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Did You Know?

Senator Feinstein submitted Senate Resolution 261 designating the RADARS System will be attending the European Association of Poison Centres and Clinical Toxicologists (EAPCCT) Annual International Congress May 29, 2012 in London, U.K. Please type the following into web browser

> http://www.eapcct.org/ index.php?page=home



Nabarun Dasgupta to Serve on RADARS[®] System Scientific Advisory **Board**

The RADARS® System is pleased to announce the appointment of Nabarun Dasgupta, MPH to the Scientific Advisory Board (SAB). Mr. Dasgupta is a quantitative epidemiologist involved in the study of the medical and nonmedical uses of prescription opioids and heroin. He is the co-founder of Project Lazarus (www.projectlazarus.org), a community-based pain management and overdose prevention nonprofit organization in Appalachian North Carolina. He has worked with and consults for diverse groups in public health (e.g., clinical practices, nonprofit organizations, state and local health departments, and the pharmaceutical industry) involved in reducing the adverse consequences of opioid use.

Mr. Dasgupta began his professional education at Princeton University, where he earned a bachelor of arts degree in molecular biology, and then a master of public health degree in the epidemiology of microbial diseases from Yale School of Medicine. He is finishing his doctoral degree in the Department of Epidemiology, Division of Pharmacoepidemiology at The University



of North Carolina Gillings School of Global Public Health, concentrating on the evaluation of community-based interventions for opioid overdose prevention using surveillance data.

Mr. Dasgupta's areas of research are in pharmacoepidemiology, opioid overdose, and consequences of injection drug use, including a crowd sourcing project to monitor street prices for prescription controlled substances. He is also involved in designing and evaluating interventions for reducing the unintended consequences of prescription opioid use. He participated in creating an algorithm to detect potential criminal prescribing of opioids, and was the lead epidemiologist for a nationwide surveillance system to detect prescription opioid abuse.

Mr. Dasgupta also works with the Centers for Disease Control and Prevention and the US Food and Drug Administration to create biosurveillance tools for bioterrorism, infectious disease reporting, and prescription drug-related and device-related adverse event monitoring, including mobile applications (www.medwatcher.org).

As a member of the RADARS System Scientific Advisory Board. Mr. Dasgupta will provide guidance for the improvement of current pharmasurveillance systems, development of new pharmasurveillance systems, and insight into the regulatory and policy changes that impact the prescription drug industry.



A Decade of the RADARS[®] System

It was 2002,

Tiger Woods was the best golfer in the world, The iPod had just been introduced, Mark Zuckerberg was just finishing his senior year of <u>high school</u> on his way to Harvard, The Anaheim Angels won the World Series, and

The RADARS® System was launched.

Originally created by Purdue Pharma to help the healthcare community, law enforcement, government agencies, the public, and the pharmaceutical industry track and understand the abuse and diversion of prescription medications, the RADARS System and the data we provide have become critical components of post-market surveillance for many medications.

In 2006, Denver Health and Hospital Authority acquired the RADARS System. We have seen tremendous growth and maturity in the RADARS System over the last decade, expanding from 4 core programs to 6 programs. Coverage of the United States has expanded, data quality has improved, and more medications are monitored. Our databases track everything from unintentional poison center exposures to trends in the street value of specific prescription drugs. We strive to keep our programs current even as technology rapidly changes. The RADARS System has incorporated web-based data collection for both our College Survey and StreetRx Programs and has innovated crowdsourcing as a surveillance platform with Epidemico.

What will the next 10 years bring? Population demographics, regulatory actions, surveillance needs and much more will change over the next decade. The RADARS System will build on our current success to address these new challenges and obstacles. As pharmaceutical companies continue to devote efforts to deter the abuse of their medications, as organizations endure with their efforts to curb or eliminate abuse through interventions and treatment programs, and as government agencies try to protect the health of the public, the RADARS System intends to provide data to support all of these efforts. We are planning several innovative changes to assist in each of these endeavors.

