



UNIVERSITY *of* MARYLAND
SCHOOL OF PHARMACY
THE PETER LAMY CENTER
ON DRUG THERAPY AND AGING

Pain in Older Adults and the End-of-Life: Opening Pandora's Box

Thursday January 11, 2018

Seminar Objectives

- Health care professionals who participate in this seminar are eligible to receive **3.5 hours of CE credit** for their attendance.
- At the end of this program, participants will be able to:
 - ✓ Delineate methods of identifying and monitoring pain in older adults and patients near the end-of-life.
 - ✓ Determine strategies for developing appropriate pain management goals in older and end-of-life adults.
 - ✓ Diminish the risk of creating a medication misadventure while mitigating pain pharmacologically.
 - ✓ Propose non-pharmacologic and pharmacologic avenues for optimizing pain management in these populations.

Pain in Older Adults and the End-of-Life: Opening Pandora's Box

SEMINAR AGENDA

TIME	ACTIVITY
8:00-8:30 a.m.	Registration and Check-in
8:30-9:15 a.m.	<p>Opioid Use and Medication Safety in Older Adults: Setting the Stage <i>Nicole Brandt, PharmD, MBA</i> <i>Linda Simoni-Wastila, PhD</i> <i>University of Maryland School of Pharmacy</i></p> <p>Objectives:</p> <ul style="list-style-type: none"> • Increase participants' awareness to the safety of opioids in older adults. • Describe local and national initiatives to increase awareness to this public health concern.
9:15-9:45 a.m.	<p>Strategies in Establishing Patient-Centered Pain Management Goals <i>Danielle Doberman, MD, MPH</i> <i>Johns Hopkins Medicine</i></p> <p>Objective:</p> <ul style="list-style-type: none"> • Determine strategies for developing appropriate pain management goals in older and end-of-life adults.
9:45-10:15 a.m.	<p>Pain Careplans and Monitoring: Role of the Interprofessional Team <i>Barbara Resnick, PhD, RN, CRNP, FAAN, FAANP</i> <i>University of Maryland School of Nursing</i></p> <p>Objective:</p> <ul style="list-style-type: none"> • Delineate methods of identifying and monitoring pain in older adults and patients near the end-of-life.
10:15-10:30 a.m.	Break
10:30-11:00 a.m.	<p>Mitigating Risks While Optimizing the Benefits of Pharmacologic Agents to Manage Pain <i>Mary Lynn McPherson, PharmD, MA, MDA, BCPS, CPE</i> <i>University of Maryland School of Pharmacy</i></p> <p>Objective:</p> <ul style="list-style-type: none"> • Propose non-pharmacologic and pharmacologic avenues for optimizing pain management in older adults and patients near the end-of-life.
11:00 a.m. - 12:00 p.m.	<p>Town Hall Moderated Discussion with Presenters</p> <p>Objectives:</p> <ul style="list-style-type: none"> • Diminish the risk of creating a medication misadventure while mitigating pain pharmacologically. • Illustrate the importance of collaboration among the interprofessional team to address pain management.

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Opioid Use and Medication Safety in Older Adults: Setting the Stage

Nicole Brandt, PharmD, MBA, BCGP, BCPP, FASCP
Linda Simoni-Wastila BSP Pharm, MSPH, PhD

Objectives

- ❑ Increase participants' awareness of the safety of opioids in older adults.
- ❑ Describe local and national initiatives to increase awareness to this public health concern.



Let's Start with Ms. NJ

- NJ is an 82 yr old woman who was referred to your practice due to concerns that she has had 4 falls in the last 6 weeks and the ED is worried about her use of her medications. She is living independently in her own rowhome.
- **PMH:** CAD; depression; osteoporosis
- **Medications:** Lisinopril 20mg daily; gabapentin 600mg three times a day; alprazolam 1mg twice daily; aripiprazole 5mg at bedtime; oxycodone/APAP 5/325mg 1 – 2 tablets every 6 hours for back pain; naproxen 220mg twice daily; aspirin 81mg daily;



Where do you start when treating NJ?

What are some of your initial concerns?



