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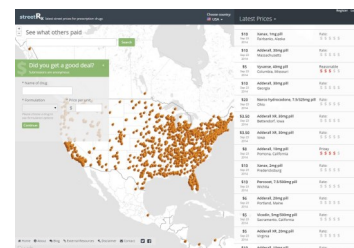


SAVE THE DATE!

RADARS[®] SYSTEM NINTH ANNUAL SCIENTIFIC MEETING
May 5th - 6th, 2015
Westin Georgetown, Washington, D.C.

Introducing the StreetRx Re-launch

**RADARS[®] System and
Epidemico announce re-launch
of StreetRx.com, a
crowdsourcing site for black
market prices on prescription
and illicit drugs**



Did You Know?

The U.S. Government will now allow pharmacies and clinics to take back unused prescription drugs.

StreetRx gathers user submitted information on street prices of diverted prescription drugs and illicit drugs in the United States as well as in Australia, Canada, France, Germany, Italy, Spain, and United Kingdom. Visitors can anonymously view and post submissions in a format that offers price transparency, while providing a novel data set for public health surveillance. Localization is set to the city level and feedback is shared via a simple five-point rating scale, allowing users to share price data while preventing the coordination of illicit transactions. The system has been optimized with a sleek design, easier navigation, and mobile device compatibility.

StreetRx.com has been used to generate valuable insights for health promotion programs and epidemiological research. The site is able to identify differences in the appeal of conventional versus abuse-deterrent formulations, regional variances in diverted drug prices, and changes in the localized price and availability of newly released products. Information on drug prices and preferences help health communication specialists tailor outreach programs to local needs, and assist epidemiologists and policymakers to understand the effects of product formulations, prescribing practices and pricing structures on the diversion of prescription drugs.

The RADARS[®] System invites you to visit the site and spread the news among your colleagues and communities.

Recent Publication by RADARS[®] System

Assessment of prescription opioid intentional exposures across the rural-urban continuum in the United States using both population and drug availability rates

Marie-Claire Le Lait, Erin M. Martinez, Stevan G. Severtson, Sarah A. Lavery, Becki Bucher-Bartelson and Richard C. Dart. June 2014.

Key Points:

- ♦ Examination of prescription opioid intentional exposure rates, adjusting for population and drug availability (unique recipients of dispensed drug or URDD), along with rates of drug availability per population, can show a more complete picture of prescription opioid abuse and misuse in areas with varying proportions of the population residing in rural areas.
- ♦ The number of people filling an opioid prescription rises as the proportion of the population residing in a rural area increases.
- ♦ This information can be used to develop targeted opioid abuse prevention strategies and further the education of physicians in rural areas about this epidemic.

Introduction: Research indicates that the prescription opioid epidemic may disproportionately affect rural areas compared to urban and suburban ones. This study assessed how rates of intentional opioid exposures reported to poison centers and the number of individuals filling prescriptions for opioids vary as the proportion of the population that resides in a rural area changes.

Methods: This study examines prescription opioid intentional exposures using opioid classes tracked in the RADARS[®] System Poison Center Program. Intentional exposure rates were calculated adjusting for population and unique recipients of dispensed drug (URDD). These rates were analyzed using time (quarter) and the proportion of a three-digit zip code residing in a rural area as covariates. Additionally, the URDD per population rate was calculated to examine the proportion of the population filling prescriptions for opioids.

Results: After adjusting for population, intentional exposure cases significantly increased as the proportion of the population residing in a rural area increased. However, when adjusting for URDD, intentional exposure cases decreased with increasing rural population. The URDD per population increased as the proportion of people residing in a rural area increased.

