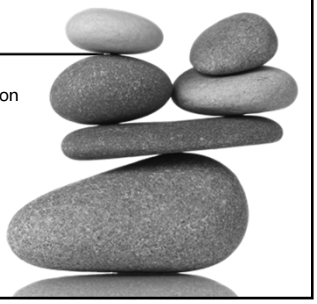
Opioid Prescribing:
Safe Practice, Changing Lives

Presented by CO*RE
Collaboration for REMS Education
www.core-rems.org



Collaborative for REMS Education

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DISCLOSURE:
Dr. Havens and all staff involved in this content declare that neither they nor members of their immediate families have had financial relationships with the manufacturers of goods or services discussed, or corporate supporters of this event.

CO*RE Collaborative for REMS Education

On July 9, 2012, the Food and Drug Administration (FDA) approved a Risk Evaluation and Mitigation Strategy (REMS) for extended-release (ER) and long-acting (LA) opioid medications.

Founded in June, 2010, the Collaborative on REMS Education (CO*RE), a multi-disciplinary team of 13 partners has designed a core curriculum based on needs assessment, practice gaps, clinical competencies, and learner self-assessment to meet the requirements of the FDA REMS Blueprint.

www.core-rems.org

CO*RE Organizations

Our Partners

- American Pain Society (APS)
- American Academy of Hospice and Palliative Medicine (AAHPM)
- American Association of Nurse Practitioners (AANP)
- American Academy of Physician Assistants (AAPA)
- American Osteopathic Association (AOA)
- American Society of Addiction Medicine (ASAM)
- California Academy of Family Physicians (CAFP)
- Healthcare Performance Consulting (HPC)
- Interstate Postgraduate Medical Association (IPMA)
- Nurse Practitioner Healthcare Foundation (NPHF)
- Physicians Institute for Excellence in Medicine which coordinates 15 state medical societies
- Medscape
- American College of Emergency Physicians (ACEP)

AAHPM American Academy of Hospice and Palliative Medicine
AANP American Association of Nurse Practitioners
AAPA
AOA American Osteopathic Association — Treating our family and yours
American Pain Society — Research Education Treatment Advocacy
American Society of Addiction Medicine — Founded 1954 — ASAM
California Academy of Family Physicians — Strong medicine for California
Healthcare Performance Consulting
IPMA Interstate Postgraduate Medical Association — Practice-changing CME
Physicians' Institute for Excellence in Medicine — Improving medical practice for physicians and their patients
NPHF
American Academy of Family Physicians — Strong medicine for America
Medscape Education
American College of Emergency Physicians — Advancing Emergency Care

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Products Covered by this REMS

Brand Name Products

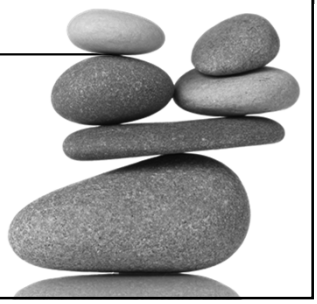
- Avinza® morphine sulfate ER capsules
- Belbuca® buprenorphine buccal film
- Butrans® buprenorphine transdermal system
- Dolophine® methadone hydrochloride tablets
- Duragesic® fentanyl transdermal system
- Embeda® morphine sulfate/naltrexone ER capsules
- Exalgo® hydromorphone hydrochloride ER tablets
- Hysingla® ER (hydrocodone bitartrate) ER tablets
- Kadian® morphine sulfate ER capsules
- MorphaBond® morphine sulfate ER tablets
- MS Contin® morphine sulfate CR tablets
- Nucynta® ER tapentadol ER tablets
- Opana® ER oxymorphone hydrochloride ER tablets
- OxyContin® oxycodone hydrochloride CR tablets
- Targiniq™ oxycodone hydrochloride/naloxone hydrochloride ER tablets
- Zohydro® hydrocodone bitartrate ER capsules

Generic Products

- Fentanyl ER transdermal systems
- Methadone hydrochloride tablets
- Methadone hydrochloride oral concentrate
- Methadone hydrochloride oral solution
- Morphine sulfate ER tablets
- Morphine sulfate ER capsules
- Oxycodone hydrochloride ER tablets

WHY PRESCRIBER EDUCATION IS IMPORTANT

Introduction



Prescribers of ER/LA Opioids Should Balance:

The benefits of prescribing ER/LA opioids to treat pain

The risks of serious adverse outcomes

ER/LA opioid analgesics should be prescribed only by health care professionals who are knowledgeable in the use of potent opioids for the management of pain

Opioid Misuse/Abuse is a Major Public Health Problem

Improper use of any opioid can result in serious AEs including overdose & death

This risk can be greater w/ ER/LA opioids

ER opioid dosage units contain more opioid than IR formulations	*Methadone is a potent opioid with a long, highly variable half-life*
In 2012	**In 2011**
37 million Americans age ≥12 had used an opioid for nonmedical use some time in their life	488,004 ED visits involved nonmedical use of opioids • *Methadone involved in 30% of prescription opioid deaths*