Prescription Opioids: Balancing Risks & Benefits



Prescription Opioids

- **Opioids** associated with nearly *three out of four* prescription drug overdoses¹
 - A 200 percent rise in the death rate related to opioid overuse (including opioid pain relievers and heroin) since 2000²
- **Multiple Black Box Warnings:**
 - 2013: Long-acting, extended release formulations
 - 2016: Immediate release opioids
 - 2016: Opioids and benzodiazepines

¹Centers for Disease Control and Prevention (CDC). 2011. "Vital Signs: Overdoses of Prescription Opioid Pain Relievers—United States, 1999-2008." *MMWR* 60: 1–6.

² Rudd, R.A., et al. 2016. "Increases in Drug and Opioid Overdose Deaths – United States, 2000-2014. *Morbidity and Mortality Weekly Report* 64(50&51); 1378–82.

The Opioid Crisis in Older Adults

- Despite attention paid to opioid overdose, older population ignored
- Growth in Rx opioid use fastest among Medicare beneficiaries
- In 2015, **30 percent** (12 million people) of Medicare Part D beneficiaries received an opioid prescription¹
 - spending on prescription opioids increased 165 percent from 2006–2015¹
- From 1995-2010²
 - 14-fold increase in Rx opioid use in total Medicare population
 - 9-fold increase in ≥ 65 year olds
- Between 2007 to 2012, long-term opioid use among Medicare Part D recipients increased from 4.6% to 7.3%³

¹U.S. Department of Health and Human Services (HHS), Office of Inspector General. 2016. “High Part D Spending on Opioids and Substantial Growth in Compound Drugs Raise Concerns.” *HHS OIG Data Brief*. OEI-02-16-00290;

²Olson M, Wang S, Iza M, et al. National Trends in the Office-Based Prescription of Schedule II Opioids. *Journal Of Clinical Psychiatry*. 2013; 74(9): 932-939.

³Kuo, Y., Raji, M. A., Chen, N., Hasan, H., & Goodwin, J. S. (2016). Trends in Opioid Prescriptions Among Part D Medicare Recipients From 2007 to 2012. *The American Journal Of Medicine*, 129(2), 221.e21-30. doi:10.1016/j.amjmed.2015.10.002

The Opioid Crisis in Older Adults

- Concomitant substance use a concern
- In 2015, 28% of Part D enrollee Rx opioid users concurrently used sedative-hypnotics⁴
- Impact of Rx opioid and sedative-hypnotic use and misuse:
 - Cognitive decline
 - Falls and TBI
 - Dependence
 - Overdose (fatal and non-fatal)
- Number of adults aged ≥ 50 years with a Substance Use Disorder (SUD) will double from 2.8 million (2006) to 5.7 million (2020)⁵

⁴CMS. Concurrent Use of Opioids and Benzodiazepine in a Medicare Part D Population. 2017 announcement available at: <https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovContra/Downloads/Concurrent-Use-of-Opioids-and-Benzodiazepines-in-a-Medicare-Part-D-Population-CY-2015.pdf>

⁵Han B, Gfroerer JC, Colliver JD, Penne MA. Substance use disorder among older adults in the United States in 2020. *Addiction*. 2009;104(1):88-96.

These Facts Reveal Little

- Remaining questions concerning Medicare beneficiaries
 - Characteristics of older adults who use—and abuse—Rx medications?
 - Characteristics associated with SUD?
 - Outcomes other than fatal overdose (OD)?
- Reasons for scant research:
 - Aged and disabled historically neglected
 - Stigma of SUD and mental illness
 - Limitations in administrative claims data
 - SAMHSA redaction of SUD diagnoses
 - Biases studies to date
 - Prohibits studies of SUD population AND comorbidities (HIV/AIDS, hepatitis, psychiatric conditions)

Snapshot: Opioid Use in Medicare Beneficiaries with SUD

- Objective 1: Improve understanding of Medicare beneficiaries with SUD by looking at patterns of opioid and sedative-hypnotic use
 - Look at overlap of SUD, pain, and mental illness diagnoses
- Objective 2: Examine relationships between SUD, pain, and mental illness relationships and opioid/sedative use with opioid overdose hospitalizations



KEEP
CALM

There's

Hardly Any

Statistics

Methods: Study Design and Population

- Cross Sectional Design
 - 2008-2009 CCW data (substance use diagnoses *not* redacted)
- Population: Medicare beneficiaries—all ages
 - Inclusion Criteria
 - Continuous Medicare parts A, B, and D coverage from January 1, 2008-December 31, 2009 or until death in 2009.
 - Exclusion Criteria
 - Individuals with a hospice start date in or before 2009
- Objective 2: Constructed cohort of Medicare beneficiaries with an opioid overdose hospital event (index date) in 2009 → 1,225 fatal and non-fatal events
 - Retrospective Assessment: Look-back 12 months prior to index event for:
 - Rx opioid use
 - SUD diagnosis
 - Overdose event
 - Presence of mental illness and/or pain conditions