The RADARS[®] System Poison Center program intentional exposures to prescription opioid population rate, URDD rate, and URDD per population rate model results

Rate	Effect	Percent change (95% CI)	p-value
Population rate	Percent rural (10% increments)	3.64% (2.21, 5.09)	<.001
	Quarter	-0.45% (-1.04, 0.15)	0.139
URDD rate	Percent rural (10% increments)	-4.69% (-6.39, -2.97)	<.001
	Quarter	-1.88% (-2.59, -1.16)	<.001
URDD per population rate	Percent rural (10% increments)	5.78 (4.26, 7.31)	<.001
	Quarter	1.85 (1.51, 2.2)	<.001

Conclusions: Using both population and URDD adjusted intentional exposure rates gives a more complete picture of opioid abuse in rural areas. This information can be used to develop opioid abuse prevention strategies and further the education of physicians serving rural areas about this epidemic.



FDA Approves Extended-Release, Abuse-Deterrent, Hysingla ER November 20, 2014

Hysingla ER (hydrocodone bitartrate), an extended-release opioid analgesic to treat pain severe enough to require daily, around-the-clock, long-term opioid treatment has been approved.



FDA Approves Labeling with Abuse-Deterrent Features for Embeda October 17, 2014

Embeda (morphine sulfate and naltrexone hydrochloride), an opioid analgesic, has been approved with labeling describing the product's abuse-deterrent properties.



FDA Approves New Extended-Release Oxycodone with Abuse-Deterrent Properties July 23, 2014

Targiniq ER (oxycodone hydrochloride and naloxone hydrochloride), an extended-release/long-acting (ER/LA) opioid analgesic, has been approved with abuse-deterrent properties expected to help reduce the abuse of the drug.



FDA Approves Buccal Buprenorphine Plus Naloxone Formulation for Treatment of Opioid Dependence June 6, 2014

Bunavail (buprenorphine and naloxone) buccal film received approval for its New Drug Application. Bunavail became available on the market on November 3, 2014.



DEA Reclassifies Hydrocodone-Combination Products to Schedule II Drugs October 6, 2014

The DEA has reclassified hydrocodone-combination products to a more restrictive Schedule II in an attempt to lessen drug abuse. The rule applies to all pharmaceuticals containing hydrocodone currently on the market in the United States.



DEA Rules Tramadol a Schedule IV Drug August 18, 2014

The DEA officially changed tramadol from a non-classified drug to a Schedule IV substance under the Controlled Substances Act.



2014 RADARS® System Conference Attendance

RADARS® System strives to attend all relevant meetings in the field of prescription drug abuse, misuse and diversion. Our goal is to share knowledge and data with research colleagues, medical and public health officials, policy makers, regulatory agencies and pharmaceutical companies. RADARS® System data are shared at industry and regulatory events around the world. Domestically and internationally, we presented lectures and posters at a variety of meetings this year including:

DOMESTIC

- ◆ **Human Abuse Liability & Abuse-Deterrent Formulation Conference.** Silver Spring, MD. November 2014.
- ◆ **North American Congress of Clinical Toxicology (NACCT).** New Orleans, LA. October 2014.
- ◆ **PAINWeek 2014.** Las Vegas, NV. September 2014.
- ◆ **College on Problems of Drug Dependence (CPDD) Annual Meeting.** San Juan, Puerto Rico. June 2014.
- ◆ **International Conference on Opioids (ICOO).** Boston, MA. June 2014.
- ◆ **2014 BIO International Convention.** San Diego, CA. June 2014.
- ◆ **33rd Annual Scientific Meeting of the American Pain Society (APS).** Tampa, Florida. May 2014.
- ◆ **45th Annual Medical-Scientific Conference of the American Society of Addiction Medicine (ASAM).** Orlando, FL. April, 2014.
- ◆ **2014 National Rx Drug Abuse Summit.** Atlanta, GA. April 2014.
- ◆ **American Academy of Pain Medicine (AAPM) Annual Meeting.** Phoenix, AZ. March 2014.
- ◆ **American College of Medical Toxicology (ACMT) Annual Meeting.** Phoenix, AZ. March 2014.