SAMHSA (2013). *Results from the 2012 National Survey on Drug Use and Health: Detailed Tables.* NSDUH Series H-46, HHS Publication No. (SMA) 13-4795. Rockville, MD. SAMHSA. (2013). *Drug Abuse Warning Network, 2011: National Estimates of Drug-Related Emergency Department Visits.* HHS Publication No. (SMA) 13-4760, DAWN Series D-39. Rockville, MD. CDC. CDC Vital Signs. *Prescription Painkiller Overdoses. Use and abuse of methadone as a painkiller.* 2012. FDA. *Questions and Answers: FDA approves a Risk Evaluation and Mitigation Strategy for Extended-Release and Long-Acting Opioid Analgesics.* www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm309742.htm. 2012

In 2013

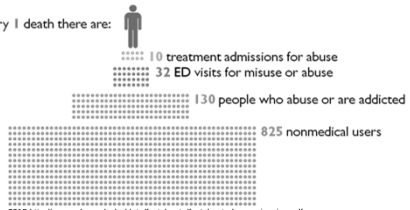
43,982 Americans

DIED FROM DRUG POISONINGS

Nearly 16,235 deaths involved prescription opioids

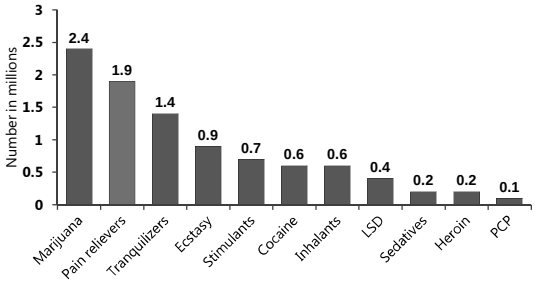
In 2008

For every 1 death there are:



NCHS Data Fact Sheet, June 2015 http://www.cdc.gov/nchs/data/factsheets/factsheet_drug_poisoning.pdf
CDC. Policy Impact: Prescription Painkiller Overdoses. http://www.cdc.gov/homeandrecreationalsafety/rxbrief/ (Historical content - 2008 data) (accessed on 1/6/15).

First-Time Use of Specific Drugs Among Persons Age ≥ 12 (2012)



SAMHSA. (2013). *Results from the 2012 National Survey on Drug Use and Health: Summary of National Findings.* NSDUH Series H-46, HHS Publication No. (SMA) 13-4795. Rockville, MD.

Learning Objectives

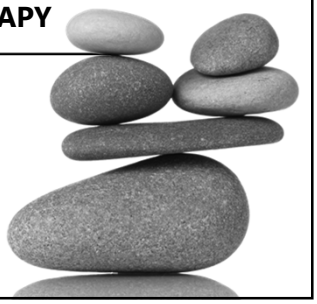
- Describe appropriate patient assessment for treatment with ER/LA opioid analgesics, evaluating risks and potential benefits of ER/LA therapy, as well as possible misuse.
- Apply proper methods to initiate therapy, modify dose, and discontinue use of ER/LA opioid analgesics, applying best practices including accurate dosing and conversion techniques, as well as appropriate discontinuation strategies.
- Demonstrate accurate knowledge about how to manage ongoing therapy with ER/LA opioid analgesics and properly use evidence-based tools while assessing for adverse effects.
- Employ methods to counsel patients and caregivers about the safe use of ER/LA opioid analgesics, including proper storage and disposal.
- Review/assess general and product-specific drug information concerning ER/LA opioid analgesics and identifying potential adverse effects of ER/LA opioids.

Misuse, abuse, divergence and overdose of ER/LA opioids is a major public health crisis.

YOU and **YOUR TEAM *can*** have an immediate and positive impact on this crisis while also caring for your patients appropriately.

ASSESSING PATIENTS FOR TREATMENT WITH ER/LA OPIOID ANALGESIC THERAPY

Unit 1



Balance Risks Against Potential Benefits

Conduct thorough H&P and appropriate testing	***Comprehensive benefit-to-harm evaluation***
Benefits Include	**Risks Include**
• Analgesia (adequate pain control) • Improved Function	• Overdose • Life-threatening respiratory depression • Abuse by patient or household contacts • Misuse & addiction • Physical dependence & tolerance • Interactions w/ other medications & substances • Risk of neonatal withdrawal syndrome w/ prolonged use during pregnancy • Inadvertent exposure/ingestion by household contacts, especially children

Chou R, et al. *J Pain.* 2009;10:113-30. Department of Veterans Affairs, Department of Defense. *VA/DoD Clinical Practice Guideline for Management of Opioid Therapy for Chronic Pain.* 2010.
FDA. *Blueprint for Prescriber Education for Extended-Release and Long-Acting Opioid Analgesics.* Modified 08/2014. www.fda.gov/downloads/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/UCM411196.pdf

Adequately **DOCUMENT** all patient interactions, assessments, test results, & treatment plans

