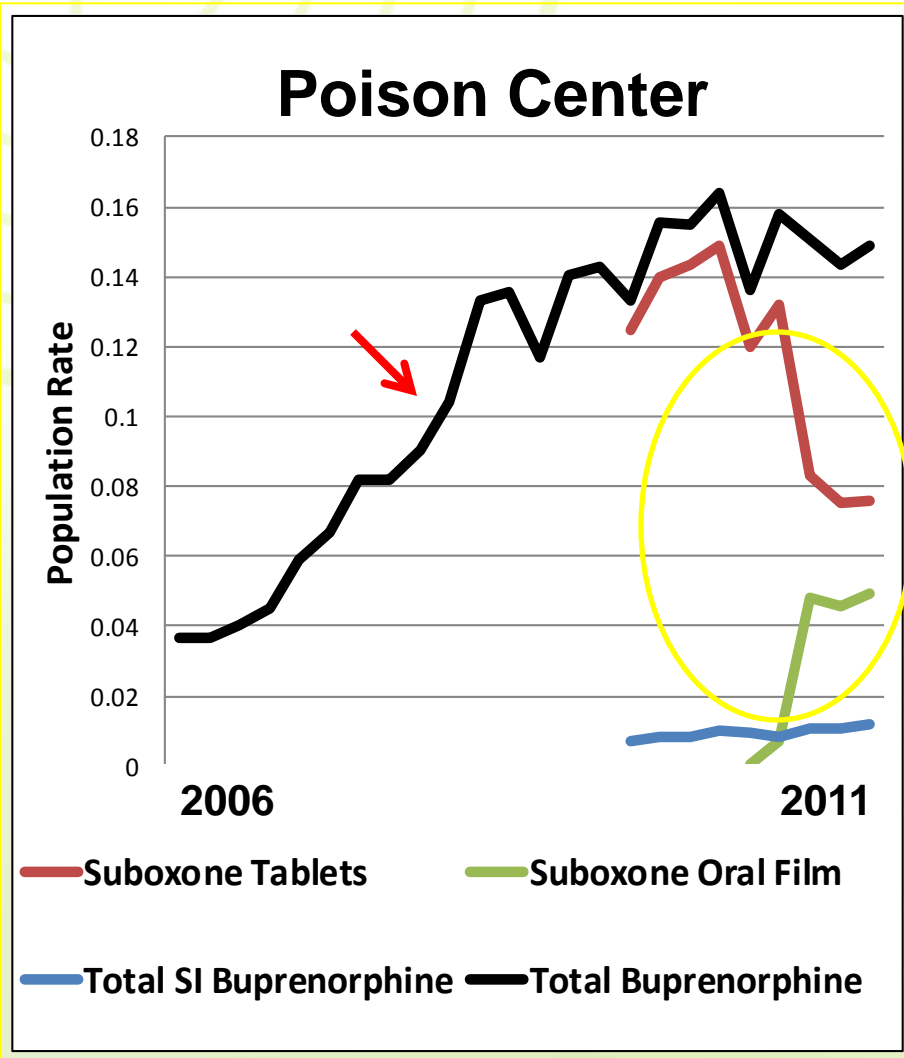
Number of Total Methadone and Buprenorphine Cases,
RADARS System Drug Diversion Program, 2002 - 2011



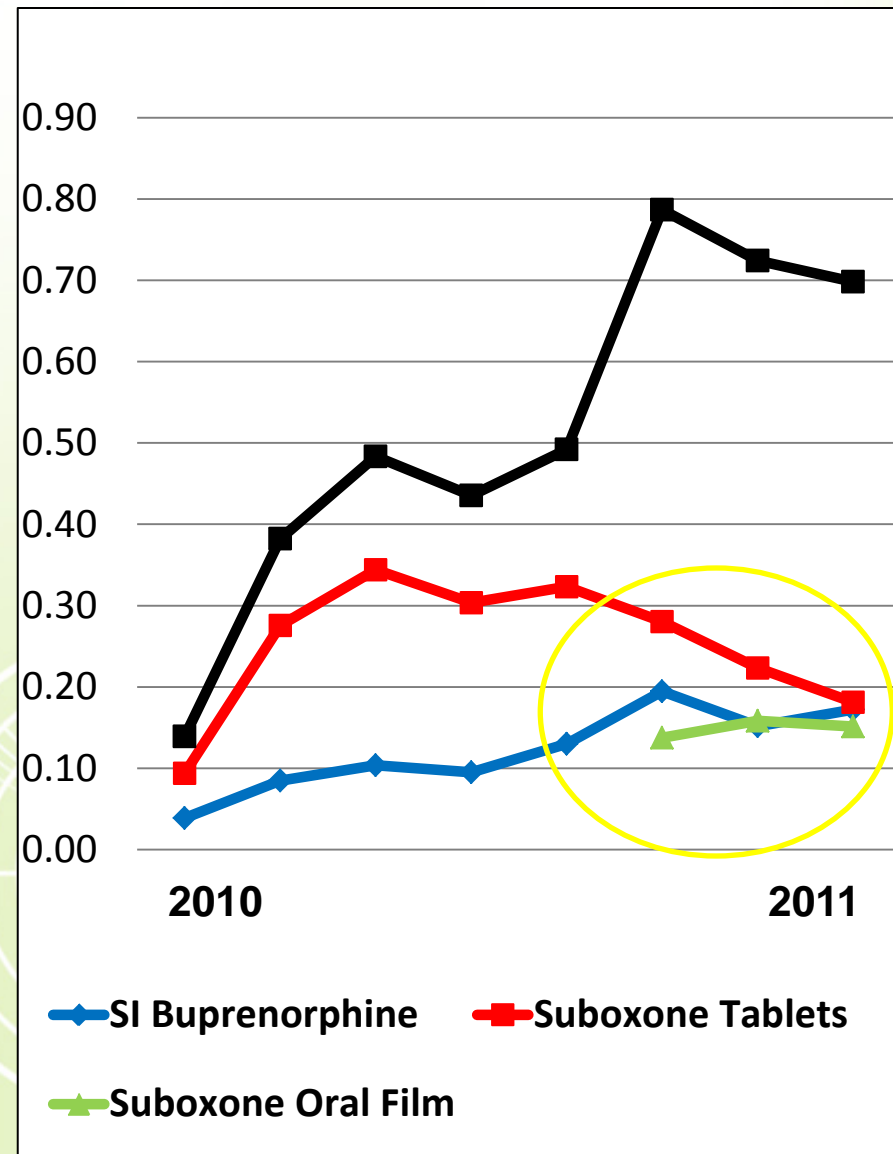
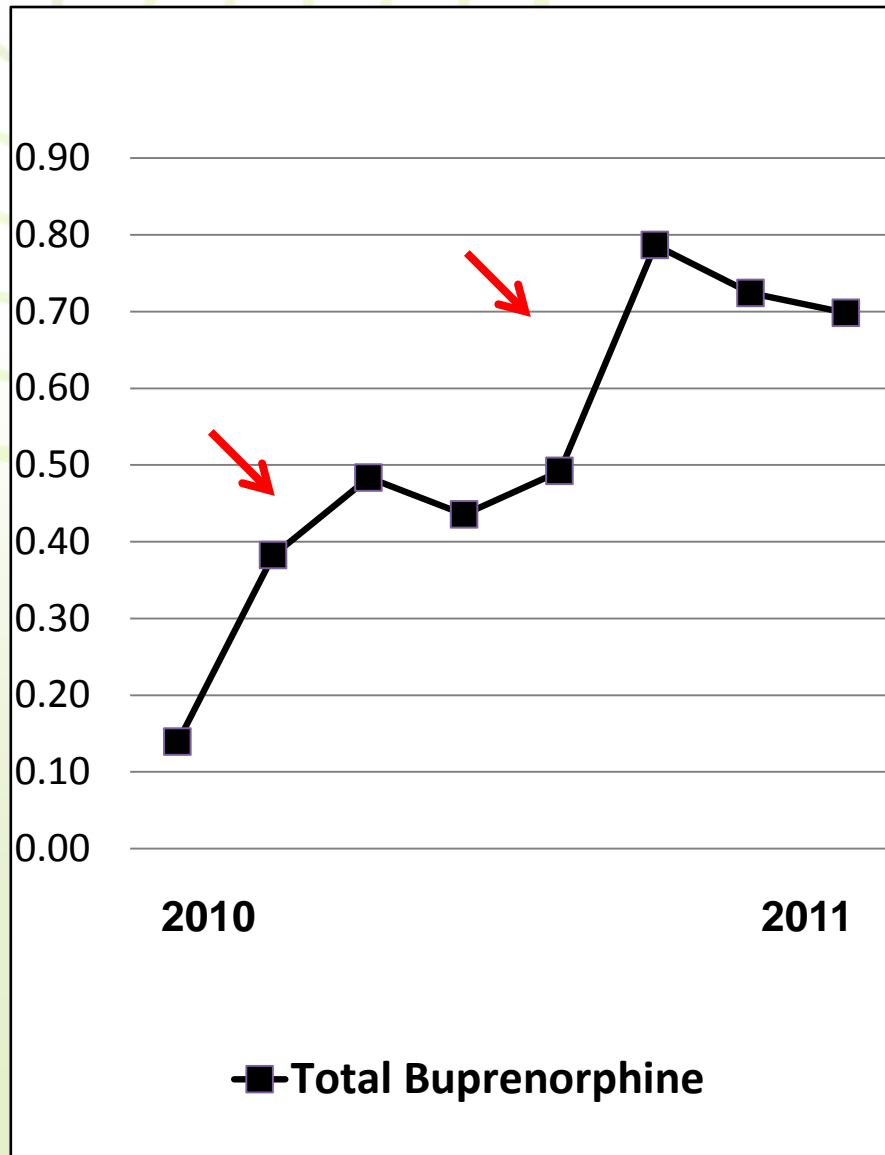
Availability of Buprenorphine has Expanded Unique Recipient of Dispensed Drug (URDD)



