



ADAI RESEARCH BRIEF

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The Use & Abuse of Prescription-Type Opiates in Washington State

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Washington State is grappling with policy issues aimed at limiting the negative impacts associated with prescription opiate use. Increases in prescription opiate involved deaths have recently been reported nationally¹ and concerns about prescription opiate associated mortality have been expressed locally. For instance, medical directors of Washington State agencies sent letters of concern about opiate prescribing practices to physicians in 2004;² limited the type and number of opiate prescriptions allowed in 2005;³ and, in February 2007, released pilot educational guidelines for opiate prescribing in Washington State, including clinical considerations and dose recommendations.⁴

Pain is very common, with an estimated 24% of U.S. adults reporting moderate to extreme pain interference in the prior month.⁵ Approximately 19% of US adults received a prescription for opiates in 2005.⁶ Two prescription opiate pain medications, methadone and buprenorphine, are also used to treat addiction to heroin or prescription-type opiates.

Guidelines for the management of pain were released in 1996 by the Washington State Medical Quality Assurance Commission.⁷ These guidelines clearly state that the under-treatment of pain has negative impacts on the public and they provide physicians with specific advice for the appropriate use of opiates in the treatment of medical conditions involving substantial pain.

While crucial to the appropriate treatment of pain, prescription-type opiates can also be misused, resulting in harmful health and social effects. Abuse of prescription opiate medications can impede appropriate and effective pain management by contributing to 1) stigmatization of patients on prescription opiates, 2) health care providers' fear of prescribing and dispensing opiates, and 3) under-medication of pain patients.⁸

The full scope and nature of the problem is unknown, but newly available data provide some insights.

- Three recent surveys indicate prescription-type opiate use appears to be a particular problem among young adults in Washington State.
- Prescribing, drug treatment, mortality and youth survey data suggest that prescription-type opiate use and abuse are relatively common compared to other substances across Washington State's 39 counties.
- Emergency department and mortality data indicate both a range of motivations for using and sources of prescription-type opiates.

FINDINGS

Trends in Opioid Medication Use and Prescriptions Throughout Washington

Three recent surveys of Washingtonians indicate that young adults are using and abusing prescription-type opiates at relatively high levels.

National survey data on ‘non-medical’ use, defined as use of prescription pain relieving medication “not-prescribed to you or only for the experience or feeling it caused”, was reported by approximately 5.9% of Washingtonians during 2004 and 2005 (Figure 1a). The highest prevalence of ‘non-medical use’ was among young adults. National data, unavailable at the state level, indicate that past month use was reported by less than half of those who reported past year use. Further, among those with non-medical use of pain relievers in the past year nationally, 12% met abuse or dependence criteria, the same proportion as for alcohol and quite different than the 67% of past year users of heroin who met abuse or dependence criteria.⁹ Note that trends are difficult to discern due to changes in survey methodology in recent years, though all indications are of increasing levels of ‘non-medical’ use of pain relievers nationally.

Figure 1a: Past-year use of prescription pain relieving medication “not-prescribed to you or only for the experience or feeling it caused”, estimated prevalence(%) for 2004 & 2005

	Total		Ages 12-17		Ages 18-25		Ages 26 or Older	
	Estimate	95% C.I.	Estimate	95% C.I.	Estimate	95% C.I.	Estimate	95% C.I.
Washington State	5.9	(4.9 - 7.1)	7.5	(5.9 - 9.5)	14.8	(12.3 - 17.9)	4.1	(3.1 - 5.5)
Total U.S.	4.8		7.1		12.2		3.2	

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004 and 2005.