Clinical Interview: Patient Medical History

Illness relevant to (1) effects or (2) metabolism of opioids

1. Pulmonary disease, constipation, nausea, cognitive impairment
2. Hepatic, renal disease

Illness possibly linked to substance abuse, e.g.:

Hepatitis	**HIV**	**Tuberculosis**	**Cellulitis**
STIs	**Trauma, burns**	**Cardiac disease**	**Pulmonary disease**

Chou R, et al. *J Pain.* 2009;10:113-30. Zacharoff KL, et al. *Managing Chronic Pain with Opioids in Primary Care.* 2nd ed. Newton, MA: Inflexion, Inc., 2010. Department of Veterans Affairs, Department of Defense. *VA/DoD Clinical Practice Guideline for Management of Opioid Therapy for Chronic Pain.* 2010.

Clinical Interview: Pain & Treatment History

Description of pain

Location | **Intensity** | **Quality** | **Onset/ Duration** | **Variations / Patterns / Rhythms**

What relieves the pain?

What causes or increases pain?

Effects of pain on physical, emotional, and psychosocial function

Patient's pain & functional goals

Heapy A, Kerns RD. Psychological and Behavioral Assessment. In: Raj's Practical Management of Pain. 4th ed. 2008;279-95. Zacharoff KL, et al. Managing Chronic Pain with Opioids in Primary Care. 2nd ed. Newton, MA: Inflexion, Inc., 2010.

Clinical Interview: Pain & Treatment History, cont'd

Pain Medications

Past use

Current use

- Query state **PDMP** where available to confirm patient report
- Contact past providers & obtain prior medical records
- Conduct **UDT**

Dosage

- For opioids currently prescribed: opioid, dose, regimen, & duration
  - Important to determine if patient is **opioid tolerant**

General effectiveness

Nonpharmacologic strategies & effectiveness

Perform Thorough Evaluation & Assessment of Pain

Seek objective confirmatory data → **Components of patient evaluation for pain** → **Order diagnostic tests (appropriate to complaint)**

General: vital signs, appearance, posture, gait, & pain behaviors

Neurologic exam

Musculoskeletal Exam
- Inspection
- Palpation
- Percussion
- Auscultation
- Provocative maneuvers

Cutaneous or trophic findings

Lalani I, Argoff CE. History and Physical Examination of the Pain Patient. In: *Raj's Practical Management of Pain.* 4th ed. 2008;177-88. Chou R, et al. *J Pain.* 2009;10:113-30.

Assess Risk of Abuse, Including Substance Use & Psychiatric Hx

Obtain a complete Hx of current & past substance use

- Prescription drugs
- Illegal substances
- Alcohol & tobacco
  - Substance abuse Hx does not prohibit treatment w/ ER/LA opioids but may require additional monitoring & expert consultation/referral
- Family Hx of substance abuse & psychiatric disorders
- Hx of sexual abuse

Social history also relevant

Employment, cultural background, social network, marital history, legal history, & other behavioral patterns

Risk Assessment, cont'd

Be knowledgeable about risk factors for opioid abuse	Understand & use addiction or abuse screening tools	Conduct a UDT
• Personal or family Hx of alcohol or drug abuse • Younger age • Presence of psychiatric conditions	• Assess potential risks associated w/ chronic opioid therapy • Manage patients using ER/LA opioids based on risk assessment	• Understand limitations

Risk Assessment Tools: Examples

Tool	# of items	Administered By
Patients considered for long-term opioid therapy:		
ORT Opioid Risk Tool	5	patient
SOAPP® Screener & Opioid Assessment for Patients w/ Pain	24, 14, & 5	patient
DIRE Diagnosis, Intractability, Risk, & Efficacy Score	7	clinician
Characterize misuse once opioid treatments begins:		
PMQ Pain Medication Questionnaire	26	patient
COMM Current Opioid Misuse Measure	17	patient
PDUQ Prescription Drug Use Questionnaire	40	clinician
Not specific to pain populations:		
CAGE-AID Cut Down, Annoyed, Guilty, Eye-Opener Tool, Adjusted to Include Drugs	4	clinician
RAFFT Relax, Alone, Friends, Family, Trouble	5	patient
DAST Drug Abuse Screening Test	28	patient
SBIRT Screening, Brief Intervention, & Referral to Treatment	Varies	clinician

Opioid Risk Tool (ORT)

Mark each box that applies	Female	Male
1. Family Hx of substance abuse		
Alcohol	☐ 1	☐ 3
Illegal drugs	☐ 2	☐ 3
Prescription drugs	☐ 4	☐ 4
2. Personal Hx of substance abuse		
Alcohol	☐ 3	☐ 3
Illegal drugs	☐ 4	☐ 4
Prescription drugs	☐ 5	☐ 5
3. Age between 16 & 45 yrs	☐ 1	☐ 1
4. Hx of preadolescent sexual abuse	☐ 3	☐ 0
5. Psychologic disease		
ADD, OCD, bipolar, schizophrenia	☐ 2	☐ 2
Depression	☐ 1	☐ 1
Scoring Totals:		

Administer

On initial visit

Prior to opioid therapy

Scoring *(risk)*

0-3: low

4-7: moderate

≥8: high

Webster LR, Webster RM. *Pain Med.* 2005;6:432-42.

Screener & Opioid Assessment for Patients with Pain (SOAPP)®

Identifies patients as at high, moderate, or low risk for misuse of opioids prescribed for chronic pain

How is SOAPP® administered?

- Usually self-administered in waiting room, exam room, or prior to an office visit
- May be completed as part of an interview w/ a nurse, physician, or psychologist
- Prescribers should have a completed & scored SOAPP® while making opioid treatment decisions

SOAPP® Monitoring Recommendations. https://painedu.org/soapp/SOAPP_Monitoring_Recommendations.pdf
The SOAPP® Version 1.0 Tutorial. https://painedu.org/soapp_tutorial_01.asp

When to Consider a Trial of an Opioid

Potential benefits are likely to outweigh risks

Failed to adequately respond to nonopioid & nondrug interventions

Continuous, around-the-clock opioid analgesic is needed for an extended period of time

Pain is chronic and severe

No alternative therapy is likely to pose as favorable a balance of benefits to harms

Chou R, et al. *J Pain.* 2009;10:113-30. Department of Veterans Affairs, Department of Defense. *VA/DoD Clinical Practice Guideline for Management of Opioid Therapy for Chronic Pain.* 2010.

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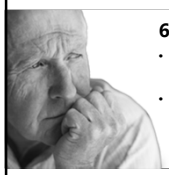
When to Consider a Trial of an Opioid, cont'd



60-yr-old w/ chronic disabling OA pain

- Nonopioid therapies not effective, IR opioids provided some relief but experienced end-of-dose failure
- No psychiatric/medical comorbidity or personal/family drug abuse Hx
  - High potential benefits relative to potential risks
  - Could prescribe opioids to this patient in most settings w/ routine monitoring

30-yr-old w/ fibromyalgia & recent IV drug abuse

- High potential risks relative to benefits (opioid therapy not 1st line for fibromyalgia)
- Requires intensive structure, monitoring, & management by clinician w/ expertise in both addiction & pain
  - Not a good candidate for opioid therapy

Chou R, et al. *J Pain.* 2009;10:113-30.

When to Consider a Trial of an Opioid, cont'd

Selection of patients between these 2 extremes requires:

Careful assessment & characterization of patient risk

Structuring of care to match risk

In patients w/ Hx of substance abuse or a psychiatric comorbidity, this may require assistance from experts in managing pain, addiction, or other mental health concerns

In some cases opioids may not be appropriate or should be deferred until the comorbidity has been adequately addressed

– Consider referral

Chou R, et al. *J Pain.* 2009;10113-30.

Referring High-Risk Patients

Prescribers should

Understand when to appropriately refer high-risk patients to pain management or addiction specialists

Also check your state regulations for requirements

Chou R, et al. *J Pain.* 2009;10113-30.

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Special Considerations: Elderly Patients

Does patient have medical problems that increase risk of opioid-related AEs?

Respiratory depression more likely in elderly, cachectic, or debilitated patients

- Altered PK due to poor fat stores, muscle wasting, or altered clearance
- Monitor closely, particularly when
  - Initiating & titrating ER/LA opioids
  - Given concomitantly w/ other drugs that depress respiration
- Reduce starting dose to 1/3 to 1/2 the usual dosage in debilitated, non-opioid-tolerant patients
- Titrate dose cautiously

Older adults more likely to develop constipation

- Routinely initiate a bowel regimen before it develops

Is patient/caregiver likely to manage opioid therapy responsibly?

American Geriatrics Society Panel on the Pharmacological Management of Persistent Pain in Older Persons. *J Am Geriatr Soc.* 2009;57:1331-46. Chou R, et al. *J Pain.* 2009;10:112-30.

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Special Considerations: Pregnant Women

Managing chronic pain in pregnant women is challenging, & affects both mother and fetus

Potential risks of opioid therapy to the newborn include:

- Low birth weight
- Premature birth
- Hypoxic-ischemic brain injury
- Neonatal death
- Prolonged QT syndrome
- Neonatal opioid withdrawal syndrome

Given these potential risks, clinicians should:

- Counsel women of childbearing potential about risks & benefits of opioid therapy during pregnancy & after delivery
- Encourage minimal/no opioid use during pregnancy, unless potential benefits outweigh risks

If chronic opioid therapy is used during pregnancy, anticipate & manage risks to the patient and newborns

Chou R, et al. *J Pain.* 2009;10:112-30.

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Special Considerations: Children (<18 years)

Safety & effectiveness of most ER/LA opioids unestablished

Pediatric analgesic trials pose challenges
Transdermal fentanyl approved in children aged ≥2 yrs
Oxycodone ER dosing changes for children ≥ 11 yrs (see Unit 6)

Most opioid studies focus on inpatient safety

Opioids are common sources of drug error

Opioid indications are primarily life-limiting conditions

Few children with chronic pain due to non-life-limiting conditions should receive opioids

When prescribing opioids to children:

Consult pediatric palliative care team or pediatric pain specialist or refer to a specialized multidisciplinary pain clinic

Berde CB, et al. *Pediatrics.* 2012;129:354-64. Gregoire MC, et al. *Pain Res Manag.* 2013;18:47-50. Mc Donnell C. *Pain Res Manag.* 2011;16:93-8. Slater ME, et al. *Pain Med.* 2010;11:207-14.

Unit 1

Pearls for Practice

Document EVERYTHING

Conduct a Comprehensive H&P

General and pain-specific

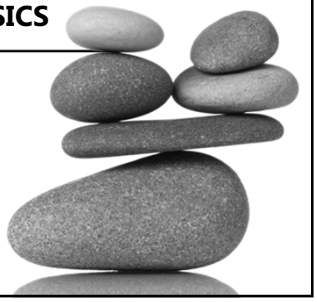
Assess Risk of Abuse

Compare Risks with Expected Benefits

Determine Whether a Therapeutic Trial is Appropriate

INITIATING THERAPY, MODIFYING DOSING, & DISCONTINUING USE OF ER/LA OPIOID ANALGESICS

Unit II



Federal & State Regulations

Comply w/ federal & state laws & regulations that govern the use of opioid therapy for pain

Federal

- Code of Federal Regulations, Title 21 Section 1306: rules governing the issuance & filling of prescriptions pursuant to section 309 of the Act (21 USC 829)
  - www.deadiversion.usdoj.gov/21cfr/cfr/2106cfrt.htm
- United States Code (USC) - Controlled Substances Act, Title 21, Section 829: prescriptions
  - www.deadiversion.usdoj.gov/21cfr/21usc/829.htm

State

- Database of state statutes, regulations, & policies for pain management
  - www.medscape.com/resource/pain/opioid-policies
  - www.painpolicy.wisc.edu/database-statutes-regulations-other-policies-pain-management

Initiating Treatment

Prescribers should regard initial treatment as a therapeutic trial

May last from several weeks to several months	
Decision to proceed w/ long-term treatment should be intentional & based on careful consideration of outcomes during the trial	
Progress toward meeting therapeutic goals	Presence of opioid-related AEs
Changes in underlying pain condition	Changes in psychiatric or medical comorbidities
Identification of aberrant drug-related behavior, addiction, or diversion	

Chou R, et al. *J Pain.* 2009;10:113-30.

ER/LA Opioid-Induced Respiratory Depression

Chief hazard of opioid agonists, including ER/LA opioids

- If not immediately recognized & treated, may lead to respiratory arrest & death
- Greatest risk: initiation of therapy or after dose increase

Manifested by reduced urge to breathe & decreased respiration rate

- Shallow breathing
- CO_2 retention can exacerbate opioid sedating effects

Instruct patients/family members to call 911*

- Managed w/ close observation, supportive measures, & opioid antagonists, depending on patient's clinical status

Chou R, et al. *J Pain.* 2009;10:113-30. FDA. *Blueprint for Prescriber Education for Extended-Release and Long-Acting Opioid Analgesics.* 08/2014. www.fda.gov/downloads/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/UCM311290.pdf

ER/LA Opioid-Induced Respiratory Depression

More likely to occur

- In elderly, cachectic, or debilitated patients
  - **Contraindicated** in patients w/ respiratory depression or conditions that increase risk
- If given concomitantly w/ other drugs that depress respiration

Reduce risk

- Proper dosing & titration are essential
- **Do not overestimate** dose when converting dosage from another opioid product
  - Can result in fatal overdose w/ first dose
- Instruct patients to swallow tablets/capsules whole
  - Dose from cut, crushed, dissolved, or chewed tablets/capsules may be fatal, particularly in opioid-naïve individuals

FDA. *Blueprint for Prescriber Education for Extended-Release and Long-Acting Opioid Analgesics.* 08/2014. www.fda.gov/downloads/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/UCM311290.pdf

Initiating & Titrating: Opioid-Naïve Patients

Drug & dose selection is critical

Some ER/LA opioids or dosage forms are only recommended for **opioid-tolerant** patients

- ANY strength of transdermal fentanyl or hydromorphone ER
- Certain strengths/doses of other ER/LA products (check drug PI)

Monitor patients closely for respiratory depression

Especially within 24-72 h of initiating therapy & increasing dosage

Individualize dosage by titration based on efficacy, tolerability, & presence of AEs

Check ER/LA opioid product PI for minimum titration intervals

Supplement w/ IR analgesics (opioids & nonopioid) if pain is not controlled during titration

The ER/LA Opioid Analgesics Risk Evaluation & Mitigation Strategy. *Selected Important Safety Information, Abuse potential & risk of life-threatening respiratory depression.* www.fda.gov/downloads/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/UCM311290.pdf. 2014. Chou R, et al. *J Pain.* 2009;10:113-30. FDA. *Blueprint for Prescriber Education for Extended-Release and Long-Acting Opioid Analgesics.* 08/2014. www.fda.gov/downloads/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/UCM311290.pdf

Initiating: Opioid-Tolerant Patients

If opioid tolerant – no restrictions on which products can be used

Patients considered opioid tolerant are taking at least

- 60 mg oral morphine/day
- 25 mcg transdermal fentanyl/hr
- 30 mg oral oxycodone/day
- 8 mg oral hydromorphone/day
- 25 mg oral oxymorphone/day
- An equianalgesic dose of another opioid

For 1 Wk Or Longer

Still requires caution when rotating a patient on an IR opioid to a different ER/LA opioid

IMPORTANT

The ER/LA Opioid Analgesics Risk Evaluation & Mitigation Strategy. *Selected Important Safety Information. Abuse potential & risk of life-threatening respiratory depression.* www.er-la-opioidrems.com/IwgUI/rems/pdf/important_safety_information.pdf. 2012.

Opioid Rotation

Definition:

Change from an existing opioid regimen to another opioid w/ the goal of improving therapeutic outcomes or to avoid AEs attributed to the existing drug, e.g., myoclonus

Rationale:

Differences in pharmacologic or other effects make it likely that a switch will improve outcomes

- Effectiveness & AEs of different mu opioids vary among patients
- Patients show incomplete cross-tolerance to new opioid
  - Patient tolerant to 1st opioid can have improved analgesia from 2nd opioid at a dose lower than calculated from an EDT

Fine PG, et al. *J Pain Symptom Manage.* 2009;38:418-25. Knotkova H, et al. *J Pain Symptom Manage.* 2009;38:426-39.
Pasternak GW. *Neuropharmacol.* 2004;47(suppl 1):312-23.

Equianalgesic Doses

Opioid rotation requires calculation of an approximate equianalgesic dose

Equianalgesic dose is a construct derived from relative opioid potency estimates	Relative potency estimates
• Potency refers to dose required to produce a given effect	• Ratio of doses necessary to obtain roughly equivalent effects • Calculate across drugs or routes of administration • Relative analgesic potency is converted into an equianalgesic dose by applying the dose ratio to a standard

Equianalgesic Dose Tables (EDT)

Many different versions:

- Published
- Online
- Online Interactive
- Smart-phone apps

Vary in terms of:

- Equianalgesic values
- Whether ranges are used
- **Which opioids are included:** May or may not include transdermal opioids, rapid-onset fentanyl, ER/LA opioids, or opioid agonist-antagonists

Example of an EDT for Adults

	Equianalgesic Dose		Usual Starting Doses	
Drug	**SC/IV**	**PO**	**Parenteral**	**PO**
Morphine	10 mg	30 mg	2.5-5 mg SC/IV q3-4hr (⇔1.25 – 2.5mg)	5-15 mg q3-4hr (IR or oral solution) (⇔2.5-7.5 mg)
Oxycodone	NA	20 mg	NA	5-10 mg q3-4 (⇔2.5 mg)
Hydrocodone	NA	30 mg	NA	5 mg q3-4h (⇔2.5 mg)
Hydromorphone	1.5 mg	7.5 mg	0.2-0.6 mg SC/IV q2-3hr (⇔0.2mg)	1-2 mg q3-4hr (⇔0.5-1 mg)

Limitations of EDTs

Single-dose potency studies using a specific route, conducted in patients w/ limited opioid exposure

Did Not Consider

Chronic dosing	High opioid doses	Other routes
Different pain types	Comorbidities or organ dysfunction	Gender, ethnicity, advanced age, or concomitant medications
Direction of switch from 1 opioid to another	Inter-patient variability in pharmacologic response to opioids	Incomplete cross-tolerance among mu opioids

Utilizing Equianalgesic Doses

Incomplete cross-tolerance & inter-patient variability require use of conservative dosing when converting from one opioid to another

Equianalgesic dose a starting point for opioid rotation

Intended as General Guide

Calculated dose of new drug based on EDT must be reduced, then titrate the new opioid as needed	Closely follow patients during periods of dose adjustments

Follow conversion instructions in individual ER/LA opioid PI, when provided

Guidelines for Opioid Rotation

Calculate equianalgesic dose of new opioid from EDT

Reduce calculated equianalgesic dose by 25%-50%*

Select % reduction based on clinical judgment

Closer to 50% reduction if patient is	Closer to 25% reduction if patient
• Receiving a relatively high dose of current opioid regimen • Elderly or medically frail	• Does not have these characteristics • Is switching to a different administration route of same drug

***75%-90% reduction for methadone**

Guidelines for Opioid Rotation, cont'd

If switching to **methadone:**

- Standard EDTs are less helpful in opioid rotation to methadone
- In opioid tolerant patients, methadone doses should not exceed 30-40 mg/day upon rotation.
  - Consider inpatient monitoring, including serial EKG monitoring
- In opioid-naïve patients, methadone should not be given as an initial drug

If switching to **transdermal:**

- **Fentanyl**, calculate dose conversion based on equianalgesic dose ratios included in the PI
- **Buprenorphine**, follow instructions in the PI

Guidelines for Opioid Rotation, cont'd

Have a strategy to frequently assess analgesia, AEs and withdrawal symptoms

Titrate new opioid dose to optimize outcomes & safety

Dose for breakthrough pain (BTP) ***using a short-acting, immediate release preparation*** is 5%-15% of total daily opioid dose, administered at an appropriate interval

If oral transmucosal fentanyl product is used for BTP, begin dosing lowest dose irrespective of baseline opioid dose

NEVER use ER/LA opioids for BTP

Breakthrough Pain in Chronic Pain Patients

Patients on stable ATC opioids may experience BTP	Therapies	Consider adding
Disease progression or a new or unrelated pain	• Directed at cause of BTP or precipitating factors • Nonspecific symptomatic therapies to lessen impact of BTP	• PRN IR opioid trial based on analysis of benefit versus risk – Risk for aberrant drug-related behaviors – High-risk: only in conjunction w/ frequent monitoring & follow-up – Low-risk: w/ routine follow-up & monitoring • Nonopioid drug therapies • Nonpharmacologic treatments

Reasons for Discontinuing ER/LA Opioids

No progress toward therapeutic goals	Intolerable & Unmanageable AEs	Pain level decreases in stable patients

Nonadherence or unsafe behavior	Aberrant behaviors suggestive of addiction &/or diversion
• 1 or 2 episodes of increasing dose without prescriber knowledge • Sharing medications • Unapproved opioid use to treat another symptom (e.g., insomnia)	• Use of illicit drugs or unprescribed opioids • Repeatedly obtaining opioids from multiple outside sources • Prescription forgery • Multiple episodes of prescription loss

Unit 2

Pearls for Practice

Treat Initiation of Opioids as a Therapeutic Trial

Anticipate ER/LA Opioid-Induced Respiratory Depression

It can be immediately life-threatening

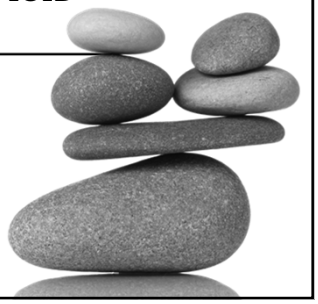
Be Conservative and Thoughtful In Dosing

When initiating, titrating, and rotating opioids
First calculate equinalgesic dose, then reduce dose appropriately

Discontinue ER/LA opioids slowly and safely

MANAGING THERAPY WITH ER/LA OPIOID ANALGESICS

Unit III



Informed Consent

Before initiating a trial of opioid analgesic therapy, confirm patient understanding of informed consent to establish:

- **Analgesic & functional goals of treatment**
- **Expectations**
- **Potential risks**
- **Alternatives to opioids**

The potential for & how to manage:

- Common opioid-related AEs (e.g., constipation, nausea, sedation)
- Other serious risks (e.g., abuse, addiction, respiratory depression, overdose)
- AEs after long-term or high-dose opioid therapy (e.g., hyperalgesia, endocrinologic or sexual dysfunction)

Patient-Prescriber Agreement (PPA)

Document signed by both patient & prescriber at time an opioid is prescribed

- **Clarify treatment plan & goals of treatment w/ patient, patient's family, & other clinicians involved in patient's care**
- **Assist in patient education**
- **Inform patients about the risks & benefits**
- **Document patient & prescriber responsibilities**

Consider a PPA

Reinforce expectations for appropriate & safe opioid use

- Obtain opioids from a single prescriber
- Fill opioid prescriptions at a designated pharmacy
- Safeguard opioids
  - Do not store in medicine cabinet
  - Keep locked (e.g., use a medication safe)
  - Do not share or sell medication
- Instructions for disposal when no longer needed
- Commitments to return for follow-up visits
- Comply w/ appropriate monitoring
  - E.g., random UDT & pill counts
- Frequency of prescriptions
- Enumerate behaviors that may lead to opioid discontinuation
- An exit strategy

Monitor Patients During Opioid Therapy

Therapeutic risks & benefits do not remain static	Identify patients	Periodically assess continued need for opioid analgesic
Affected by change in underlying pain condition, coexisting disease, or psychologic/ social circumstances	• Who are benefiting from opioid therapy • Who might benefit more w/ restructuring of treatment or receiving additional services (e.g., addiction treatment) • Whose benefits from treatment are outweighed by risks	Re-evaluate underlying medical condition if clinical presentation changes

Monitor Patients During Opioid Therapy, cont'd

Periodically evaluate:

- Pain control
  - Document pain intensity, pattern, & effects
- Functional outcomes
  - Document level of functioning
  - Assess progress toward achieving therapeutic goals
- Health-related QOL
- AE frequency & intensity
- Adherence to prescribed therapies