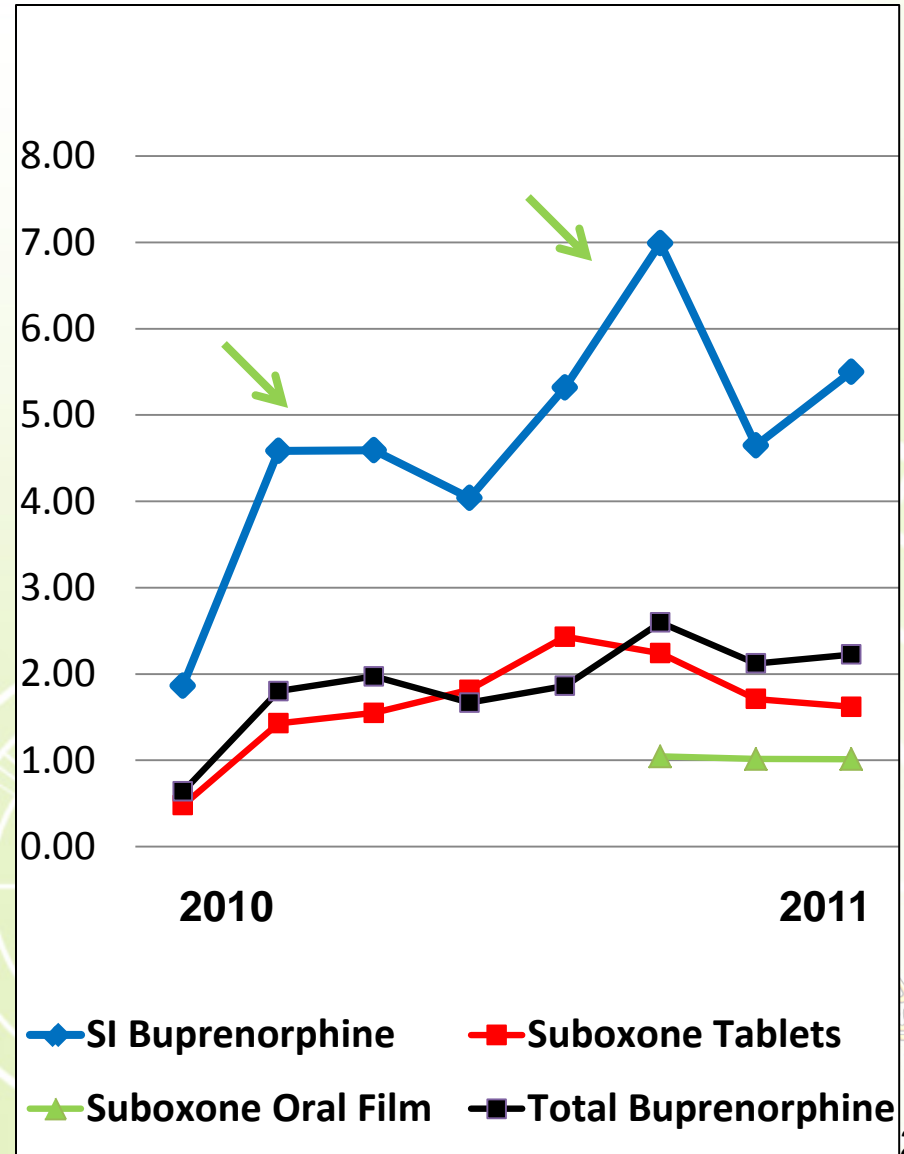
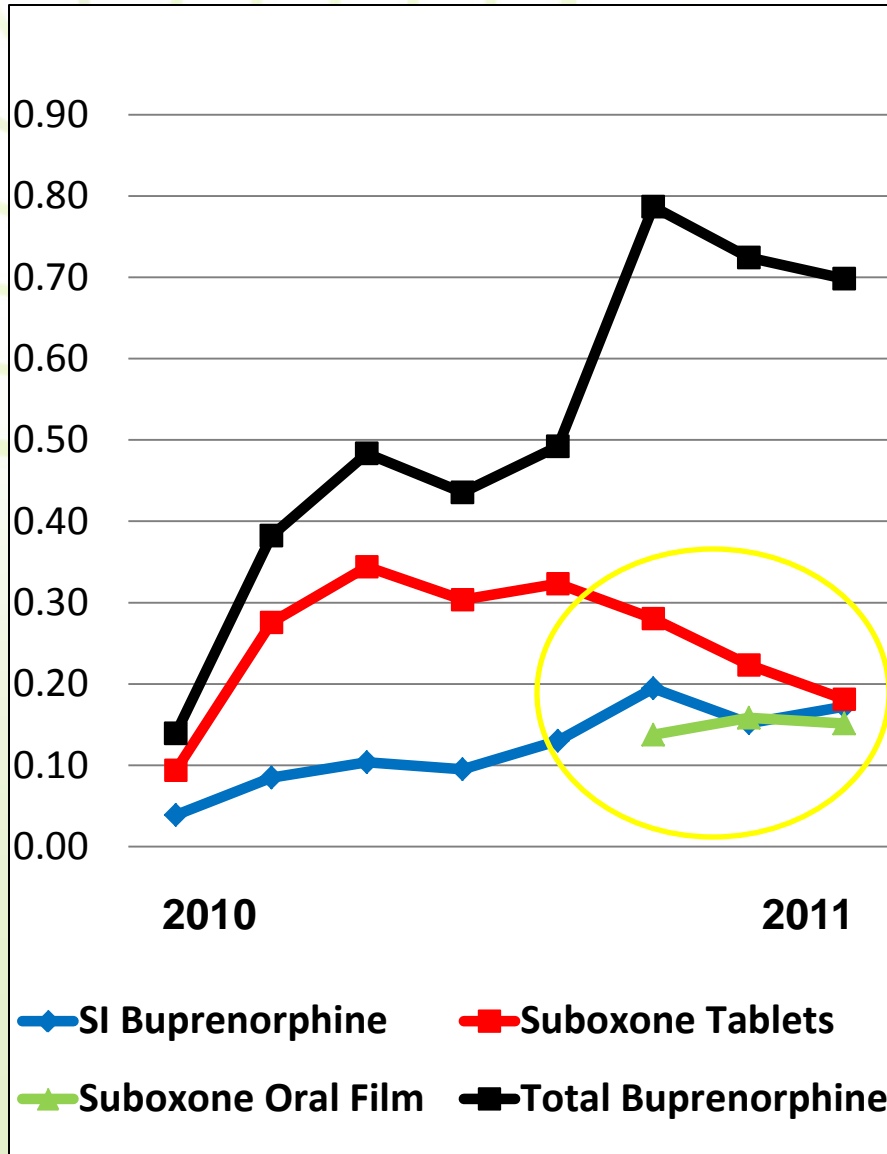
Buprenorphine Rates Poison Center, Drug Diversion Programs Population Rate (2006 – 2011)