Methods: Defining SUD, Mental Illness, & Pain

Substance Use Disorders (SUD)

Dependent and Non-dependent Abuse

- General Abuse
- Opioids
- Sedative-hypnotics
- Stimulants (excluding cocaine)
- Alcohol
- Illicit Substances

Overdose

- Poisoning by opiates
- Accidental poisoning by opiates
- Adverse effects in therapeutic use with opiates

Mental Illness

- ADHD
- Anxiety
- Bipolar
- Depression and other depressive disorders
- Personality
- PTSD
- Schizophrenia and psychotic disorders

Pain Disorders

- Joint pain
- Back pain
- Head pain
- Neck pain
- Chronic pain

Methods: Additional Variables of Interest

- Opioid Exposures*
 - Full and partial agonists (e.g., oxycodone, buprenorphine)
- Comorbidities
 - Alzheimer's disease and related dementias, Cancer, Cardiovascular diseases (CVD), Chronic Kidney Disease (CKD), Chronic Obstructive Pulmonary Disorder (COPD), Diabetes, Rheumatoid/Osteoarthritis, Osteoporosis, and Human immunodeficiency virus (HIV)
- Sociodemographic Characteristics
 - Age, gender, race, state of residence, original reason for Medicare entitlement

* Drug classifications from American Hospital formulary Service (AHFS) Drug Information 2017 Edition

Results: Characteristics of Medicare Beneficiaries With and Without SUD (I)

Characteristic	With Any SUD, N(%) N=24,058	Without Any SUD, N(%) N=1,214,336	X ² p-value
Male Gender	1,4581 (60.6)	437,132 (36.0)	<0.0001
Race			<0.0001
White	17,467 (72.6)	993,619 (81.8)	
Black	5,064 (21.1)	130,180 (10.7)	
Other/Missing	1,527 (6.4)	90,537 (7.5)	
Original Reason for Entitlement			<0.0001
Age	5,451 (22.7)	904,754 (74.5)	
Disability and/or ESRD	18,607 (77.3)	309,582 (25.5)	
Age			<0.0001
>=64	17,157 (71.3)	218,066 (29.9)	
65-74	4,659 (19.4)	499,827 (41.2)	
75-84	1,865 (7.8)	363,043 (29.9)	
85+	377 (1.6)	133,398 (11.0)	

Results: Characteristics of Medicare Beneficiaries With and Without SUD (II)

Characteristic	With Any SUD, N(%) N=24,058	Without Any SUD, N(%) N=1,214,336	X ² p-value
CVD*	15,518 (64.5)	435,108 (35.8)	<0.0001
COPD	6,307 (26.2)	78,380 (6.5)	<0.0001
Diabetes	5,278 (21.9)	153,227 (12.6)	<0.0001
CKD	3,743 (15.6)	81,847 (6.7)	<0.0001
RA or OA†	2,837 (11.8)	70,889 (5.8)	<0.0001
Liver Disorders	2,800 (11.5)	10,150 (0.8)	<0.0001
ADRD	1,727 (7.2)	58,415 (4.8)	<0.0001
Cancer	1,157 (4.8)	37,716 (3.1)	<0.0001
Osteoporosis	1,068 (4.4)	43,356 (3.7)	<0.0001
HIV	756 (3.1)	2,642 (0.2)	<0.0001

*Includes acute myocardial infarction, heart failure, hyperlipidemia, hypertension, heart disease, and stroke