INTERNATIONAL

- ◆ **16th International Society of Addiction Medicine (ISAM) Annual Meeting.** Yokohama, Japan. October 2014.
- ◆ **Federation of European Toxicologists & European Societies of Toxicology (EUROTOX).** Edinburgh, Scotland. September 2014.
- ◆ **11th European Congress on Heroin Addiction & Related Clinical Problems (Europad).** Glasgow, Scotland, UK. May 2014.
- ◆ **XXXIV Annual International Congress of the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT).** Brussels, Belgium. May 2014.
- ◆ **35th Annual Scientific Meeting Canadian Pain Society (CPS).** Quebec City, Quebec, Canada. May 2014.

Manuscripts:

- ♦ Dart RC, Bucher Bartelson B, Adams EH. **Non-medical use of tapentadol immediate release by college students.** *Clinical Journal of Pain*. 2014 Mar 5.
- ♦ Le Lait MC, Martinez EM, Severtson SG, Lavery SA, Bucher-Bartelson B, Dart RC. **Assessment of prescription opioid intentional exposures across the rural-urban continuum in the United States using both population and drug availability rates.** *Pharmacoepidemiol Drug Saf*. 2014 Jun 4.
- ♦ Lavonas EJ, Severtson SG, Martinez EM, Bucher-Bartelson B, Le Lait M-C, Green JL, Murrelle L, Cicero TJ, Kurtz SP, Rosenblum A, Surratt HL, Dart RC. **Abuse and diversion of buprenorphine sublingual tablets and film.** *Journal of Substance Abuse Treatment*. 2014 Jul;47(1):27-34.
- ♦ Surratt HL, O'Grady C, Kurtz SP, Stivers Y, Cicero TJ, Dart RC, Chen M. **Reductions in prescription opioid diversion following recent legislative interventions in Florida.** *Pharmacoepidemiology and Drug Safety*. 2014;23(3):314-230.
- ♦ Davis JM, Severtson SG, Bucher-Bartelson B, Dart RC. **Using poison center exposure calls to predict prescription opioid abuse and misuse-related emergency department visits.** 2013. *Pharmacoepidemiology and Drug Safety*. 2014;23(1):18-25.
- ♦ Davis JM, Searles VB, Severtson G, Dart RC, Bucher-Bartelson B. **Seasonal variation in suicidal behavior with prescription opioid medicine.** *Journal of Affective Disorders*. 2014; 158:30-36.

Abstracts and Posters:

- ♦ Brown KR, Le Lait MC, Dart RC, RADARS® System Poison Center Group. **Pediatric serious adverse events after exposure to immediate and extended release opioids.** NACCT 2014. New Orleans, LA. October 2014.
- ♦ Fischer LJ, Severtson SG, Dart RC, RADARS® System Poison Center Group. **Age differences in intentional abuse cases mentioning hydrocodone products versus Schedule II opioids.** NACCT 2014. New Orleans, LA. October 2014.
- ♦ Lavery SA, Le Lait MC, Severtson SG, West NA, Dart RC. **Factors associated with non-medical use of stimulants among college students.** NACCT 2014. New Orleans, LA. October 2014.
- ♦ West NA, Green JL, and Dart RC. **Trends in prescription opioid abuse and misuse among older adults.** NACCT 2014. New Orleans, LA. October 2014.
- ♦ West NA, Le Lait MC, Surratt H, Burke JJ, Kurtz SP, Dasgupta N, Bebartta VS, Dart RC. **Diversion and illicit sale of extended release tapentadol in the United States.** PAINWeek 2014. Las Vegas, NV. September 2014.
- ♦ Lavonas EJ, Martinez EH, Severtson SG, Dart RC, Green JL. **Buprenorphine/Naloxone Pediatric Ingestion: Exposure Rates Differ Between Film and Tablet Formulations.** College on Problems of Drug Dependence Annual Meeting, San Juan, Puerto Rico. June 2014.
- ♦ Green JL, Martinez EM, Walcher S, Somaini L, Deruvo G, Desel H, Milanese G, Sesana F, Guareschi M, McBride KE, Maremmani I, Rosenblum A, Parrino M, Cicero T, Dart RC. **Global impact of prescription opioid misuse: Europe and US.** College on Problems of Drug Dependence Annual Meeting, San Juan, Puerto Rico. June 2014.
- ♦ Severtson SG, Le Lait MC, Green JL, Dart RC. **Regional concentrations of Opana® ER abuse before and after introduction of a tamper resistant formulation in 2012.** College on Problems of Drug Dependence Annual Meeting, San Juan, Puerto Rico. June 2014.
- ♦ Le Lait MC, Severtson SG, Dasgupta N, Green JL, Hall A, Dart RC. **The street prices of immediate release and extended release tapentadol are lower than other Schedule II opioid tablets/capsules.** College on Problems of Drug Dependence Annual Meeting, San Juan, Puerto Rico. June 2014.
- ♦ Green JL, Martinez EM, Severtson SG, Cicero TJ, Kurtz SP, Rosenblum A, Surratt HL, Dart RC, Lavonas EJ. **Buprenorphine/naloxone abuse and diversion: film rates are less than tablet rates.** College on Problems of Drug Dependence Annual Meeting, San Juan, Puerto Rico. June 2014.
- ♦ Green JL, Martinez EM, Severtson SG, Dart RC, Lavonas EJ. **Buprenorphine/naloxone pediatric ingestion: exposure rates differ between film and tablet formulations.** College on Problems of Drug Dependence Annual Meeting, San Juan, Puerto Rico. June 2014.
- ♦ Severtson SG, Bucher Bartelson B, Green JL, Dart RC. **Diversion of Opana® ER declined following introduction of a tamper resistant formulation.** International Conference on Opioids. Boston, MA. June 2014.
- ♦ Martinez EM, McBride KE, Guareschi M, Touzeau D, Walcher S, Deruvo G, Somaini L, Fonseca F, Bucher Bartelson B, Green JL, Dart RC, Maremmani I. **European patients entering opioid addiction treatment whose primary drug is heroin differ from those whose primary drug is another opioid.** 11th European Congress on Heroin Addiction & Related Clinical Problems. Glasgow, Scotland, UK. May 2014.
- ♦ Martinez EM, McBride KE, Guareschi M, Touzeau D, Walcher S, Deruvo G, Somaini L, Fonseca F, Bucher Bartelson B, Green JL, Dart RC, Maremmani I. **Gender differences in patients entering treatment programs in Europe.** 11th European Congress on Heroin Addiction & Related Clinical Problems. Glasgow, Scotland, UK. May 2014.
- ♦ Martinez EM, McBride KE, Guareschi M, Touzeau D, Walcher S, Deruvo G, Somaini L, Fonseca F, Bucher Bartelson B, Green JL, Dart RC, Maremmani I. **European opiate addiction treatment programs: poly-opioid users are different than other patients seeking treatment.** 11th European Congress on Heroin Addiction & Related Clinical Problems. Glasgow, Scotland, UK. May 2014.
- ♦ McBride KE, Martinez EM, Guareschi M, Touzeau D, Walcher S, Deruvo G, Somaini L, Fonseca F, Green JL, Dart RC, Maremmani I. **Use of treatment history to identify drug use differences in european patients.** 11th European Congress on Heroin Addiction & Related Clinical Problems. Glasgow, Scotland, UK. May 2014.

Abstracts and Posters, continued:

- ♦ Green JL, Martinez EM, Walcher S, Somaini L, Deruvo G, Desel H, Milanese G, Sesana F, Guareschi M, McBride KE, Marenmani I, Dart RC. **Prescription opioid misuse in Europe: from opioid treatment programs to poison centres.** XXXIV Annual International Congress of the European Association of Poisons Centres and Clinical Toxicologists. Brussels, Belgium, May 2014.
- ♦ Severtson G, Le Lait C, Green J, Dart R. **Reformulation of extended release oxymorphone: changes in intentional abuse exposures before and after introduction of tamper resistant formulation.** 33rd Annual Scientific Meeting of the American Pain Society. Tampa, Florida. May 2014.
- ♦ Le Lait C, Severtson G, Surratt H, Burke J, Bebart V, Dart R. **The role of tapentadol ER in the illicit market for opioid analgesics in the United States.** 33rd Annual Scientific Meeting of the American Pain Society. Tampa, Florida. May 2014.
- ♦ Wiegand TJ, Le Lait CMC, Green JL, Dart RC. **Analysis of abuse of buprenorphine transdermal delivery system (Butrans[®]) using data from the RADARS[®] System Poison Center Program.** 45th Annual Medical-Scientific Conference of the American Society of Addiction Medicine. Orlando, FL. April, 2014.
- ♦ Green JL, Martinez EM, Severtson SG, Dart RC, Lavonas EJ. **Buprenorphine/naloxone pediatric ingestion: exposure rates differ between film and tablet formulations.** 45th Annual Medical-Scientific Conference of the American Society of Addiction Medicine. Orlando, FL. April, 2014.
- ♦ Green JL, Martinez EM, Severtson SG, Cicero TJ, Kurtz SP, Rosenblum A, Surratt HL, Dart RC, Lavonas EJ. **Buprenorphine/naloxone abuse and diversion: film rates are less than tablet rates.** 45th Annual Medical-Scientific Conference of the American Society of Addiction Medicine. Orlando, FL. April, 2014.
- ♦ Green JL, Martinez EM, Severtson SG, Cicero TJ, Kurtz SP, Rosenblum A, Surratt HL, Dart RC, Lavonas EJ. **Buprenorphine/naloxone abuse and diversion: film rates are less than tablet rates.** American College of Medical Toxicology Annual Meeting. Phoenix, AZ. March 2014.
- ♦ Green JL, Martinez EH, Severtson SG, Dart RC, Lavonas EJ. **Buprenorphine/naloxone pediatric ingestion: exposure rates differ between film and tablet formulations.** American College of Medical Toxicology Annual Meeting. Phoenix, AZ. March 2014.

RADARS[®] System Quarterly Technical Report

First Quarter 2014 Quarterly Technical Report

Appearance of Canadian Oxycodone Extended Release Products in the United States

Third Quarter 2014 Quarterly Technical Report

Opioid-Related Mortality Rates Estimated Using National Vital Statistics System Data
versus RADARS[®] Poison Center Program Data

Fourth Quarter 2014 Quarterly Technical Report

Prescription Opioid Death Rates by Gender using Data from The RADARS[®] System Poison
Center Program

RADARS[®] System in Social Media – Get Connected!



Follow us at [@RADARS_System](https://twitter.com/RADARS_System). You can find news relating to prescription drug surveillance and abuse in the US and abroad. RADARS[®] System tweets include publication announcements, conference attendance, program updates and more.



Publication and conference attendance news can be found on our LinkedIn site (www.linkedin.com/company/radars-system).



Visit www.RADARS.org for active links to presentations, conference and manuscript

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RADARS® System Mission Statement

The RADARS® System provides timely, product specific and geographically-precise data to the pharmaceutical industry, regulatory agencies, policymakers and medical/public health officials to aid in understanding trends in the abuse, misuse, and diversion of prescription drugs.

Rocky Mountain Poison and Drug Center and Denver Health and Hospital Authority

The RADARS® System is a governmental nonprofit operation of the Rocky Mountain Poison and Drug Center (RMPDC), an agency of Denver Health. The RMPDC has been in operation for more than 50 years, making it one of the oldest poison control centers in the nation. Denver Health is the safety net hospital for the City and County of Denver and is the Rocky Mountain region's academic Level I trauma center and includes Denver Public Health, Denver's 911 emergency medical response system, nine family health centers, 12 school-based clinics, NurseLine, correctional care, Denver CARES, the Denver Health Medical Plan, and the Rocky Mountain Center for Medical Response to Terrorism, Mass Casualties and Epidemics.



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Level One Care for ALL

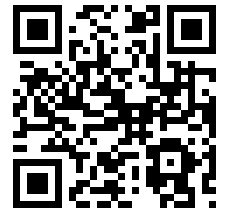


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