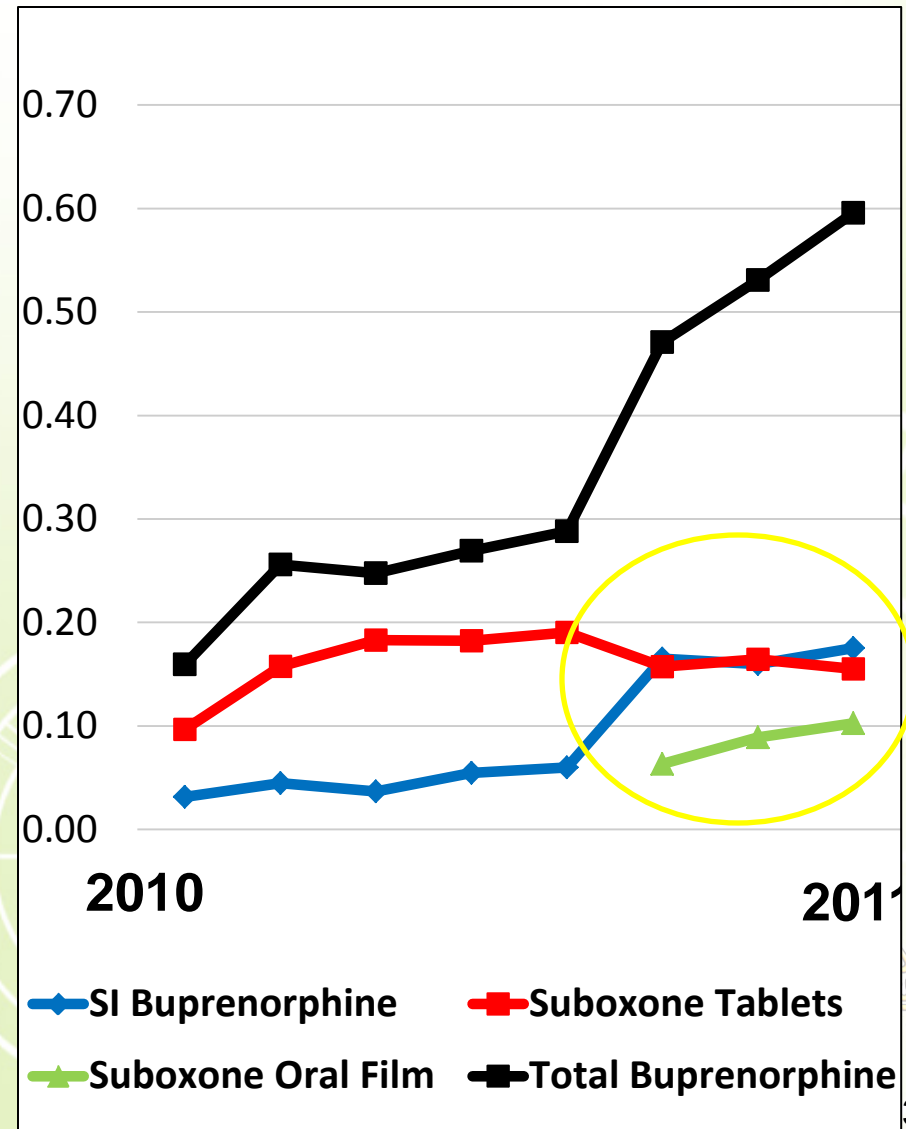
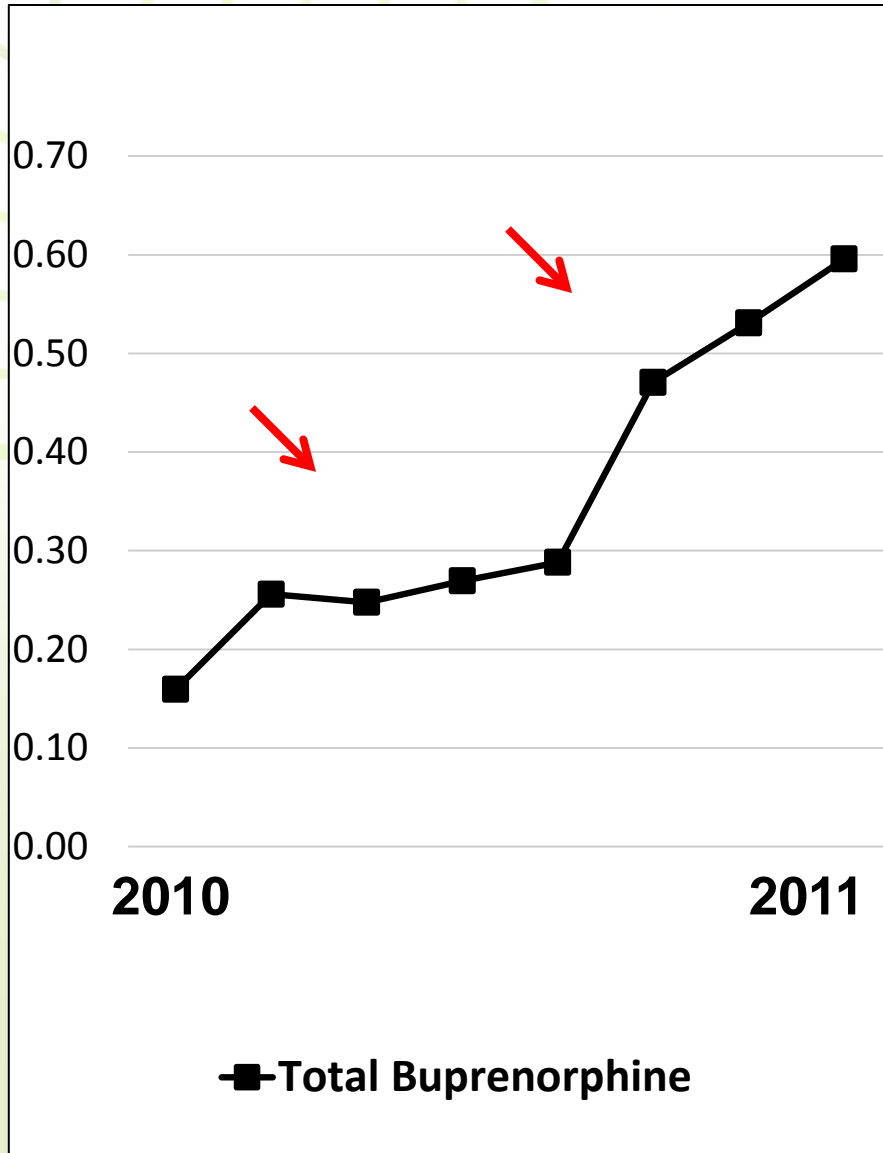
Opioid Treatment Program Population Rate 2010 Q1 - 2011 Q4