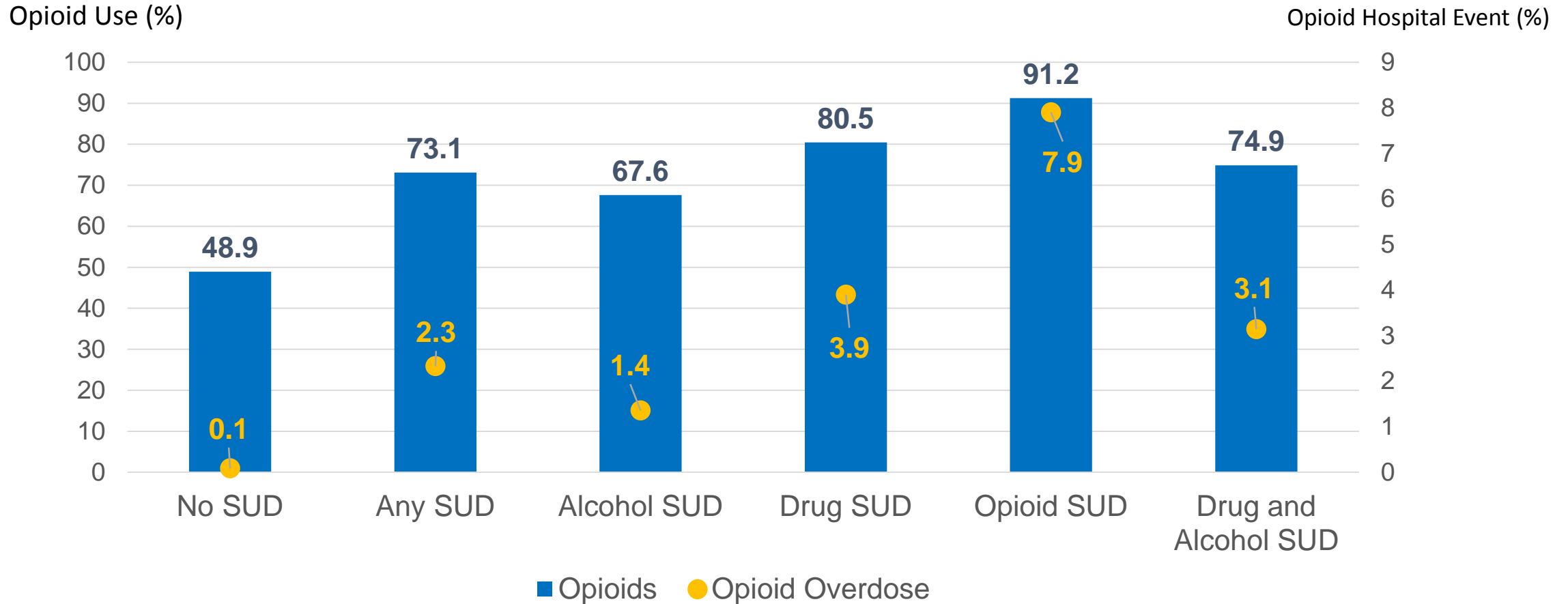
†Rheumatoid arthritis and osteoarthritis

Results: Mental Illness and Non-Cancer Chronic Pain Among Medicare Beneficiaries With and Without SUD