A Washington state survey conducted in 2003 found that 2.0% of adults reported past-year use of “pain relievers or other opiates for non-medical reasons” with ‘non-medical’ defined as not prescribed for you by your doctor or other health professional (Figure 1b).¹⁰

Figure 1b: Past-year use of “pain relievers or other opiates for non-medical reasons” not prescribed to respondent, estimated prevalence(%) 2003

	Total	Ages 18-24	Ages 25-44	Ages 45-64	Ages 65+
Washington State	2.0	5.2	2.9	0.8	0.0

Source: WA DSHS RDA Needs Assessment Survey 2003

The 2006 Washington State Healthy Youth Survey asked about the prevalence of past 30 day use of pain killers “to get high, like Vicodin, OxyContin (sometimes called Oxy or OC) or Percocet (sometimes called Percs)” with one in eight high school seniors reporting such use (Figure 1c).¹¹

Figure 1c: Estimated prevalence(%) of past-30 day use of opiate pain killers to “get high” 2006

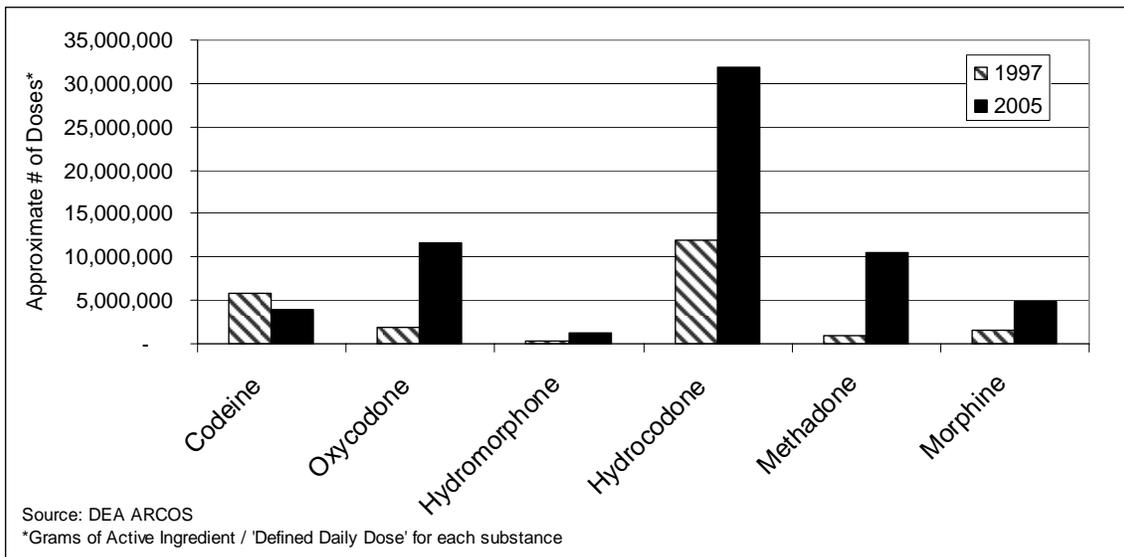
	8th Grade (n = 8,690)	10th Grade (n = 8,270)	12th Grade (n = 6,152)
Washington State	3.6 (± 0.8)	10.0 (± 1.2)	11.6 (± 2.0)

Source: WA Healthy Youth Survey 2006

Sales of most prescription opiates have increased significantly throughout Washington State. The largest proportional increase from 1997 to 2005 has occurred for oxycodone and methadone.¹² The change in the approximate number of doses¹³ for the most common opiates presented in Figure 2. Note that these data only include methadone prescribed for pain, not methadone dispensed for addiction treatment. Hydrocodone remains the most commonly prescribed type of opiate. It is not

possible to tell from these data the degree to which these differences over time are due to changes in the number of people prescribed opiates, changes in the amount prescribed or individuals switching from one type of medication to another.

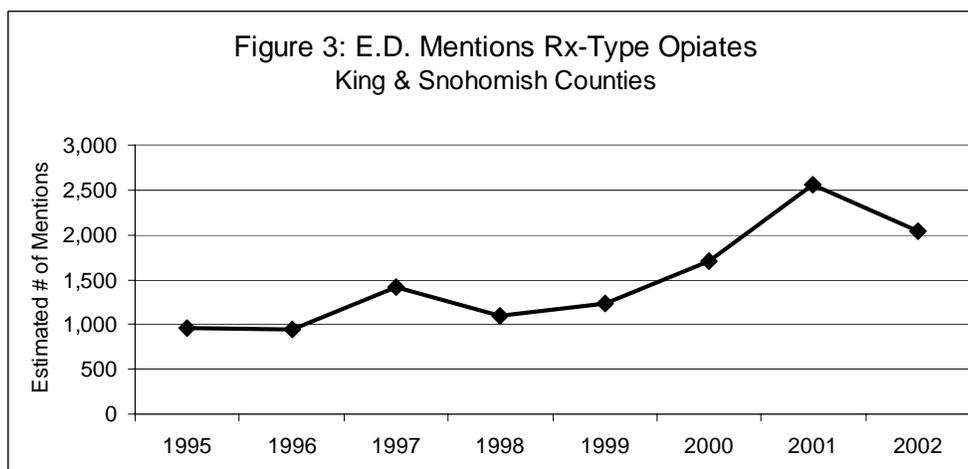
Figure 2: Prescription Opiate Sales to Hospitals and Pharmacies in WA State, Change 1997-2005.