Opioid Treatment Program URDD Rate 2010 Q1 - 2011 Q4

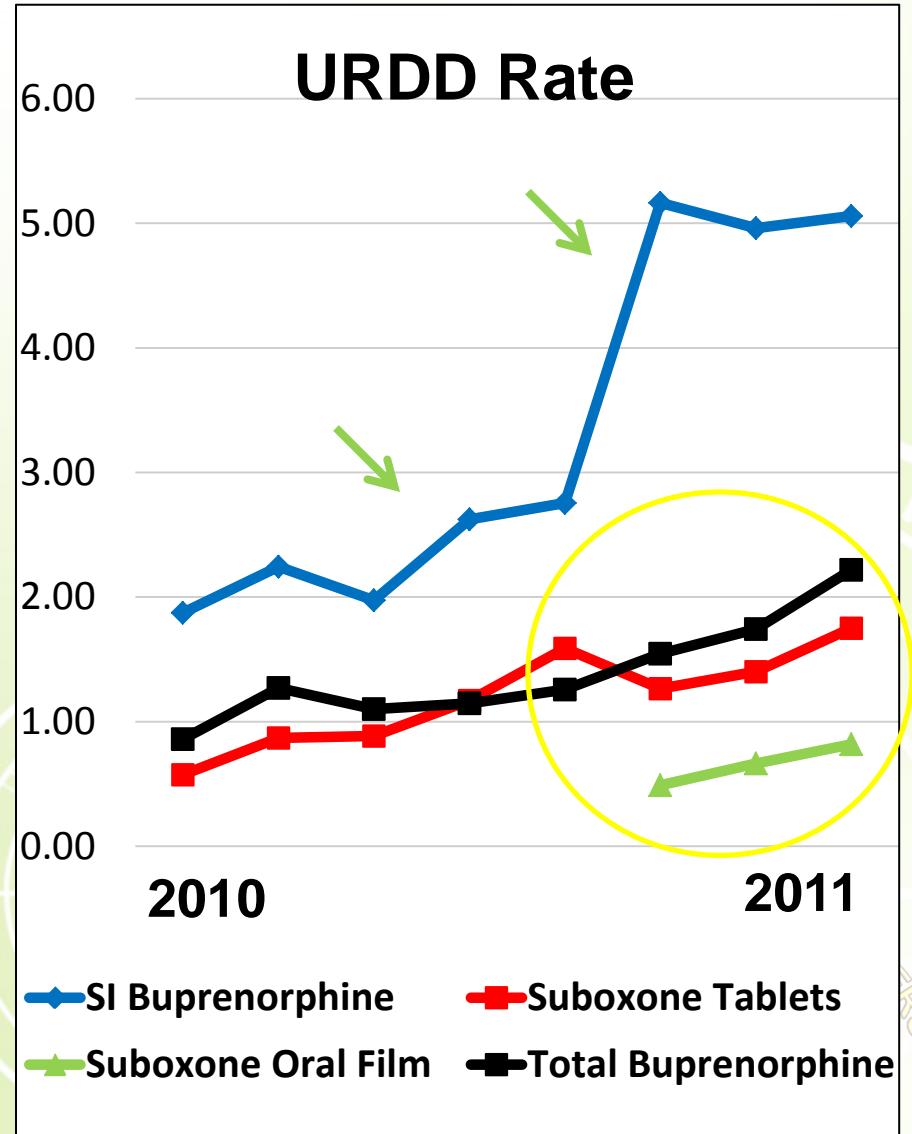
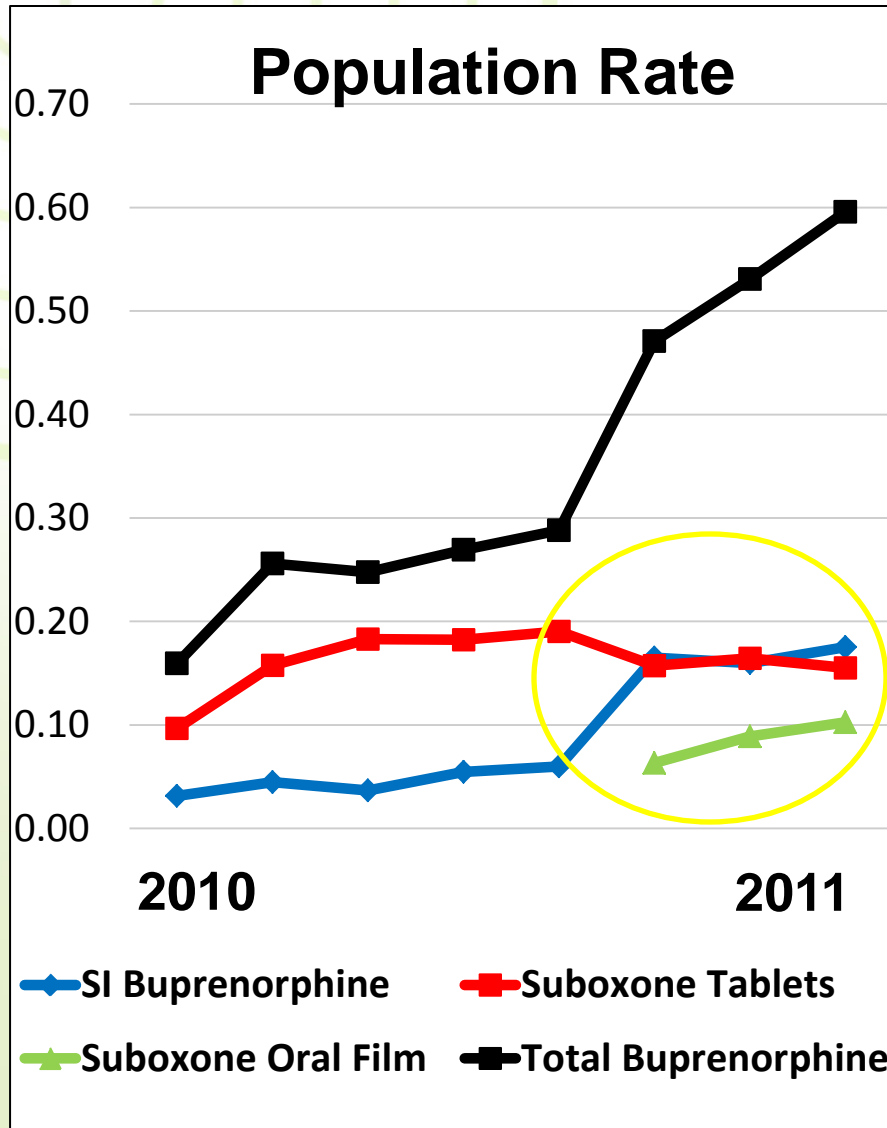


Survey Key Informants' Patients Population Rate, 2010 Q1 - 2011 Q4



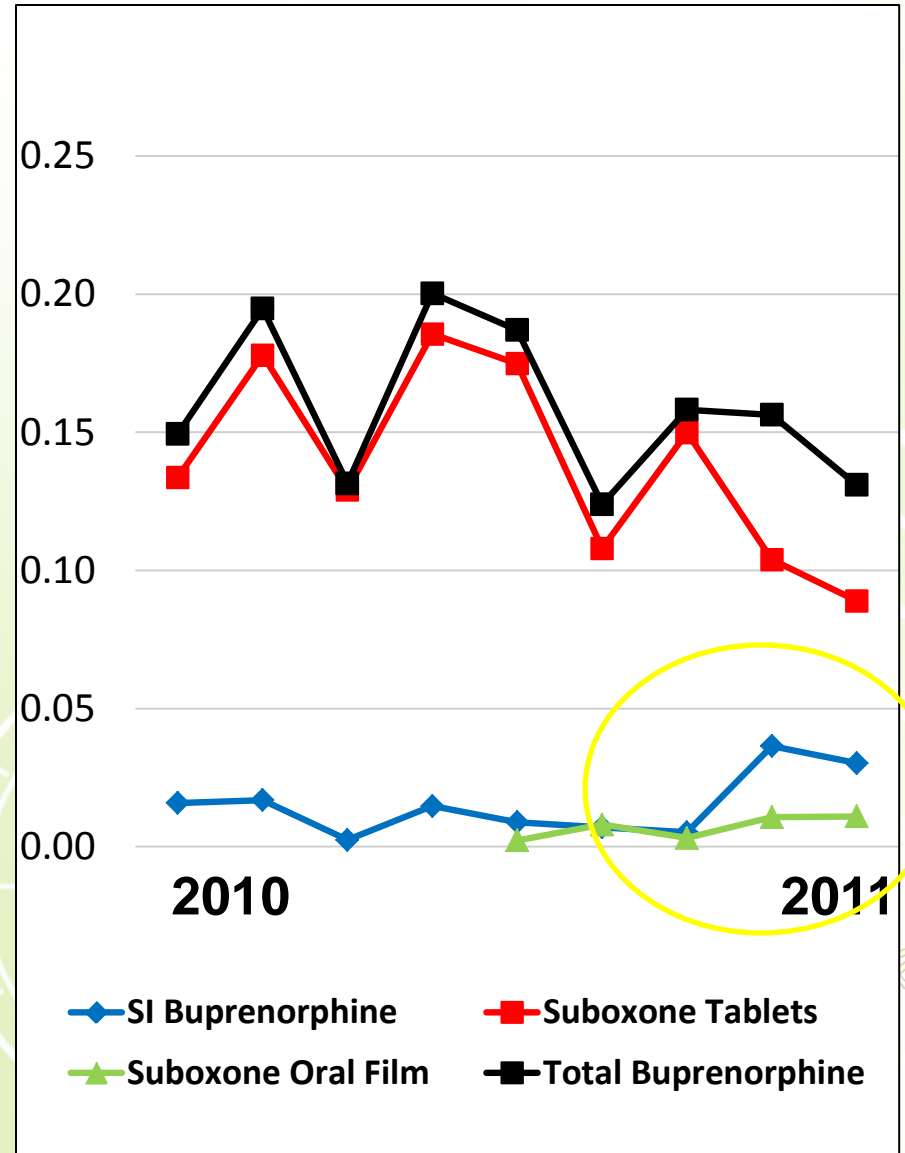
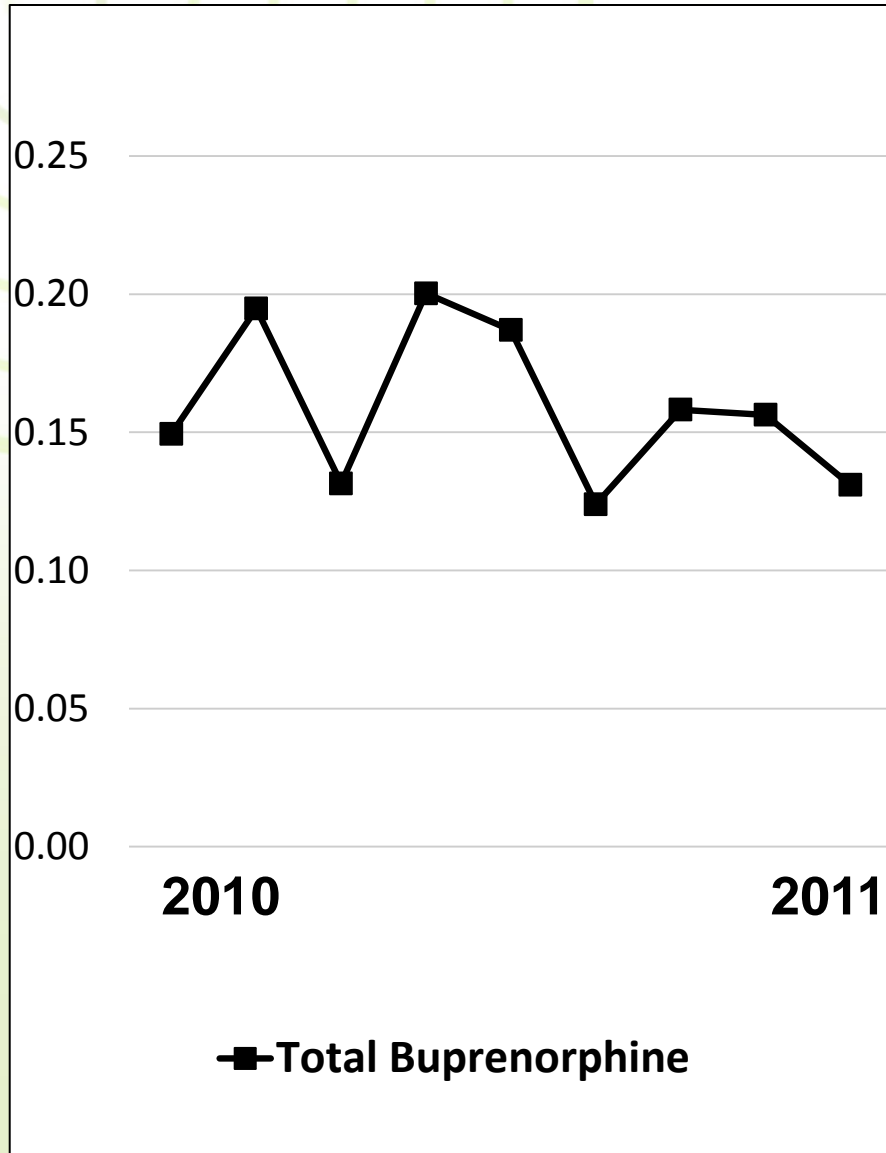
Survey Key Informant Patients