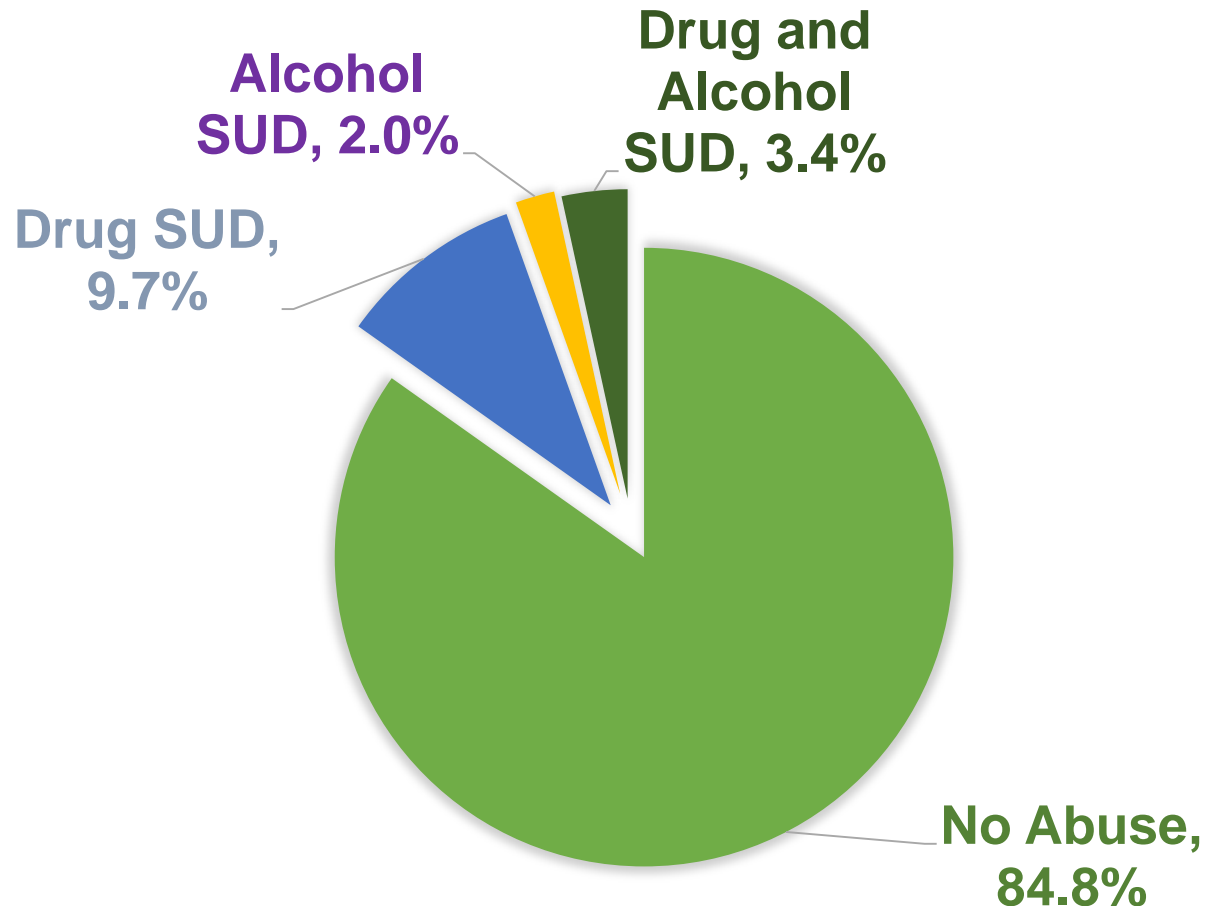
Characteristic	With Any SUD N(%)	Without Any SUD N(%)	X ² p-value*
Any Mental Illnesses	14,411 (59.9)	115,455 (9.5)	<0.0001
Depressive disorders	11,084 (46.1)	84,060 (6.9)	
Bipolar	5,302 (22.0)	12,509 (1.0)	
Anxiety	5,470 (22.7)	31,390 (2.6)	
Psychotic Disorders	4,376 (18.2)	19,167 (1.6)	
Personality Disorders	2,018 (8.4)	2,024 (0.2)	
ADHD	683 (2.8)	2,168 (0.2)	
PTSD	1,111 (4.6)	1,436 (0.1)	
Pain Conditions	17,115 (71.1)	412,797 (34.0)	<0.0001
Joint pain	14,461 (60.1)	372,926 (30.7)	
Back pain	6,312 (38.7)	144,770 (11.9)	
Chronic pain	5,350 (22.2)	23,865 (2.0)	
Neck pain	3,863 (16.1)	48,842 (4.0)	
Head pain	1,617 (6.7)	10,313 (0.9)	

*Chi-square tests for differences in proportions were done for all pain and mental diagnoses. All p<0.0001.

Results: Rx Opioid Use and Opioid OD Hospitalization Among Medicare Beneficiaries with and without SUD



