

# RADARS<sup>®</sup>

S Y S T E M

<b>Title:</b>	Buprenorphine abuse in the United States: Comparison to methadone using five surveillance programs simultaneously
<b>Authors:</b>	Green JL, Dart RC, Bucher Bartelson B
<b>Meeting:</b>	International Congress of the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT)
<b>Date:</b>	May 2011
<b>Location</b>	Dubrovnik, Croatia

## Abstract:

**Objective:** Buprenorphine and methadone are used widely in the United States for treatment of opioid abuse. Abuse of methadone is well known, however, the abuse of buprenorphine is disputed. This analysis compares abuse of methadone and buprenorphine using concurrent data systems.

**Methods:** The Researched Abuse Diversion and Addiction-Related Surveillance (RADARS<sup>®</sup>) System is a non-governmental postmarketing surveillance system focusing on prescription drug abuse. The system has five components: Drug Diversion (DD) investigators, Poison Centers (PC), Methadone Treatment Program (OTP), Survey of Key Informant Patients (SKIP), and College Student (CS) Survey. Rates of events associated with buprenorphine and methadone were determined quarterly through June 2010. All rates are expressed as events per 100,000 population.

**Results:** In DD, methadone case volume increased from 0.04 in 2002 to 0.16 (average annual increase, or slope, of 0.025,  $p < 0.001$ ) and from 0.00 to 0.13 (slope 0.019,  $p < 0.001$ ) for buprenorphine. In the PC program, methadone calls have increased from 0.14 in 2003 to 0.33 (slope 0.023,  $p < 0.001$ ) and from 0.00 to 0.15 (slope 0.023,  $p < 0.001$ ) for buprenorphine. In OTP, methadone rates increased from 0.44 in 2005 to 1.27 (slope 0.086,  $p = 0.005$ ) and from 0.02 to 0.38 (slope 0.034,  $p < 0.001$ ) for buprenorphine. In SKIP, methadone rates increased from 0.39 in 2008 to 0.78 (slope 0.160,  $p = 0.001$ ) and from 0.06 to 0.26 (slope 0.051,  $p = 0.096$ ) for buprenorphine. In CS, methadone cases increased from 0.01 in 2008 to 0.03 (slope 0.018,  $p = 0.157$ ) and buprenorphine increased from 0.00 to 0.02 (slope 0.023,  $p = 0.329$ ). The geographical distribution of cases was similar to other abused prescription analgesics. Poison center data indicate that outcomes associated with buprenorphine cases are less severe than for methadone, both in adults and in young children.

**Conclusion:** Data from five different programs indicate that abuse of methadone and buprenorphine continues to increase. It is particularly concerning that rates appear to be increasing among new initiates. Poison center data suggest that buprenorphine may have an improved safety profile compared to methadone.