URDD Rate, 2010 Q1 - 2011 Q4

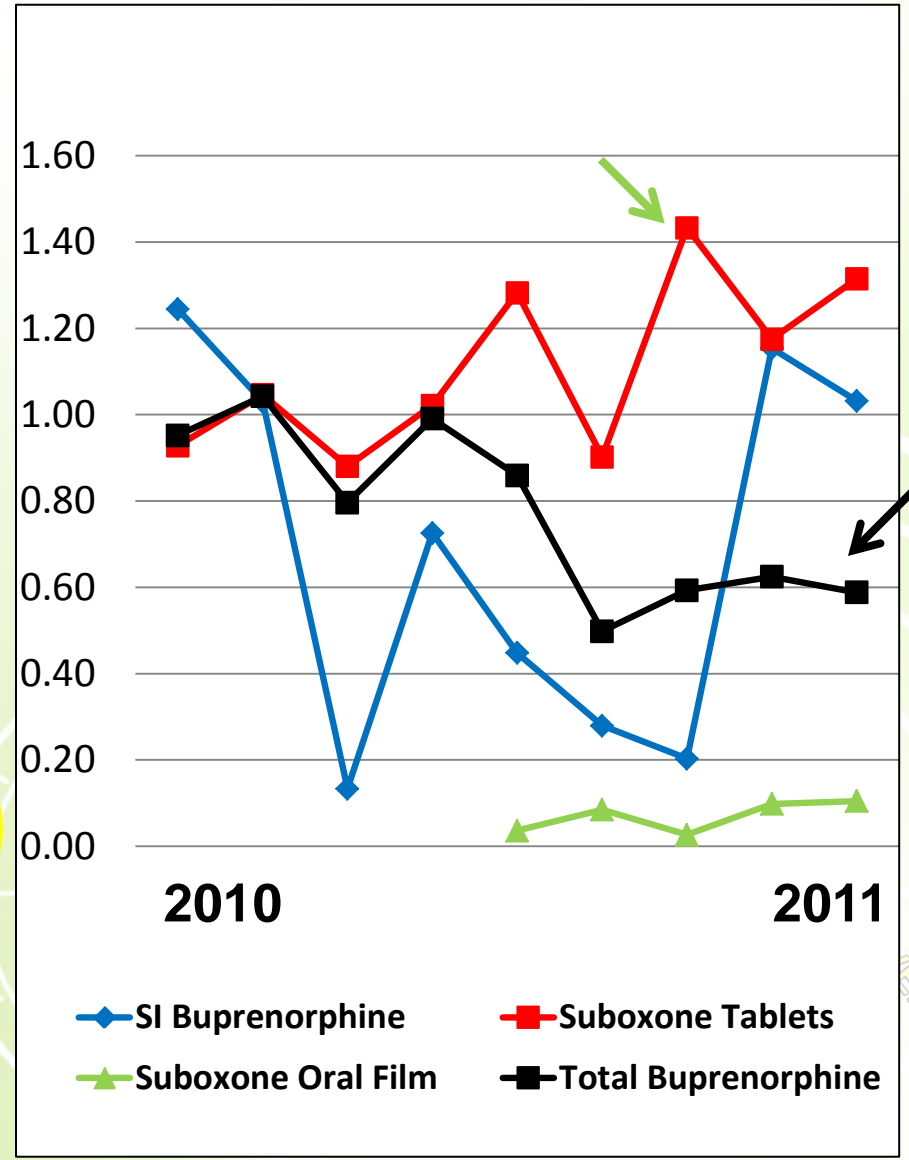
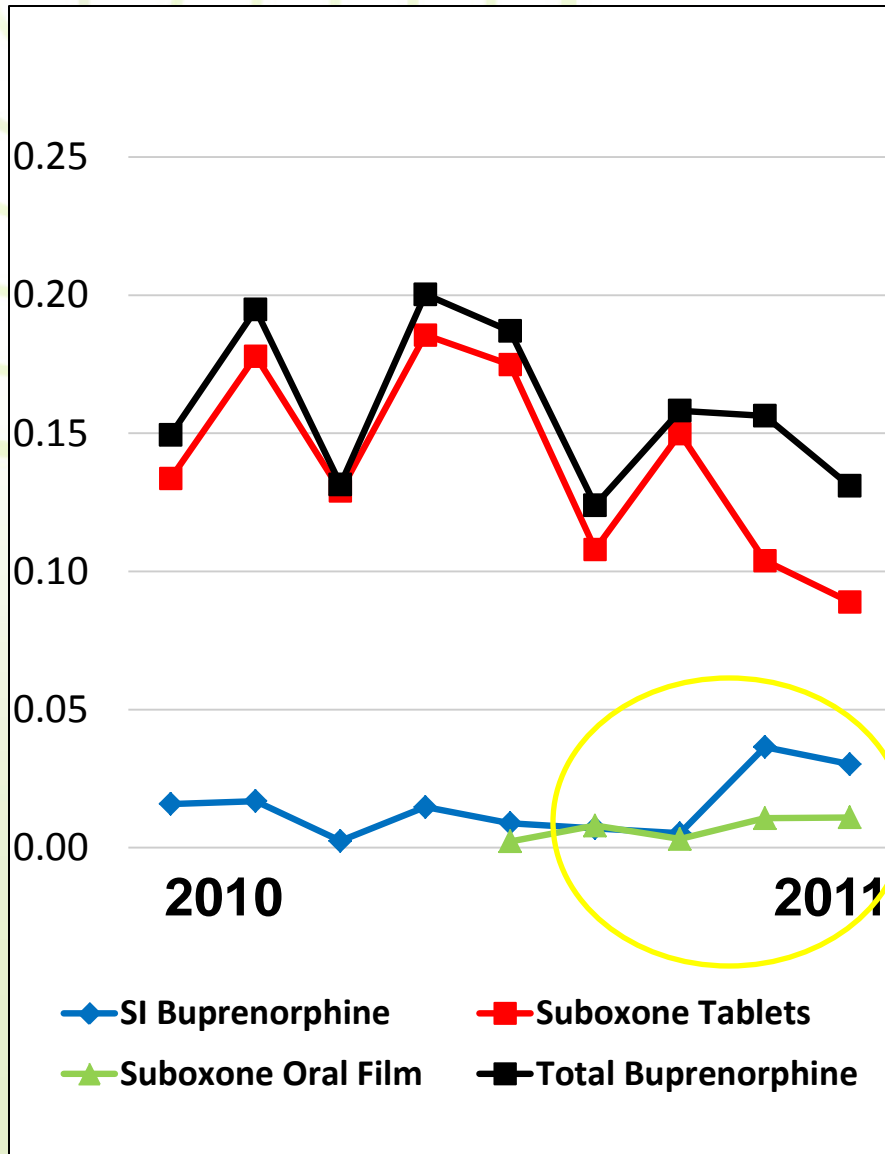


