

Impact of Prescription Monitoring Programs on Prescription Patterns and Indicators of Opioid Abuse

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Prescription Opioid Abuse is a Public Health Issue

- 2004 National Survey on Drug Use and Health¹:
 - 31.8 million Americans had used a pain reliever non-medically at least once in their lifetimes (7% increase from 2002)
- 2002 DAWN data (ED visits)²:
 - 108,320 for opioid analgesics (153% increase from 1995)

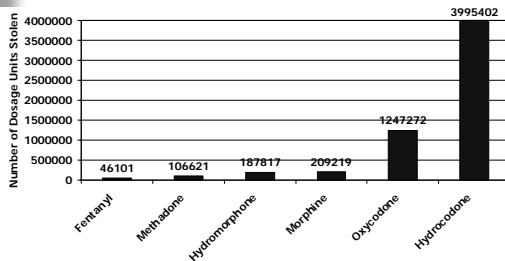
Prescription Opioid Abuse is a Public Health Issue

- 2003 Treatment Episode Data Set³:
 - Non-heroin opioids were primary drug of abuse for 9171 patients entering substance abuse treatment nationwide (534% increase from 1999)
- Better control of drug diversion should have a beneficial impact on prescription opioid abuse

Sources of Diverted Prescription Opioids

- Supply chain thefts
- Internet pharmacies
- Thefts from patients
- "Purchases" from patients
- Prescription forgery
- Illegal prescribing practices
- Prescribing to individuals who dupe prescribers

Supply Chain Thefts of Prescription Opioids, 2003



Note: Data cover only 22 Eastern states, representing 53% of US population.
 (Joranson & Gilson, 2005⁴)

Measuring and Controlling Drug Diversion

- Due to the nature of the problem, measuring the extent of drug diversion is extremely difficult
- Pharmacy thefts can be tracked, as can prescriptions
- Most other sources are virtually impossible to examine
- Can drug abuse statistics be used as a surrogate? Are all abused drugs diverted?

Prescription Monitoring Programs

- State prescription monitoring programs (PMPs) are an attempt to control drug diversion from prescribers
- Congress and Department of Justice have supported this effort through 60 grants to states totaling \$18 million⁵
- NASPER authorizes \$60 million more in grants for 2006-2010⁶

Prescription Monitoring Programs: Do They Work?

- General Accounting Office evaluation, 2002⁷, said these programs work because:
 - They shorten law enforcement investigation times by > 80% in 3 states questioned for the report
 - They reduce OxyContin prescribing
 - Only 2 of top 10 states have PMPs, while 6 of the bottom 10 states have PMPs
 - When states establish programs, you see increases in diversion in adjoining states, according to law enforcement sources

Prescription Monitoring Programs: Do They Work?

- Shorter investigations do not necessarily mean fewer investigations
- Decreased prescribing may affect legitimate pain patients as well as diverters
- Shift to adjoining states may reflect chilling effect on prescribing in monitored states

Goals of Current Study

- Evaluate impact of presence of prescription monitoring programs on prescribing as reflected in 2003 ARCOS⁸ data
- Evaluate impact of presence of prescription monitoring programs on substance abuse as reflected in 2003 TEDS and NSDUH data

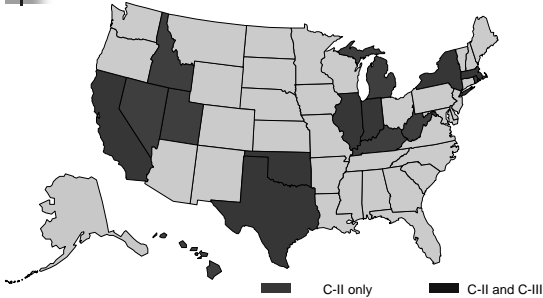
Data Sets

- ARCOS dataset (retail distribution of prescription opioids)
- TEDS dataset (patients entering substance abuse treatment)
- NSDUH survey (survey of drug use among members of the general public)