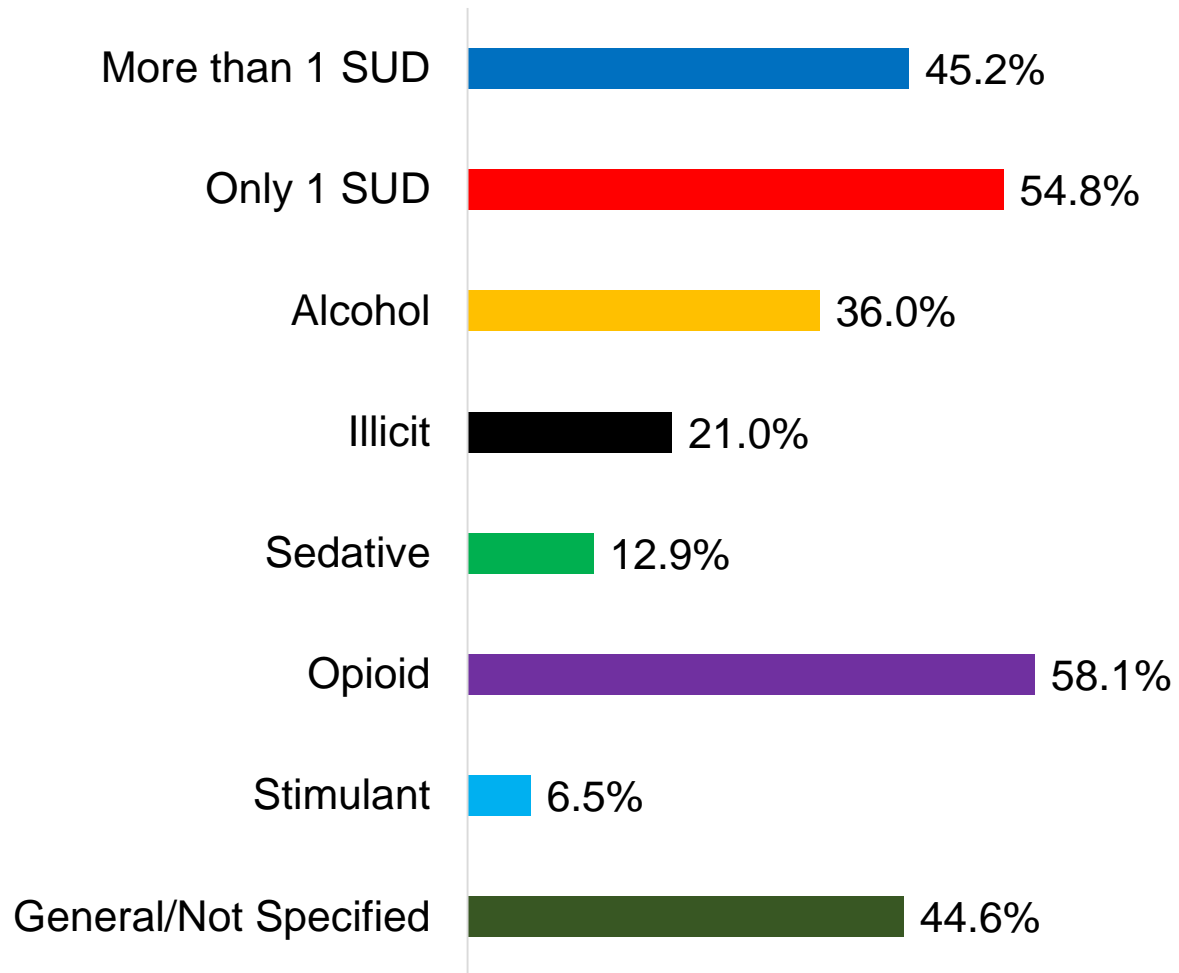
Prior Opioid Use & OD Hospital Events by SUD Status among Medicare Beneficiaries with Hospital Opioid Event in 2009 (n=1,225)



	With SUD, n=186 n (%)	Without SUD, n=1,039 n (%)
Prior Opioid Rx*	175 (94.1)	860 (82.8)
Prior Opioid OD*	27 (14.5)	20 (1.9)

*Chi-square tests for differences in proportions were done. All $p < 0.0001$.

Among Medicare Beneficiaries with a SUD Diagnosis Prior to Opioid OD in 2009 (N=186)



Discussion

- We provided estimates of a national sample of Medicare beneficiaries with SUD regarding mental illness, pain syndromes, opioid use, and opioid-related hospitalizations
 - Used 2008-2009 data that was not redacted
- SUD is a prevalent problem in the Medicare population
 - Mental illness and pain disorders highly associated with both SUD and opioid overdose hospital events
 - Other chronic conditions, such as COPD, are common SUD comorbidities
- Limitations:
 - Cross-sectional
 - Inaccurate or under coded SUD

How Did We Get to This Place?





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Confronting Pain Management and the Opioid Epidemic:

Strategies for Health Professional Organizations

Refer to Handout

What tactics can be taken to improve opioid use?