Drug Diversion

Population Rate, 2010 Q1 - 2011 Q4



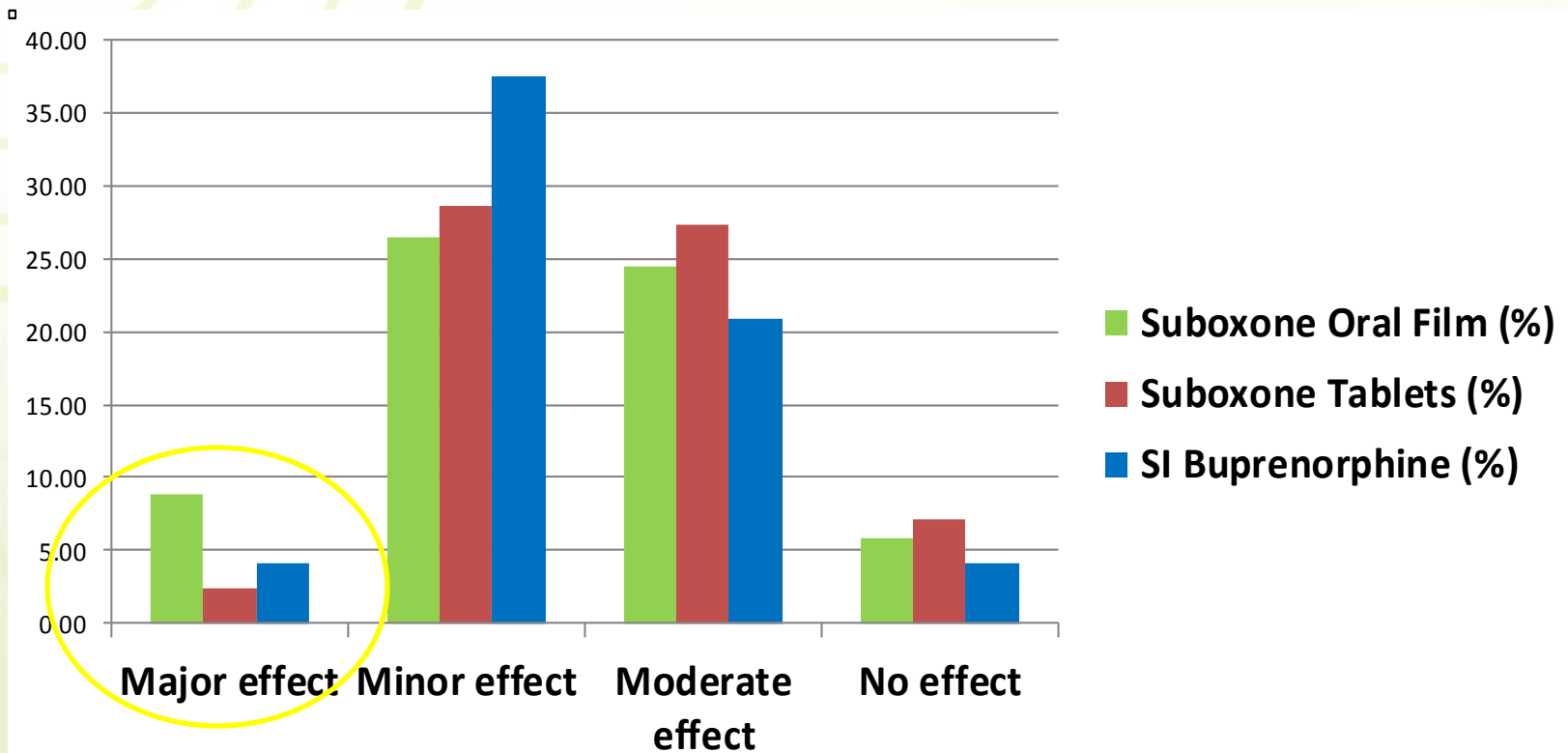
Drug Diversion Population Rate, 2010 Q1 - 2011 Q4



**RADARS® System
Poison Center Program –
Medical Outcomes and Exposure
Reasons**



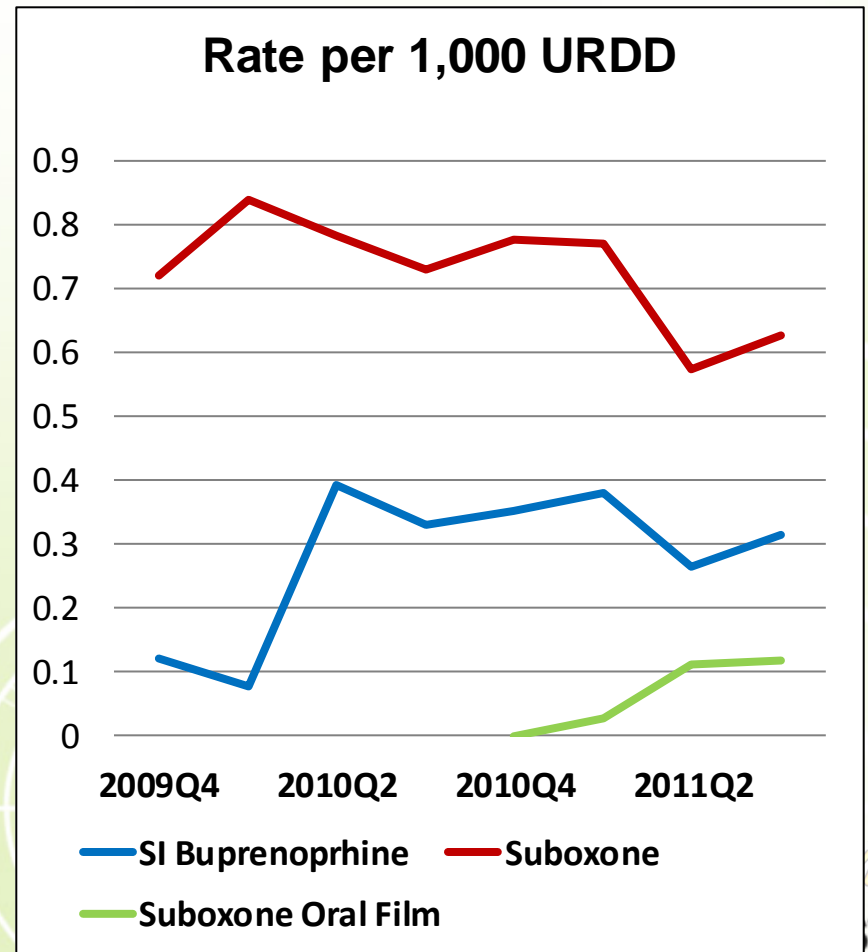
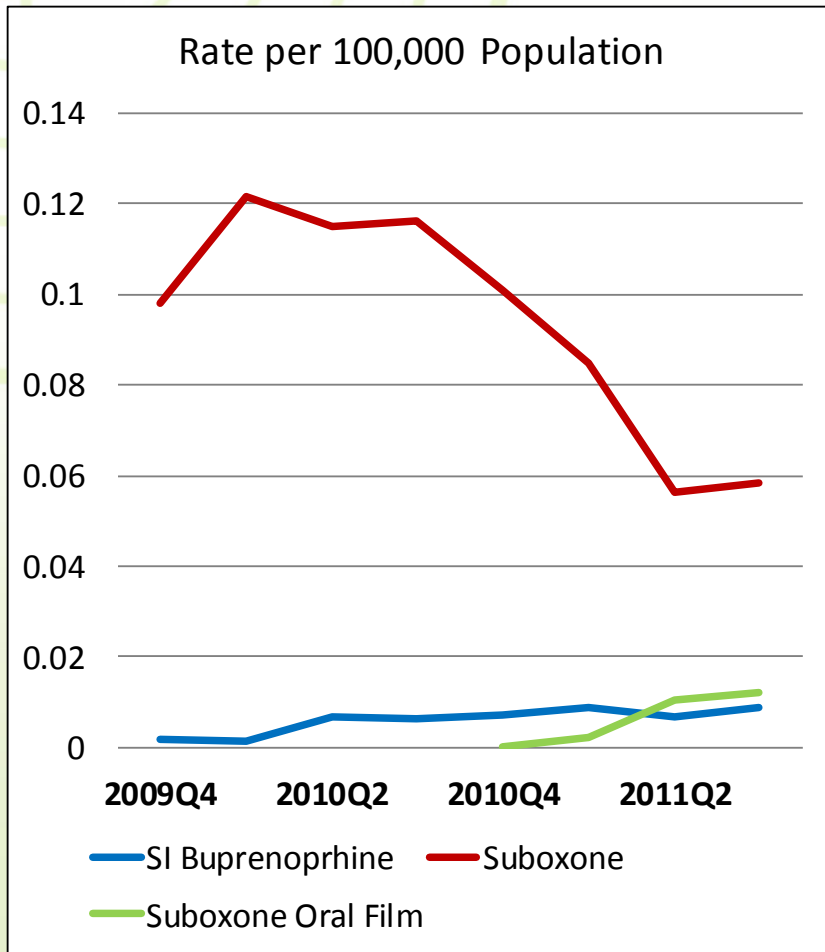
Poison Center Program Medical Outcomes (2011 Q3)