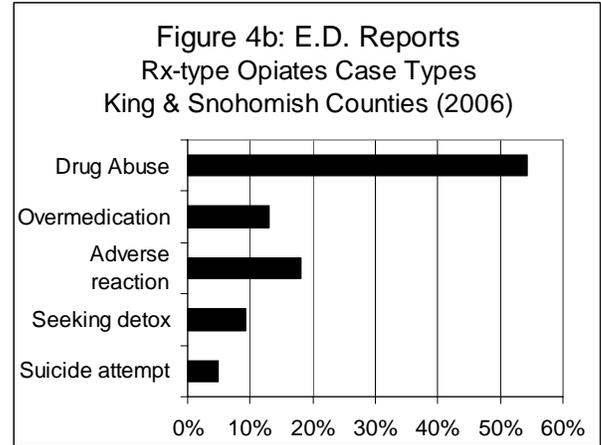
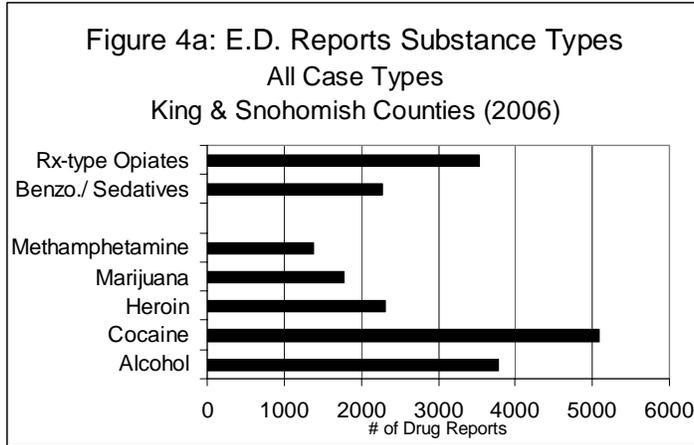
Trends In Emergency Department Visits And Deaths In The King County Area

Data concerning the medical complications of drug use are complex to interpret, as many episodes of use involve the use of multiple drugs. The role of any single drug in a poly-drug-use-episode can be difficult to determine. Data may represent a person who has mis-used or abused a drug, but could also represent a person using the drug as directed and who had used other drugs inappropriately, whether purposefully or not.