- CDC Guideline Recommendations
 - ✓ Non-opioids preferred, use opioids only when expected benefits (pain, function) likely to outweigh substantial risks
 - ✓ Encourage Non-Pharmacologic therapies
 - ✓ Establish Goals for Pain and Function
 - ✓ Discuss Risks and Benefits
 - ✓ Use Immediate- Release Opioids when Starting
 - ✓ Use the Lowest Effective Dose and shortest duration
 - ✓ Evaluate Benefits and Harms frequently
 - ✓ Review Prescription Drug Monitoring Program (PDMP) data
 - ✓ Use Urine Drug Testing
 - ✓ Avoid Concurrent Opioid & Benzodiazepine Prescribing
 - ✓ Offer Treatment for Opioid Use Disorder

- Opioid Overdose
- Opioid Basics +
- Data +
- CDC Guideline for Prescribing Opioids for Chronic Pain -
- For Patients
- For Providers
- Guideline Resources -
- Clinical Tools
- Patient & Partner Tools
- Graphics
- Posters
- Trainings
- Videos
- Mobile App
- Additional Resources

[CDC](#) > [Opioid Overdose](#) > [CDC Guideline for Prescribing Opioids for Chronic Pain](#) > [Guideline Resources](#)

Guideline Resources: CDC Opioid Guideline Mobile App



CDC's new Opioid Guideline App is designed to help providers apply the recommendations of CDC's Guideline for Prescribing Opioids for Chronic Pain into clinical practice by putting the entire guideline, tools, and resources in the palm of their hand. Managing chronic pain is complex, but accessing prescribing guidance has never been easier.

The application includes a Morphine Milligram Equivalent (MME) calculator*, summaries of key recommendations and a link to the full Guideline, and an interactive motivational interviewing feature to help providers practice effective communications skills and prescribe with confidence.

Free Download

The new CDC Opioid Guideline App is now available for free download on [Google Play](#) (Android devices) and in the [Apple Store](#) (iOS devices).



CDC Opioid Guideline App: Prescribe with Confidence



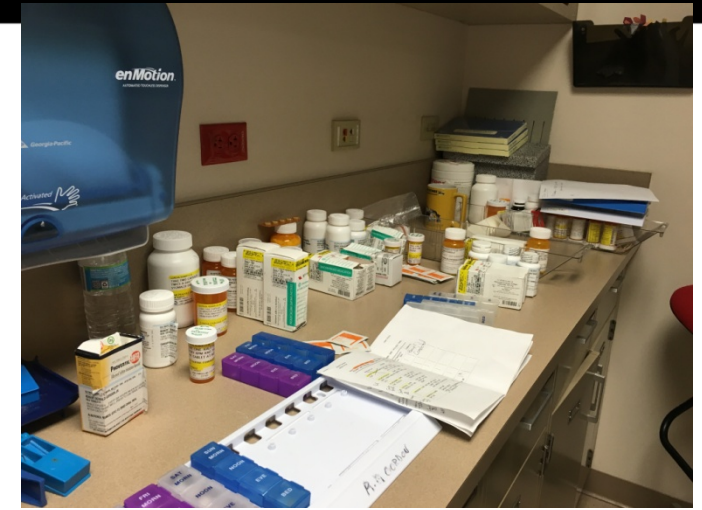
What tactics can be taken to improve opioid use?

New Measure for HEDIS® 2018: Use of Opioids at High Dosage or From Multiple Providers (OHM)

- The measure has five rates:
 1. ***Opioid High Dosage:*** Members receiving a daily dosage of opioids >120 mg morphine equivalent dose (MED) for 90 consecutive days or longer during the intake period.
 2. ***Multiple Prescribers:*** Members receiving prescriptions for opioids from four or more prescribers during the intake period.
 3. ***Multiple Pharmacies:*** Members receiving prescriptions for opioids from four or more pharmacies during the intake period.
 4. ***Multiple Prescribers and Multiple Pharmacies:*** Members receiving prescriptions for opioids from four or more prescribers ***and*** four or more pharmacies during the intake period.
 5. ***Multi-Provider, High Dosage:*** Members receiving a daily dosage of opioids >120 mg (MED) for 90 consecutive days or longer during the intake period ***and*** receiving prescriptions for opioids from four or more prescribers ***and*** four or more pharmacies during the intake.

Take Home Points

- Chronic pain management is challenging
- Improving opioid prescribing and use requires a multifaceted and multidisciplinary approach
- Numerous resources exist to help in this process but time is of the essence





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Let's Continue with Ms. NJ

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**Let's Engage the Interprofessional
Team**