## Challenging My Illusions About the Opioid Crisis

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Nabarun Dasgupta, MPH, PhD University of North Carolina at Chapel Hill Rocky Mountain Poison & Drug Center Disclosure: I am a part-time employee of the RADARS® System, a non-profit data provider to government and the pharmaceutical industry on post-marketing surveillance for controlled substances. In 1980, the second most dispensed drug in the US was an opioid analgesic (propoxyphene).

The Carter White House stated "diversion, misuse, and abuse of legal drugs may be involved in as many as seven out of ten reports of drug-related injury or death."

Schnoll S. Pain. In: Cohen S et al, eds. *Frequently Prescribed and Abused Drugs, Their Indications, Efficacy and Rational Prescribing*. Vol 2(1). Rockville, Maryland: National Institute on Drug Abuse; 1982.

US Government. Summary and Recommendations of the 1980 White House Conference on Prescription Drug Misuse, Abuse and Diversion. In: Wilford B, ed. *Balancing the Response to Prescription Drug Abuse*. Chicago, IL: American Medical Association; 1990.

## Implication

The roots of the opioid crisis are longer than conventional wisdom suggests.

Nearly all clinicians prescribe opioids. Less than half prescribe ER opioids, but most write <12 Rx/year.



90% any opioid analgesic

40% ER opioids

Physicians, nurse practitioners, physician assistants, clinical pharmacists, dentists in North Carolina

Dasgupta et al. (2016) Cohort Study of the Impact of High-Dose Opioid Analgesics on Overdose Mortality. *Pain Medicine*. PMID: 26333030 [PMP data from NC for 32k potential prescribers in 2010]

Implication Concerns about limiting access for pain patients are important, but hard to quantify.

ER opioids comprise only 11% of all opioid analgesic prescriptions.

FDA Briefing Document for May 2016 Advisory Committee meeting on Extended-release and Long-acting Opioid Analgesics Risk Evaluation and Mitigation Strategy. http://bit.ly/2gC8a0C [national outpatient data 189MM Rx 2014]

Implication

Prescribers make cognitive decisions to prescribe IR opioids more often.

Most long-term use of ER opioid analgesics is for low back pain and arthritis



Primary prevention of opioid use requires analysis of

Implication

the etiology of back and joint pain.

Young JC et al. (2017) University of North Carolina. Indications for Long-term Extended-Release Opioid Therapy [330k commercially insured adults nationally through 2015]. Manuscript in preparation.

Implication

Few patients receive high dose opioids. Lower dose patients also die from overdose.

Only 3% of patients receive opioids >150 mg morphine equivalents

Dasgupta et al. (2016) Cohort Study of the Impact of High-Dose Opioid Analgesics on Overdose Mortality. *Pain Medicine*. PMID: 26333030 [PMP data from NC in 2010]

The top 5% of opioid analgesic patients account for most of total opioid use measured in morphine equivalents 70% 48% Commercial Medicaid (Arkansas) Insurance

Edlund MJ et al. (2010) An Analysis of Heavy Utilizers of Opioids for Chronic Noncancer Pain in the TROUP Study. *J Pain & Symptom Management.* PMID: 20579834 [national commercially insured and Medicaid thru 2005] Implication

Reducing high volume opioid prescribing may be a "last mile" problem

From 2012 to 2015, opioid analgesic prescribing decreased nationwide, but drug overdose deaths increased.

## 13% decline in opioid prescriptions

40% increase in overdose deaths

**Explanations** 

heroin

misclassification

unused medications

time-lag

FDA Background Package Addendum for September 2016 Advisory Committee. Utilization Patterns of Opioid Analgesics in the Pediatric Population. Appendix A, Table 1: 258MM to 225MM per year. http://bit.ly/2hFwIWm [includes adult data] CDC Wonder Database, Multiple Cause-of-Death mortality file [16,730 to 23,402 per year, by CDC definition of overdose] Half of OD decedents had an active Rx on the day of death. A quarter had no record of Rx in year prior to death.

51% Active Rx on day of OD death

24% No Rx in year before OD death

Dasgupta et al. (2016) Cohort Study of the Impact of High-Dose Opioid Analgesics on Overdose Mortality. *Pain Medicine*. PMID: 26333030 [NC PMP-linked medical examiner data, n=478 OD deaths among patients]

Implication Defining "legitimate" patients is daunting... and a waste of time?

Implication **Opioids** are used safely by many patients, but 1-out-of-4 deaths are occurring among nonpatients.

22 out of 100,000 patients receiving opioid analgesics each year die from an overdose, or 0.02%

Dasgupta et al. (2016) Cohort Study of the Impact of High-Dose Opioid Analgesics on Overdose Mortality. *Pain Medicine*. PMID: 26333030 [NC PMP-linked medical examiner data, n=478 OD deaths among patients]

Implication Concerns about highdose opioids should not crowd out concern for those receiving lower doses.

56% of overdose deaths among pain patients occur in people receiving *less* than 100 average daily MME.



Dasgupta et al. (2016) Cohort Study of the Impact of High-Dose Opioid Analgesics on Overdose Mortality. *Pain Medicine*. PMID: 26333030 [NC PMP-linked medical examiner data, n=478 OD deaths among patients]

Drug overdose deaths continue to be concentrated in urban and surrounding counties.



Implication

The bulk of services need to be focused on urban and suburban areas.

Kneebone E & Allard SW. A nation in overdose peril: Pinpointing the most impacted communities and the local gaps in care. Brookings Institute Report. http://brook.gs/2z6acgb [2015 national data]

From 2010 to 2015, drug overdose deaths increased in some states (NY, MA), but not others (CA, TX, FL).

30 states<br/>increased19 states<br/>remained steady

2 states showed decreases followed by increases

Rudd RA et al. Increases in Drug and Opioid-Involved Overdose Deaths — United States, 2010–2015. *MMWR* December 30, 2016

Implication

Recent overdose increases are regional.

> Are there protective factors?

## Thank you for your attention.

Slides available on my LinkedIn page.

Nabarun Dasgupta nab@unc.edu