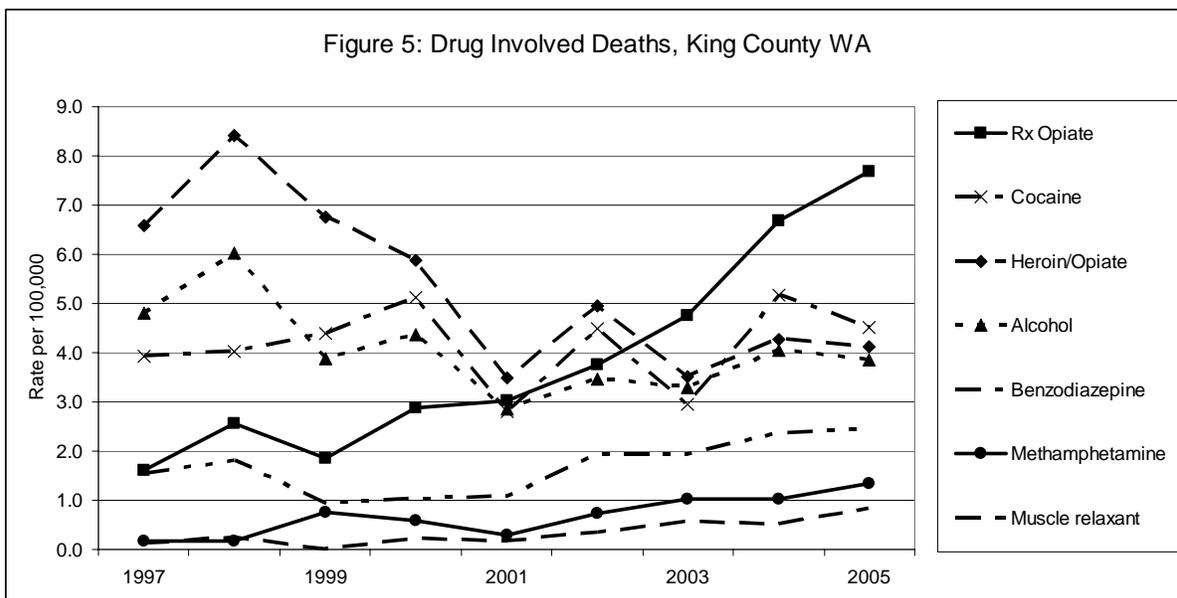
Emergency department reports for all prescription opiates increased 114% from 1997 to 2002.¹⁴ Approximately two-thirds of emergency department (E.D.) patients who reported using prescription opiates also reported using other drugs or medications, making it difficult to determine the role of any single drug (Figure 3).



Emergency department reports for 2006 indicate that there were 3,529 reports of prescription-type opiates. The most common case type for reports in which prescription-type opiates were identified were drug abuse (54%), adverse reaction (18%) and accidental overmedication (18%).

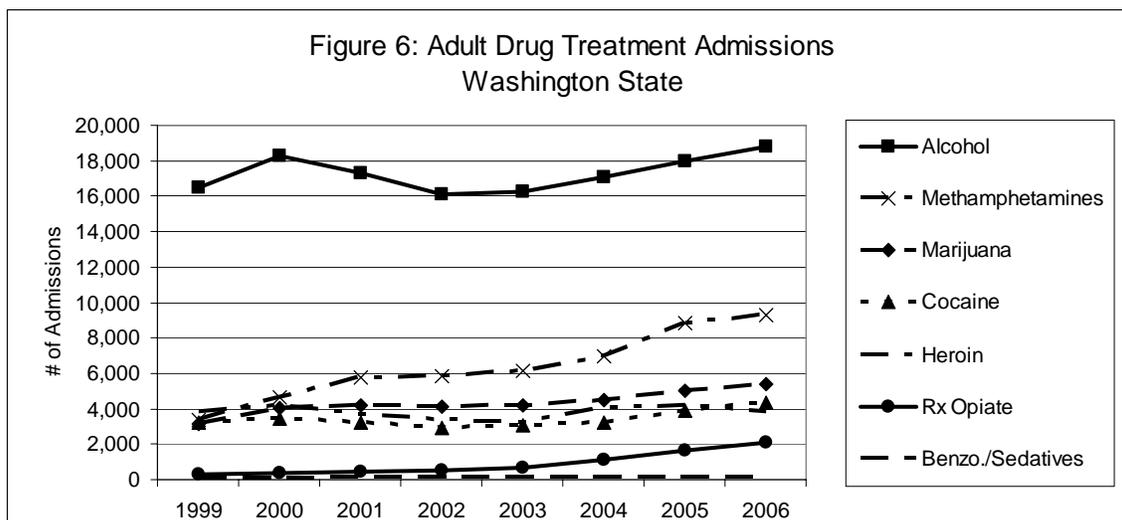


The rate of drug involved deaths in which prescription-type opiates were identified increased 380% from 1997 to 2005, from 27 to 138 people per year, with the rate relative to other drugs shown in Figure 5.¹⁵ The most common prescription-type opiate in recent years was methadone followed by oxycodone; the majority of deaths also included another CNS active drug, with benzodiazepines the most common co-ingestent. Preliminary data from a series of enhanced death investigations of prescription opiate-involved deaths in King County conducted in 2005 indicate multiple motivations for use including pain, seeking euphoric effects and, for some people, both. These data also indicate multiple sources for these prescription-type opiates including personal prescriptions, street purchases, drug treatment (some methadone cases) and in some instances the source cannot be determined.