State Prescription Monitoring Programs in 2003

State	Schedules Covered	Year Enacted (Previous Version Enacted)
California	C-II	1996 (1939)
Hawaii	C-II, C-III, C-IV	2002 (1943, 1996)
Idaho	C-II, C-III, C-IV, C-V	2001 (1967, 1997)
Illinois	C-II	1999 (1961)
Indiana	C-II	1994 (1987)
Kentucky	C-II, C-III, C-IV, C-V	1998
Massachusetts	C-II	1992
Michigan	C-II, C-III, C-IV, C-V	2002 (1988, 1993)
Nevada	C-II, C-III, C-IV	1995
New York	C-II	1998 (1972)
Oklahoma	C-II	1990
Rhode Island	C-II, C-III	1997 (1978)
Texas	C-II	1997 (1981)
Utah	C-II, C-III, C-IV, C-V	1995
West Virginia	C-II, C-III, C-IV	1995

State PMP Status, 2003



Impact of PMP vs. no PMP on Retail Opioid Distribution

Drug	No PMP Mean	PMP Mean	% Change	<i>p</i>
Oxycodone	11292	9540	-15.5	.167
Morphine	4927	4397	-10.8	.359
Fentanyl	117	114	-2.6	.657
Hydromorphone	216	197	-8.8	.434
Meperidine	2246	1739	-22.6	.184
Codeine	6937	8451	+21.8	.026
Hydrocodone	6938	10076	+45.2	.014

All amounts expressed in grams/100,000 population

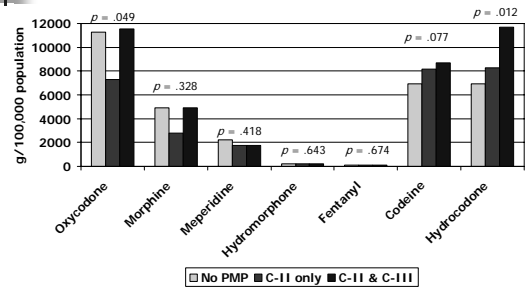
Impact of PMP vs. no PMP on Measures of Drug Abuse

Indicator	No PMP Mean	PMP Mean	<i>p</i>
TEDS	25.36	27.29	.816
NSDUH	4.51	5.31	.014

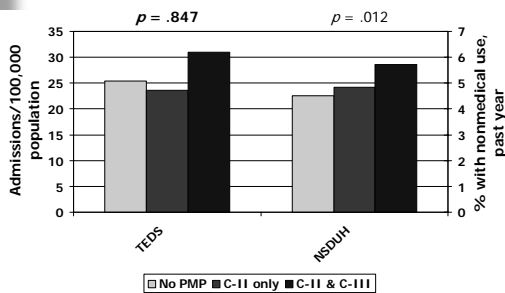
TEDS = Treatment Episode Data Base, admissions/100,000 population, non-heroin opioid as primary substance of abuse

NSDUH = National Survey on Drug Use and Health, percent of respondents ≥ 12 years of age with non-medical use of prescription opioids in past year

Impact of PMP Type on Retail Opioid Distribution



Impact of PMP Type on Measures of Drug Abuse



Summary

- PMPs are designed to control drug diversion from licensed prescribers
- Roughly half of the states currently have these programs
- Congress and the Department of Justice have awarded or authorized grants totaling \$80 million to establish or run PMPs

Summary

- Evaluations of PMP effectiveness have relied primarily on anecdotal reports and findings are subject to multiple interpretations
- It appears that having a PMP results in substantial (but non-significant) reductions in C-II prescription, but significant increases in C-III prescription

Summary

- States with PMPs that monitor C-III drugs as well as C-II drugs display significantly greater prescribing of hydrocodone than other states and greater prescribing of oxycodone than states that monitor only C-II drugs

Summary

- Neither PMP presence nor PMP type is associated with differences in rates of non-heroin opioid abuse among those entering substance abuse treatment
- PMP states (and those with PMPs monitoring both C-II and C-III) display higher rates of prescription painkiller abuse on the NSDUH

Questions Remaining to be Answered

- Are there better measures of drug diversion, and if so, what do they show?
- Are the observed changes in prescribing the result of:
 - “Downscheduling”?
 - An increase in treatment of moderate pain?
 - A crackdown on diversionary prescribing?

Questions Remaining to be Answered

- Are there certain PMP characteristics that produce the desired effects?
- Is this pattern of findings consistent over time?
- Are there better solutions to the diversion problem?

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