Poison Center Program

Unintentional General, Medical Outcome

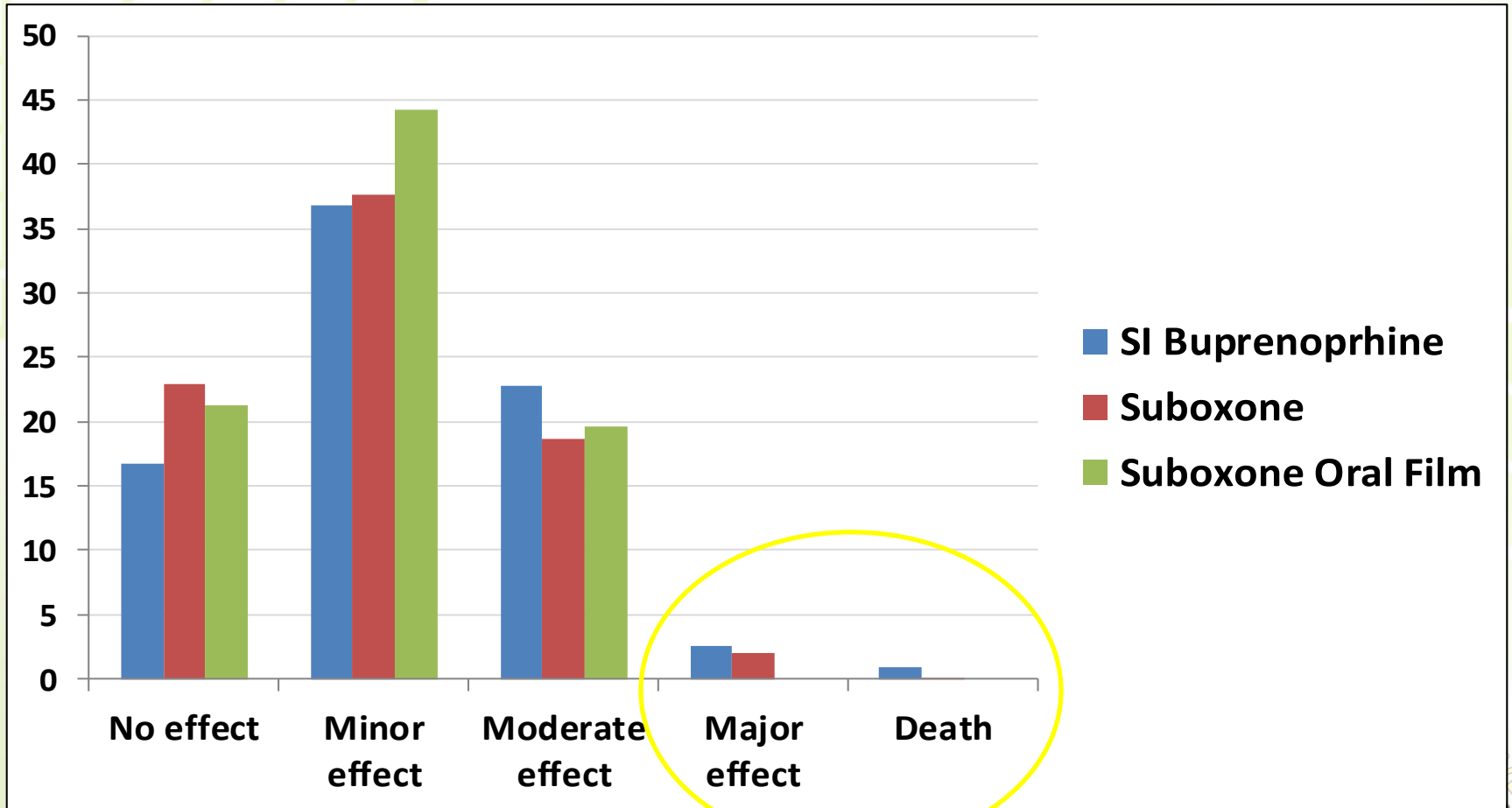
Children 0-12 Years (2009 Q4 – 2011 Q2)



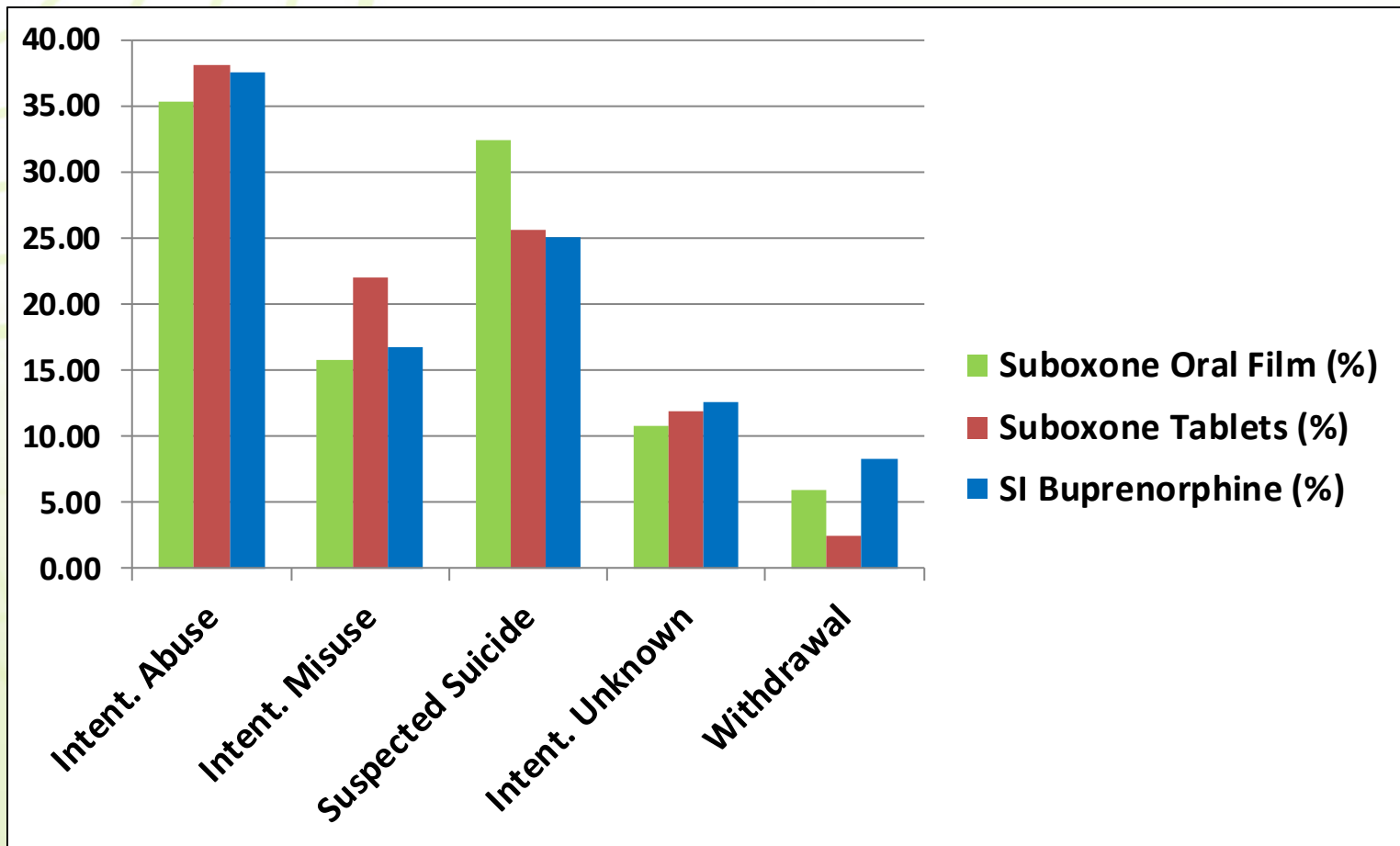
Poison Center Program

Unintentional General, Medical Outcome

Children 0-12 Years (2009 Q4 – 2011Q3)



Poison Center Program Exposure Reasons (2011 Q3)