Trends in Opiate Addiction Treatment Throughout Washington State

For adults, treatment admissions where prescription-type opiates were the primary drug of abuse increased from 1.0% to 4.6%. This includes all inpatient, outpatient and methadone maintenance treatment for public pay clients, as well as private pay clients entering methadone maintenance treatment programs, from 1999 to 2006 (Figure 6). For youth the increase was from 0.1% to 1.3%.



Historically the treatment of choice for opiate dependent persons has been methadone maintenance treatment. Methadone maintenance treatment is provided via large, specially licensed drug treatment clinics all located in metropolitan areas of Washington State. Nine programs are primarily for publicly funded clients, 4 are primarily for private-pay patients, and 4 serve patients within the Veterans Administration system.

The caseload for methadone maintenance treatment depends primarily on the level of funding available. Statewide, caseload increased from 3,114 at the end of 2000 to 5,410 at the end of 2006 for private and public pay admissions combined.¹⁶ The number of unduplicated clients admitted in each of these years was 4,412 and 7,276 respectively, higher than the caseload because some people stay in treatment less than one year. In King County, there were 476 people on the Public Health- Seattle & King County waiting list for methadone maintenance treatment at the end of 2000 and 461 at the end of 2006.¹⁷ The caseload served by facilities located in King County increased slightly from 2,252 to 2,492 over this same time frame.

Beginning in 2002, buprenorphine provided an additional opiate dependence treatment medication that could be prescribed by specially trained physicians in a office based setting. The exact treatment capacity for buprenorphine is unknown. A recent change in Federal law allows a physician with at least one year's experience to treat up to 100 individuals at a time. This is an increase from the previous maximum of 30 patients. As of March 2007, 72 physicians and 10 treatment programs in Washington were included in the online provider directory <http://buprenorphine.samhsa.gov/bwns_locator/>, though all these providers may not be actively prescribing and some additional providers opt not to be listed. Few physicians accept publicly funded clients, and Medicaid will fund buprenorphine only for patients enrolled in state-certified addiction treatment programs.

DISCUSSION

Prescription and survey data point to dramatic increases in prescription opioid use in recent years. The increases in prescription opioid reports in emergency departments and in drug-involved-deaths appear to be related to increases in prescriptions of these drugs for pain management. Methadone and oxycodone are the prescription opiates responsible for the largest proportion of these increases. Hydrocodone is a widely prescribed opioid, yet it has comparatively low numbers of reports in the ED and deaths. This may be due to it being combined with other medications such as acetaminophen or aspirin. It is unknown which prescription opiate medications are responsible for the reported increases in prescription drug abuse and treatment admissions. All opiates can be physically dangerous. Buprenorphine, a recently approved medication for use in opioid treatment, will be important to monitor in the future.

Oxycodone

In December 1995, a new formulation of oxycodone became available that packaged high doses of the drug with a time release mechanism.¹⁸ Drug abusers quickly learned how to defeat the time-release mechanism, thereby subjecting themselves to high doses of short-acting oxycodone. In the following years, drug-caused deaths in which oxycodone was identified increased from 1 to 32 in King County (1997-2005), while ED reports tripled in King and Snohomish counties (1995-2002) and prescriptions for the King County area increased 590% (1997-2005). In Autumn 2003 OxyContin was removed from Medicaid's preferred drug list in Washington State.

Methadone

Methadone can be dangerous if mis-used because it lasts for a relatively long time in the body and toxic levels can occur if the dose is not slowly adjusted. The increase in the identification of methadone in deaths ruled drug-caused in King County (479%) paralleled the increase in sales to hospitals and pharmacies of methadone (590%) from 1997 to 2005. From 2000 through 2006 the caseload in King County methadone treatment programs increased 11%. While methadone maintenance treatment (MMT) programs are a potential source of methadone, the majority of methadone in MMT is consumed in front of staff, with a minority of clients receiving take-home doses. Take-home doses are sometimes not taken by clients and instead sold, traded, or given to others. To minimize such abuse, clients in MMT regularly undergo urinalysis to confirm that they are taking their methadone and to determine if they are taking illegal drugs. Those prescribed methadone for pain outside the MMT system do not regularly undergo drug screening, though such screening is recommended for patients with a history of addiction.