My deepest felt thanks go to our Scientific Advisory Board and our Industry Advisory Board for their support and contributions over the past decade. You have been an integral part of the RADARS System and its decade-long success in providing prescription drug data that are geographically specific, relevant, and current. I look forward to maintaining our productive and fruitful partnerships.

Please be sure to join us on April 24th, 2011 for the Annual Meeting of the RADARS System. We have nationally and internationally acclaimed speakers coming to make our 10th Anniversary the best meeting yet!

Sincerely, Richard C. Dart, MD, PhD

Data Comparison - RADARS System College Survey and National Survey on Drug Use and Health

The RADARS System College Survey Program is an internet survey designed to measure the prevalence of non-medical drug use in the college student population in the United States. Questions are designed to directly identify the use of product-specific prescription drugs, and to assess other aspects that are informative of drug abuse behaviors. Researchers at RADARS System recently evaluated College Survey by comparing its non-medical drug use (NMDU) prevalence estimates to NMDU prevalence estimates from the annual National Survey on Drug Use and Health (NSDUH), a nationally representative survey.

The NSDUH collects data about illicit drug use, non-medical drug use, tobacco, and alcohol use among the general population of the United States. College Survey is similar in many aspects but is administered more frequently, specifically to college students, and presents data quarterly. Aggregated data from all 2009 College Survey administrations were used to compare NMDU use estimates among 18-25 year-olds to the same on the NSDUH. While data from 2010 and 2011 are available for College Survey, the most current data available from the NSDUH is from 2009.

Table 1 highlights comparable prevalence estimates of non-medical drug use from College Survey and the NSDUH

Table 1				
Drug use in RADARS System College Survey (CS) and National Survey on Drug Use and Health (NSDUH)				
Timeframe	RADARS System CS	NSDUH	NSDUH	NSDUH
	Past 3 months use	Past month use	Past year use	Lifetime use
	Prevalence %, (95% CI) ^a			
Prescription drugs				
Pain Relievers	11.2 (10.2, 12.2)	4.6 (3.8, 5.4)	11.5 (10.4, 12.7)	(-)
Stimulants	9.8 (8.8, 10.7)	1.5 (1.2, 1.9)	4.9 (4.1, 5.6)	(-)
Muscle Relaxants	9.7 (9.0, 10.5)	(-)	(-)	2.3 (1.8, 2.9)
Tranquilizers	7.6 (6.8, 8.4)	1.7 (1.2, 2.2)	5.8 (4.9, 6.7)	(-)
Oxycodone	4.0 (3.4, 4.6)	(-)	(-)	8.7 (7.6, 9.7)
Hydrocodone	5.4 (4.7, 6.1)	(-)	(-)	7.2 (6.1, 8.3)
Methadone	1.7 (1.3, 2.1)	(-)	(-)	1.2 (0.9, 1.6)
Morphine	1.9 (1.4, 2.3)	(-)	(-)	2.3 (1.7, 2.9)
Tramadol	1.4 (1.1, 1.8)	(-)	(-)	1.5 (1.0, 2.0)
OxyContin®	1.0 (0.7, 1.3)	0.5 (0.3, 0.8)	2.1 (1.6, 2.5)	(-)
Ultram®	0.6 (0.3, 0.8)	(-)	(-)	0.6 (0.3, 0.8)
Recreational drugs				
Tobacco	32.6 (31.2, 34.1)	32.2 (33.1, 37.3)	48.6 (46.2, 51.0)	(-)
Alcohol	64.1 (62.6, 65.5)	63.3 (61.6, 65.0)	80.5 (79.3, 81.7)	(-)
MDMA	4.3 (3.7, 5.0)	(-)	(-)	10.0 (8.8, 11.3)
Marijuana	22.4 (21.1, 23.7)	14.2 (12.8, 15.7)	18.2 (16.6, 19.8)	(-)
Cocaine	4.4 (3.7, 5.0)	1.7 (1.2, 2.2)	5.7 (4.7, 6.7)	(-)
Heroin	2.4 (1.9, 2.9)	0.2 (0.0, 0.3)	0.4 (0.2, 0.6)	(-)
Methamphetamine	2.6 (2.1, 3.1)	0.2 (0.0, 0.4)	0.7 (0.3, 1.1)	(-)
^a 95% CI = Confidence Interval of Prevalence Estimate				