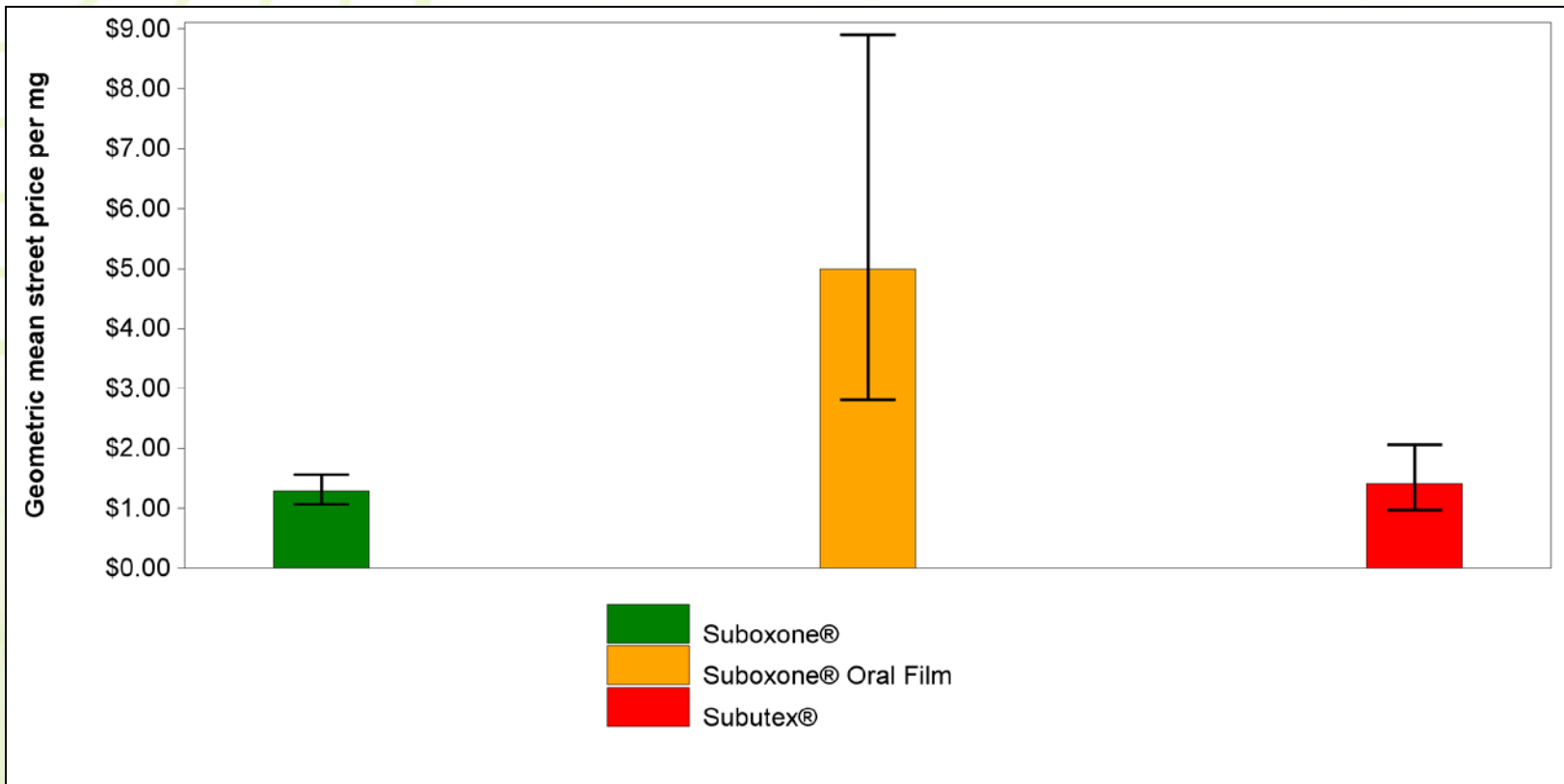
RADARS[®] System

Drug Diversion and StreetRX Programs

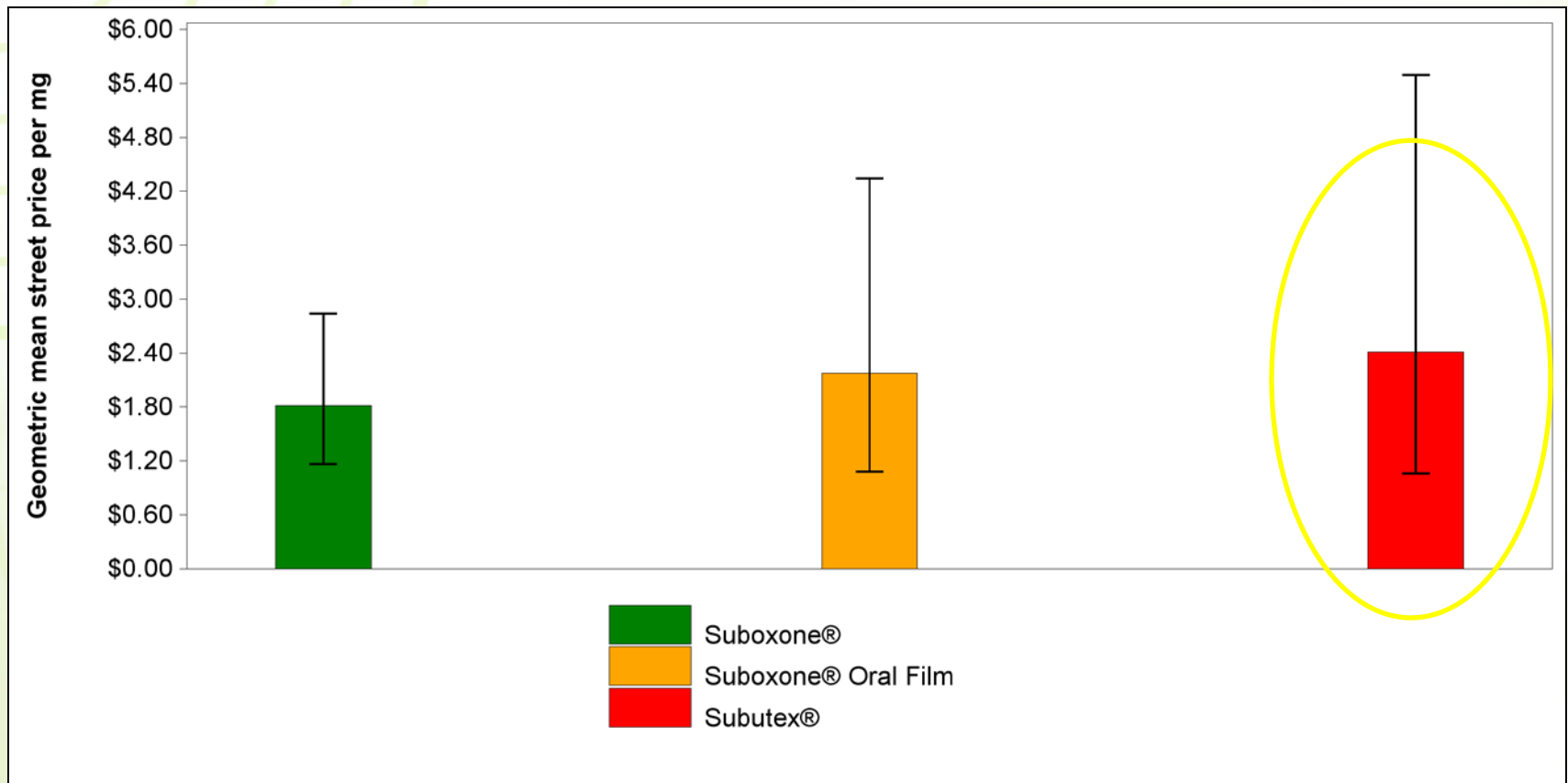
Buprenorphine Street Price



StreetRx – Price Per mg (1/1/2011 – 2/13/2012)



Drug Diversion SPQ – Price Per mg (2011 Q3)



Conclusions

- Has availability of buprenorphine expanded?
 - Dramatic increase in people filling a prescription (URDD)
 - Marked increase of misuse and abuse in all systems
 - Street price is higher than other opioids
 - Single ingredient is on the rise, highest in OTP and SKIP
- Is Suboxone an abuse deterrent formulation?
 - Yes, endorsements are falling and lower than SI
- Misuse and abuse of buprenorphine in high risk populations (OTP and SKIP)
 - Total endorsements rising quickly
 - Single ingredient is generally preferred

Conclusions

- What happens to innocent bystanders?
 - Unintentional Exposure Rates in the pediatric population have declined over the past year and a half
 - Majority of “Major” and “Death” outcomes associated with single ingredient buprenorphine

Thank You!