The overall change in the amount of methadone administered in MMT is small in comparison to the rate of increase of prescriptions for pain. Many more people receive prescriptions for methadone for treatment of pain than are receiving treatment for opiate dependence in MMT, both in King County and throughout Washington. Therefore, it appears that the increase in ED reports and mortalities is likely driven by methadone prescribed for pain. A similar finding was reported at a national meeting on methadone-associated mortality in 2003 and a 2006 peer reviewed article by authors at the Centers for Disease Control.¹⁹

Buprenorphine

In October of 2002, buprenorphine was approved in the United States for use in opiate addiction treatment.²⁰ Physicians outside MMT can prescribe buprenorphine after receiving eight hours of training and registering with the federal government. It is hoped that buprenorphine will increase addiction treatment capacity in Washington State, especially in counties without opiate treatment programs. It appears that the risk of overdose is lower with buprenorphine than methadone, and when combined with naloxone (an opiate antagonist), it is not a major drug of abuse. Overdose deaths are rare, though they have been reported when buprenorphine is combined with antipsychotic drugs,²² tranquilizers, and depressants such as diazepam (e.g. Valium)²² and alcohol. An earlier version of this research brief noted in 2003 that "buprenorphine has not been reported in most data sources

SUMMARY

Maintaining the balance between providing adequate pain management and preventing mis-use of prescription opiates is delicate work. The dramatic increase in prescription opiate use, legal and illegal, has had negative effects that are measurable in terms of morbidity and mortality. Policy changes could limit access to adequate pain management, as they may increase physicians wariness of prescribing opiates. It is difficult to measure the positive effects of opiate medicines on the quality of life for the many Washingtonians suffering from pain. As pain management practice improves, as the tools for treating opiate addiction expand, and as policy changes to modify utilization of opiate medicines are increasingly implemented, careful attention must be paid to minimize both the negative consequences of prescription opiate use as well as unintended consequences of policy changes.

METHODS & DATA SOURCES

We sought to describe the nature and scope of prescription-type opiate use in Washington State utilizing the following data sources:

- Emergency Department data from the Drug Abuse Warning Network, trends from 1997 - 2002 from the original DAWN and cross-sectional data from 2006 from the NewDAWN! system.
- King County medical examiner data from annual reports and public data provided directly to the authors for 1997-2005,
- Drug Enforcement Administration (DEA) data on prescription opioid medication sales to hospitals and pharmacies for 1997-2005.
- Washington State data from three different surveys: the National Survey on Drug Use and Health (2004-2005), the Washington State Healthy Youth Survey (2006), the Washington State Needs Assessment Survey (2003).
- Treatment data from the WA State Division of Alcohol and Substance Abuse (1999-2006).
- Opiate treatment program waiting list totals for King County (2000-2006).

Data were organized to allow interpretation and comparison of general trends across data sources. Statistical analyses were not conducted.

DATA NOTE: COMMON DRUG NAMES

Data used refer to generic names, common brand names are listed in Table 1 for reference.

Generic Name	Common brand names	Medical Indications
Buprenorphine	Buprenex, Subutex, Suboxone	Pain, Addiction treatment
Codeine	Codeine	Pain, Cough suppressant
Fentanyl	Fentanyl, Actiq, Sublimaze, Duragesic	Pain
Hydrocodone	Vicodin, Vicoprofen	Pain, Cough suppressant
Hydromorphone	Dilaudid	Pain
Meperidine	Demerol	Pain
Methadone	Methadose, Dolophine	Pain, Addiction treatment
Morphine	MS Contin, Avinza, Oramorph SR	Pain
Oxycodone	OxyContin, Percocet, Percodan	Pain
Propoxyphene	Darvon	Pain

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