Patients requiring more frequent monitoring include:

- High-risk patients
- Patients taking high opioid doses

Anticipate & Treat Common AEs

Constipation	**most common AE; does not resolve with time**

- **Initiate a bowel regimen before constipation develops**
- **Increase fluid & fiber intake, stool softeners, & laxatives**
- **Opioid antagonists may help prevent/treat opioid-induced bowel dysfunction**

Nausea & vomiting	**tend to diminish over days or weeks**

Oral & rectal antiemetic therapies as needed

Drowsiness & sedation	**tend to wane over time**

Counsel patients about driving, work & home safety as well as risks of concomitant exposure to other drugs & substances w/ sedating effects

Pruritus & myoclonus	**tend to diminish over days or weeks**

Treatment strategies for either condition largely anecdotal

Chou R, et al. J Pain. 2009;10:113-30

Monitor Adherence and Aberrant Behavior

Routinely monitor patient adherence to treatment plan

- Recognize & document aberrant drug-related behavior
  - In addition to patient self-report also use:
    - State PDMPs, where available
    - UDT
      - Positive for nonprescribed drugs
      - Positive for illicit substance
      - Negative for prescribed opioid
- Family member or caregiver interviews
- Monitoring tools such as the COMM, PADT, PMQ, or PDUQ
- Medication reconciliation (e.g., pill counts)

PADT=Pain Assessment & Documentation Tool

Address Aberrant Drug-Related Behavior

Behavior outside the boundaries of agreed-on treatment plan:

Behaviors that are **less** indicative of aberrancy

- **Unsanctioned dose escalations or other noncompliance w/ therapy on 1 or 2 occasions**
- **Unapproved use of the drug to treat another symptom**
- **Openly acquiring similar drugs from other medical sources**

Behaviors that are **more** indicative of aberrancy

- **Multiple dose escalations or other noncompliance w/ therapy despite warnings**
- **Prescription forgery**
- **Obtaining prescription drugs from nonmedical sources**

Prescription Drug Monitoring Programs (PDMPs)

49 states have an operational PDMP
DC has enacted PDMP legislation, not yet operational
1 state has no legislation

Individual state laws determine

- Who has access to PDMP information
- Which drug schedules are monitored
- Which agency administers the PDMP
- Whether prescribers are required to register w/ the PDMP
- Whether prescribers are required to access PDMP information in certain circumstances
- Whether unsolicited PDMP reports are sent to prescribers

PDMP Benefits

Record of a patient's controlled substance prescriptions

- Some are available online 24/7
- Opportunity to discuss w/ patient

Provide warnings of potential misuse/abuse

- Existing prescriptions not reported by patient
- Multiple prescribers/pharmacies
- Drugs that increase overdose risk when taken together
- Patient pays for drugs of abuse w/ cash

Prescribers can check their own prescribing Hx

PDMP Unsolicited Patient Threshold Reports

Reports automatically generated on patients who cross certain thresholds when filling prescriptions. Available in some states.

E-mailed to prescribers to whom prescriptions were attributed

Prescribers review records to confirm it is your patient & you wrote the prescription(s) attributed to you

If inaccurate, contact PDMP

If you wrote the prescription(s), patient safety may dictate need to discuss the patient w/ other prescribers listed on report

- Decide who will continue to prescribe for the patient & who might address drug abuse concerns.

Rationale for Urine Drug Testing (UDT)

Help to identify drug misuse/addiction

- Prior to starting opioid treatment

Assist in assessing adherence during opioid therapy

- As requirement of therapy w/ an opioid
- Support decision to refer

UDT frequency is based on clinical judgment

Depending on patient's display of aberrant behavior and whether it is sufficient to document adherence to treatment plan

Check state regulations for requirements

Main Types of UDT Methods

Initial testing w/ IA drug panels:

- Classify substance as present or absent according to cutoff
- Many do not identify individual drugs within a class
- Subject to cross-reactivity
- Either lab based or at POC

Identify specific drugs &/or metabolites w/ sophisticated lab-based testing; e.g., GC/MS or LC/MS*

- Specifically confirm the presence of a given drug
  - e.g., morphine is the opiate causing a positive IA*
- Identify drugs not included in IA tests
- When results are contested

* GC/MS=gas chromatography/ mass spectrometry
IA=immunoassay
LC/MS=liquid chromatography/ mass spectrometry

Detecting Opioids by UDT

Most common opiate IA drug panels

- Detect "opiates" morphine & codeine, but doesn't distinguish
- Do not reliably detect semisynthetic opioids
  - Specific IA panels can be ordered for some
- Do not detect synthetic opioids (e.g., methadone, fentanyl)
  - Only a specifically directed IA panel will detect synthetics

GC/MS or LC/MS will identify specific opioids

- Confirm presence of a drug causing a positive IA
- Identify opioids not included in IA drug panels, including semisynthetic & synthetic opioids
- