

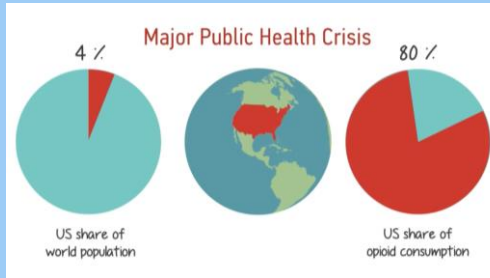
PILL STREET BLUES: THE OPIOID EPIDEMIC IN NORTH CAROLINA

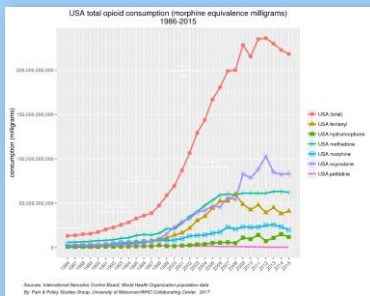
Matthew E. Nielsen, MD, MS, FACS
Urology, Epidemiology, Health Policy & Management
University of North Carolina at Chapel Hill

Disclosures

- Grant funding: Patient-Centered Outcomes Research Institute, National Cancer Institute, Agency for Healthcare Research and Quality
- Consultant: American College of Physicians High Value Care Task Force
- Consultant/Advisor: Grand Rounds



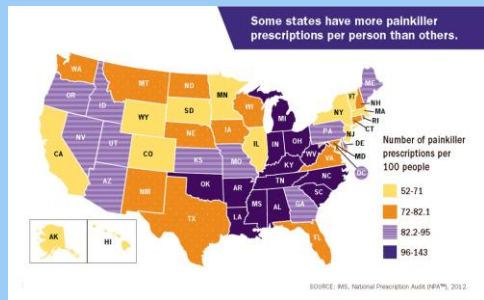




Prescription Opioids In America

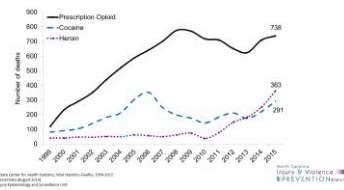
1 bottle for every adult





North Carolina Deaths

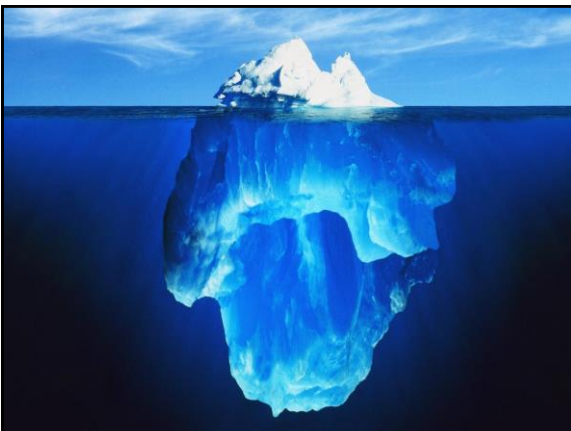
Medication/Drug Overdose Deaths in NC

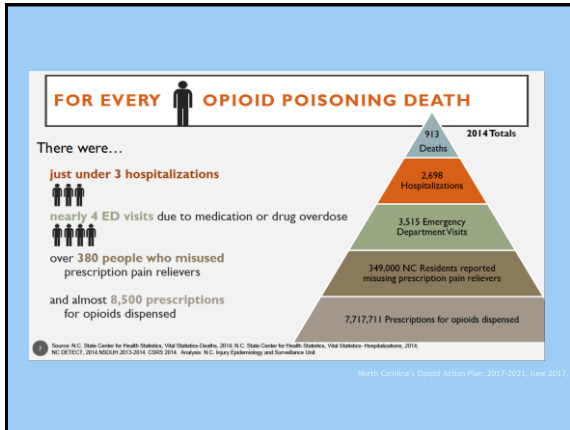


Heroin Addiction Starts with Prescription Addiction









How did we get here?



ADDICTION RARE IN PATIENTS TREATED WITH NARCOTICS

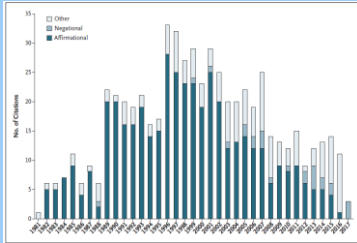
To the Editor: Recently, we examined our current files to determine the incidence of narcotic addiction in 39,946 hospitalized medical patients¹ who were monitored consecutively. Although there were 11,882 patients who received at least one narcotic preparation, there were only four cases of reasonably well documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs implicated were meperidine in two patients,² Percodan in one, and hydromorphone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction.

JANE PORTER
HERSHEL JICK, M.D.
Boston Collaborative Drug
Surveillance Program

Waltham, MA 02154 Boston University Medical Center

Porter J, New Engl J Med 1980; 302 (2)

NEJM letter regarding opioid addiction misrepresented and heavily cited



Source: A et al. JAMA 2016;316:222

1996



2000

CHICAGO—Excuses for inadequate pain control appear to have run their course and will no longer be accepted because poor pain control is unethical, clinically unsound, and economically wasteful.

EXCELLENCE

Phillips DM. 2000 Commission on Accreditation of Health Care Organizations. (2000) pain management standards committee. JAMA. 2000;284(4):420-425.

2001 NPC/JCAHO Guide



Pain: Current Understanding of Assessment, Management, and Treatments. National Pharmaceutical Council. December 2001.

2001 NPC/JCAHO Guide

Most experts agree that patients who undergo prolonged opioid therapy usually develop physical dependence but do not develop addictive disorders.¹⁵² In general, patients in pain do not become addicted to opioids. Although the actual risk of addiction is unknown,¹⁵² it is thought to be quite low. A recent study of opioid analgesic use revealed "low and stable" abuse of opioids between 1990 and 1996 despite significant increases in opioids prescribed.¹⁵⁴

Pain: Current Understanding of Assessment, Management, and Treatments. National Pharmaceutical Council. December 2001.

2001 NPC/JCAHO Guide

This fear sometimes reflects a lack of understanding of the risk of addiction with therapeutic drug use. Although studies suggest that the risk of iatrogenic addiction is quite low (e.g., Perry and Heidrich,¹⁶³ Zenz et al.¹⁶⁴), surveys indicate that clinicians often overestimate this risk.¹⁶⁵⁻¹⁶⁷

Pain: Current Understanding of Assessment, Management, and Treatments. National Pharmaceutical Council. December 2001.

No association between initial postop opioid prescription and
HCAHPS pain management / pain dimension scores

	<100 OMRs (n = 9 Hospitals)	100-400 OMRs (n = 9 Hospitals)	401-625 OMRs (n = 11 Hospitals)	>625 OMRs (n = 9 Hospitals)	>625 OMRs (n = 9 Hospitals)
Pain management*	68.5 (66.7-71.7)	69.0 (66.6-71.3)	68.5 (66.7-70.3)	69.0 (66.4-71.3)	69.1 (67.2-71.4)
Pain dimension†	5.9 (1.5-2.0)	5.2 (1.0-1.6)	5.2 (1.0-1.6)	5.4 (1.1-1.5)	5.4 (0.9-1.9)
Patients, No.	3488	6046	2341	5176	4627
Age, mean (SD), y	48.2 (11.3)	49.3 (11.0)	50.0 (10.8)	49.4 (10.9)	50.5 (10.7)
Men, No. (%)	1196 (34.3)	2281 (37.7)	2808 (12.2)	2066 (39.7)	3576 (40.4)
Preoperative long-term opioid use, No. (%)	295 (8.5)	546 (9.0)	799 (34.3)	606 (11.9)	976 (21.1)
Final postoperative opioid prescription, No. (%)	2625 (75.3)	4206 (69.6)	5239 (22.8)	3981 (77.1)	6006 (13.0)
Procedures type, No. (%)					
Orthopedic surgery*	1133 (32.5)	2338 (38.7)	3005 (12.8)	2295 (44.3)	4027 (45.4)
General surgery†	1214 (34.8)	2088 (34.5)	2533 (10.8)	1854 (35.8)	2451 (27.8)
Gynecologic surgery (hysterectomy)	872 (25.0)	1096 (18.1)	1274 (54.2)	1048 (20.2)	1371 (15.1)
Cancer surgery*	380 (10.9)	316 (5.2)	344 (14.7)	133 (2.6)	458 (10.1)
Cardiac and vascular surgery†	89 (2.6)	211 (3.5)	305 (13.0)	246 (4.7)	520 (5.8)

Lee JS, Hu HM, Brummett CM, Sytjamaki JD,
Dupree JM, Englebe MJ, Waljee JF. JAMA. May
16, 2017

West Virginia Cities Sue Accrediting Group Over Painkillers

Several West Virginia municipalities are suing The Joint Commission, claiming the Chicago-based health care accreditation group downplayed the dangers of prescription painkillers and helped fuel addictions.