(-) = not available from NSDUH

College Survey detected substantive differences in estimates of use of stimulants, muscle relaxants, marijuana, methamphetamine and heroin compared to the NSDUH survey, however. Explanations for the differences could, in part, lie with the identification of prescription drugs used in the NSDUH compared to College Survey. For example, a positive muscle relaxant response on the NSDUH is identified with a response to "Flexeril," "Soma," or "other additional responses on the tranquilizer module that fit into muscle relaxant module." College Survey, on the other hand, asks respondents if they "took a prescription muscle relaxant non-medically," and provides a comprehensive list of scientific and brand name examples including: baclofen, carisoprodal, chlorphenesin, chlorzoxazone, cyclobenzaprine, metaxalone, methocarbamol, orphenadrine as well as numerous brand names (e.g., Soma[®], Flexeril[®], and others). The higher prevalence of non-medical use of muscle relaxants detected by College Survey could be indicative of a more accurate estimate given that providing comprehensive examples and subclasses likely eases the guesswork surrounding the complexities of medication names.

Although College Survey found higher estimates of prescription stimulant use and marijuana use among college students than the NDSUH, other studies on illicit substance use among college students report similar estimates to those found by College Survey. McCabe et al. report past year stimulant use between 5-6% (McCabe, Teter et al. 2005; McCabe, Knight et al. 2005; McCabe 2008), lifetime stimulant use at 8.3% (Teter, McCabe et al. 2006), and past year of marijuana use between 23 -30% (McCabe, West et al. 2007). College Survey found higher prevalence of methamphetamine and heroin use than the NDSUH and other published reports, however. These differences could be explained as unique findings but deserve further investigation.

Prevalence estimates from College Survey are comparable to the NSDUH and other surveys studying NMDU among college students. Additionally, College Survey is a timely survey instrument that samples a geographically broader collegiate population than many other surveys.

Upcoming Meetings of Interest

- DIA Pharmacovigilance and Risk Management, January 23-25, 2012. Arlington, Virginia.
- American Academy of Pain Medicine, February 23-26, 2012. Palm Springs, California.
- Society of Toxicology, March 11-15, 2012.San Francisco, California.
- American Society for Clinical Pharmacology and Therapeutics, March 14-17, 2012. National Harbor, Maryland.
- Drug Information Association Euro Meeting, March 26-28, 2012. Copenhagen, Denmark.
- National Rx Drug Abuse Summit, April 10-12, 2012 Orlando, Florida
- Association of Clinical Research Professionals, April 14-17, 2012. Houston, Texas.
- World Drug Safety Congress Americas, April 17-20, 2012. Boston, Massachusetts.
- American Society of Addiction Medicine, April 19-22, 2012. Atlanta, Georgia.
- American Association of Occupational Health Nurses, April 21-23, 2012. Nashville, Tennessee.
- Food and Drug Law Institute Annual Conference, April 24-25, 2012. Washington, District of Columbia

Did You Know?

On December 29, 2011 the FDA approved a single shared Risk Evaluation and Mitigation Strategy (REMS) for transmucosal immediate-release fentanyl (TIRF) products. The shared system strategy will be called the TIRF REMS Access Program and is scheduled to begin in March 2012.

Contact Information

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Program or Data Inquiries: Ryan Westberry Business Manager-OPS 303 389-1297



Recent RADARS System Publications and Presentations

Reifler LM, Droz D, Bailey E, Schnoll SH, Fant R, Dart RC, Bucher-Bartelson B. Do prescription monitoring programs impact state trends in Opioid abuse/misuse? *Pain Medicine*.2012; *In Press.*

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 in the United States.

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 (DH). The RMPDC has been in operation for more than 50 years, making it one of the oldest poison control centers in the nation. DH 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 schoolbased 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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