Surgical Prescribing is Fueling the Opioid Epidemic

@MichaelEnglesbe

6-15%
Incidence of new
chronic opioid use
after surgery



~70%
Opioids prescribed after
surgery are unused
→ DIVERSION

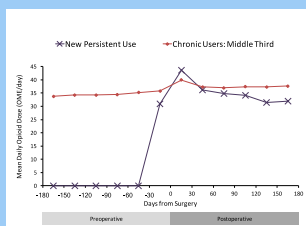
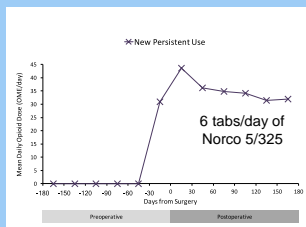
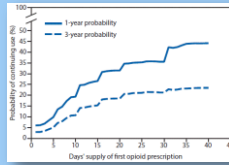
Postoperative prescribing
is not currently tailored to
the individual

Hill et al. Ann Surg. Sept 2016

Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use — United States, 2006–2015

FIGURE 1. One- and 3-year probabilities of continued opioid use among opioid-naïve patients, by number of days' supply* of the first opioid prescription — United States, 2006–2015

From MMWR
March 17, 2017
66(10):263–269



JAMA Surgery | Review
**Prescription Opioid Analgesics Commonly
 Unused After Surgery**
 A Systematic Review

FINDINGS Six eligible studies reported on a total of 810 unique patients (range, 30-250 patients) who underwent 7 different types of surgical procedures. Across the 6 studies, 67% to 92% of patients reported unused opioids. Of all the opioid tablets obtained by surgical patients, 42% to 71% went unused. Most patients stopped or used no opioids owing to adequate pain control, and 16% to 29% of patients reported opioid-induced adverse effects. In 2 studies examining storage safety, 73% to 77% of patients reported that their prescription opioids were not stored in locked containers. All studies reported low rates of anticipated or actual disposal, but no study reported US Food and Drug Administration-recommended disposal methods in more than 9% of patients.

CONCLUSIONS AND RELEVANCE Postoperative prescription opioids often go unused, unlocked, and undisposed, suggesting an important reservoir of opioids contributing to nonmedical use of these products, which could cause injuries or even deaths.

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CONCLUSIONS AND RELEVANCE Postoperative prescription opioids often go unused, unlocked, and undisposed, suggesting an important reservoir of opioids contributing to nonmedical use of these products, which could cause injuries or even deaths.

33 extra pills per prescription
 62 million
 unused pills/year
 1,881,481 operations / year^{1,2}

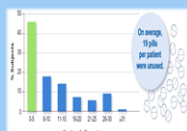
**data from state of Michigan*

1. HCUP Fast State, Healthcare Cost and Utilization Project (HCUP), March 2017, Agency for Healthcare Research and Quality, Rockville, MD.
2. HCUP Central Distributor SASD File Composition, Healthcare Cost and Utilization Project (HCUP), March 2017, Agency for Healthcare Research and Quality, Rockville, MD.

Over Prescribing Can Lead to Diversion

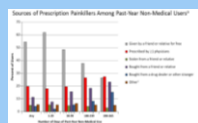
Surgeons Tend to Overprescribe

- >50% of pts use ≤5 pills
- Average Prescription = 30 pills



Diversion is Common

- Diversion = >70% of Non-Medical Use
- Diversion is non-medical use of legally prescribed prescription medication



Where Do They Get Them?

TABLE 2
Sources of Pharmaceutical Opioids for Non-Medical Use (n = 383)

Source	Ever (select all that apply)	In the past six months (select the most common source)
Own prescription	179 (46.7%)	15 (3.9%)
Given free by friends	336 (87.7%)	114 (29.8%)
Given free by relatives	169 (44.1%)	44 (11.5%)
Bought	307 (80.2%)	203 (53.0%)
Took from relatives	79 (20.6%)	4 (1%)
Took from friends	40 (10.4%)	0
Doctor shopping	39 (10.2%)	2 (0.5%)
Internet	3 (0.8%)	0
Other	1 (0.3%)	1 (0.3%)

Denarelle R. et al. (2014) Sources of Pharmaceutical Opioids for Non-Medical Use among Young Adults. *Journal of Psychosomatic Drugs*, 46-3, 198-207

Where Do They Get Them?

Who knew Grandma kept a stash!
Talk to your kids about prescription drug abuse
Learn how at www.drugfreej.org

Partnership for a Drug-Free New Jersey | Drug Enforcement Administration New Jersey Division | Jason's Message

The Partnership For A Drug-Free New Jersey

DID YOU KNOW drug abuse starts early?



- More than 90% of adults with substance use disorders started using before age 18.
- 2500 kids 12-17yo misuse an opioid for the first time EVERY DAY in the US

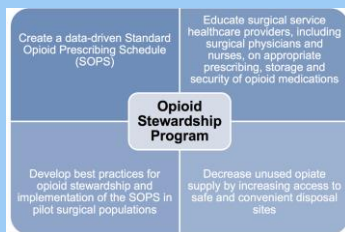
• CASAColumbia. (2011). Adolescent Substance Use: America's #1 Public Health Problem. Retrieved from <https://www.casacolumbia.org/files/Columbia%20Health%20Center%20Adolescent%20Substance%20Use%20America's%20Public%20Health%20Problem.pdf>

• Epstein H., Hansen C., Thorson D. A. Protocol for Addressing Acute Pain and Prescribing Opioids. *Minnesota Medicine*, 2014;47-51

Preventing Chronic Opioid Use and Abuse Before it Starts



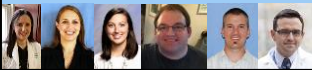




Compliance with standard opioid prescription schedule in at least 3 post-surgical patient populations with a target of 50% to be reached in the final 3 months of the fiscal year.

Team Members

Brooke A. Chisney, MD – Physician Lead
 Lani Mann, PharmD, MBA – Pharmacy Lead
 Matthew Nelson, MD – Physician Lead
 Peggy P. McNaull, MD – Dept. of Anesthesiology Sponsor
 Nathan Woody, CGSB – Manager, Patient Safety & Quality (Anesthesiology)
 Clark McCal, MHA, Data Analyst (Anesthesiology)
 Chad Hatfield, PharmD, MHA – Dept. of Pharmacy Sponsor
 John Prieur, MHA, MA – Manager, Pharmacy Strategy and Quality (Pharmacy)
 Jesse Gilmore, DNP, RN, CPN – Quality & Organizational Excellence Analyst (Pharmacy)
 Jennifer Hill, MPH – Quality & Organizational Excellence Analyst (Pharmacy)
 Tom Matzka, MHA – Manager (Community Relations)
 Ange Smith, MD – Pilot Clinic Lead (Urology)
 AnnMarie Connolly, MD – Pilot Clinic Lead (Urology/Oncology)
 Linda Van Le – Pilot Clinic Lead (Gynecologic Oncology)
 Elizabeth Dreesen, MD – Pilot Clinic Lead (Trauma Surgery)
 Audrey Morrison Cook, MSPA, PA-C – Pilot Clinic Lead (Trauma Surgery)
 Loree Kallanien, MD – Pilot Clinic Lead (Plastic Surgery)
 William Adamson, MD – Pilot Clinic Lead (Pediatric Surgery)
 Lynn Farber, NP – Pilot Clinic Lead (Pediatric Surgery)
 Wade McClan, DO – Pilot Clinic Lead (Pediatric Otolaryngology)
 Sherry Ross, MD – Pilot Clinic Lead (Pediatric Urology)
 Janet Kadar, MSN, MBA, FACHE – Executive Sponsor



ORIGINAL ARTICLE

An Educational Intervention Decreases Opioid Prescribing After General Surgical Operations

Maureen V. Hill, MD,* Ryland S. Stucke, MD,* Michelle L. McMahon, BS,†
Julia L. Beeman, BS,* and Richard J. Barth Jr., MD*

"Dartmouth Model" (80% target from 2015 baseline consumption analysis)

- Partial Mastectomy (PM); PM + SLNB; Lap Chole (LC); Lap Inguinal Hernia (LH); Open Inguinal Hernia (IH)

TABLE 2. Comparison of Opioid Prescriptions Pre versus Post Provider Education

Operation	Number of Cases		Mean Number of Opioid Pills Prescribed (SD)			Median Number of Opioid Pills Prescribed		Range	
	Pre	Post	Pre	Post	P	Pre	Post	Pre	Post
PM	175	58	19.8 (10.2)	5.1 (4.1)	0.0001	20	5	0–30	0–20
PM SLNB	112	62	23.7 (11.3)	9.6 (2.4)	0.0001	20	10	0–60	5–15
LC	240	58	35.2 (16.9)	19.4 (7.2)	0.0001	30	15	0–100	0–40
LH	80	27	33.8 (9.0)	19.3 (7.3)	0.0001	30	15	15–70	0–30
IH	85	18	33.2 (15.7)	18.3 (8.7)	0.0001	30	15	15–120	0–40

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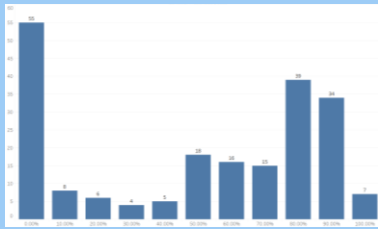
TABLE 3. Effect of Education Intervention on Total Number of Opioid Pills Prescribed

Operation	Patient in Post-education Group	Pre-education Mean No. of Opioids Prescribed	No. of Opioids Would Have Been Prescribed	No. of Opioids Actually Prescribed	% Decrease
PM	58	19.8	1140	280	74.2
PM SLNB	62	23.7	1460	398	59.3
LC	58	35.2	2042	1120	44.7
LH	27	33.8	913	520	43.0
IH	18	33.2	596	170	44.3
Total	224		6170	2072	53.3

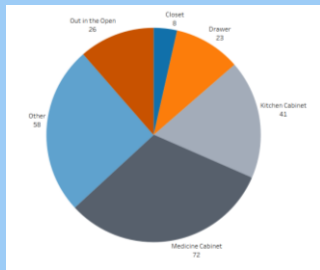
TABLE 4. Opioid Pills Taken

Operation	PM	PM SLNB	LC	LH	IH	Total
Patients	58	62	58	27	18	224
No. surveyed (%)	34 (58.6)	42 (67.7)	42 (72.4)	20 (74.0)	10 (58.9)	148 (66.0)
Pills prescribed (n)	162	308	833	340	140	1913
Pills taken (n)	38 (23.4)	78 (25.3)	302 (36.3)	182 (53.5)	78 (55.7)	656 (34.3)
Mean no. of pills taken (SD)	1.8 (0)	1.9 (1)	7.5 (8.3)	9.7 (10.7)	2.8 (7.7)	
P-value	0	0	0	0	0	1

72% of patients had >50% of prescribed doses leftover



Where Do Patients Store Their Prescriptions?



Safe Storage & Security: MedSafe Collection Sites



- Collection Sites now available at UNC MC & Hillsborough for safe disposal
- Educational Patient Infographic wins National Award





Compound	Number of Samples
oxicamCOX2-APAP 5-325 mg Tablet	5340
oxicamCOX2-APAP 5-325 mg Tablet	2544
oxicamCOX2 IR 5 mg Tablet	634
HYDROCOXIBARONE 2 Mts Tablet	272
oxicamCOX2 15 MG IR Tablet	115
oxicamCOX2 10 mg IR Tablet	61
tramadol 50 mg Tablet	58
tramadol 50 mg Tablet	15
oxicamCOX2-APAP 10-325 mg per Tablet	15

9,258 tablets prescribed during project
24,688 tablets annually
Using SOPS, would have reduced prescribed opioids by 3,794
Annualized – Reduction by 10,117*

[illegible]

THE OPIOID EPIDEMIC: A NATION AND STATE IN CRISIS

In 2017, UNC Medical Center, the Ambulatory Surgical Center and Hillsborough Hospital together prescribed 857,993 opioid pills for

- At 2010/11, Medical Center, the Ambulatory Surgical Center and Hillsborough Hospital together prescribed 852,563 opioid pills for post-procedural pain.
- Increase access to safe and convenient disposal of opioids, and patient and provider education on treatment of post-surgical pain

- [illegible]

UNC Medical Center established ORCID STANDARD as FYB QUALITY ORGANIZATIONAL GOAL. During FYB, 4, 3000 cases met 80% compliance with the Standard. In FYB, 3, 3000 cases met 80% compliance with the Standard. In FYB, 3, 3000 cases met 80% compliance with the Standard.





STOP Act of 2017

- Extend standing orders for naloxone to community health groups
- Improve opioid prescribing practices
- Strengthen controlled substance reporting system
- Dedicate funding to efforts

Targeted Controlled Substances

- "Controlled substances included in G.S. 90-90(1) or (2) or G.S. 90-91(d)"
- Schedule II and III **opioids**



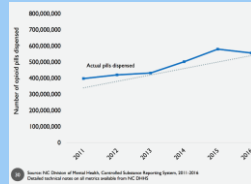
Naloxone

- Person at risk of overdose
- Person in a position to assist someone at risk of overdose
- Governmental or non-governmental organizations that promote scientifically proven risk mitigation strategies for substance use disorders
- Standing order from State Health Director
- Immunity



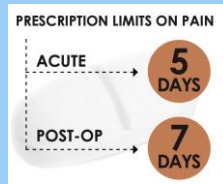
Improving Opioid Prescribing Practices

- Prescribing limits
- NC Controlled Substance Reporting System
- PA/NP consultation with supervising physician
- E-prescribing of controlled substances



Prescribing Limits

- Effective January 1, 2018
- Limits **initial** prescriptions for Sch II/III opioids for acute pain
- After subsequent consultation can rx as appropriate
- Exemptions: chronic pain, facility-administered drugs, cancer, palliative care, medication-assisted treatment for substance use disorder



www.ncmedboard.org/safeopi

NC Controlled Substance Reporting System

- Effective date *TBD*
- Requires review of NC CSRS for previous **12 months** before prescribing Schedule II/III opioids
- At least every 3 months after
- Document in chart
- Technical failure- must go back



Consultation With Supervising Physician

SECTION 4. G.S. 90-18.1(b) is amended by adding a new subdivision to read:

"(5) A physician assistant shall personally consult with the supervising physician prior to prescribing a targeted controlled substance as defined in Article 5 of this Chapter when all of the following conditions apply:

- a. The patient is being treated by a facility that primarily engages in the treatment of pain by prescribing narcotic medications or advertises in any medium for any type of pain management services.
- b. The therapeutic use of the targeted controlled substance will or is expected to exceed a period of 30 days.

When a targeted controlled substance prescribed in accordance with this subdivision is continuously prescribed to the same patient, the physician assistant shall consult with the supervising physician at least once every 90 days to verify that the prescription remains medically appropriate for the patient."

Definition of "Consultation"

21 NCAC 32S .0225 DEFINITION OF CONSULTATION FOR PRESCRIBING CONTROLLED SUBSTANCES

For purposes of N.C. Gen. Stat. § 90-18.1(b), the term "consult" shall mean a meaningful communication, either in person or electronically, between the physician assistant and a supervising physician that is documented in the patient medical record. For purposes of this Rule, "meaningful communication" shall mean an exchange of information that allows the supervising physician to make a determination that the prescription is medically indicated.

North Carolina Medical Board

E-Prescribing of Targeted Controlled Substances

- Effective January 1, 2020
- Schedule II and III targeted controlled substances
- Exceptions: dispensing directly to ultimate user, facility administration of drug, pharmacy on federal property, veterinary medicine, electrical failure



Also Included

- Opioid disposal information for in-home hospice/palliative care
- No State funds can be used for syringe exchange programs
- Funding dedicated to support NC CSRS
- Penalties for late or inaccurate reporting by pharmacy to NC CSRS
- Annual report to General Assembly and licensing boards from NC CSRS



Thank You

Email: mnielsen@med.unc.edu



: @m_e_nielsen

What about Tramadol?

- The highest probabilities of continued opioid use at 1 and 3 years
- If initial treatment was with **tramadol** (13.7% at 1 year; 6.8% at 3 years)

Opioids are powerful (temporary) mental health medications

Opioids have very powerful calming and antidepressant properties.

- That effect decreases with continued exposure to opioids
- Ultimately, opioids may cause an increase in anxiety and depression
- For that reason, you should be very cautious using opioids in those with:
 - Mood disorders (depression or bipolar)
 - Anxiety disorders
 - PTSD

A recent study concluded that: "the 16% of Americans who have mental health disorders receive over half of all opioids prescribed in the United States."⁵³
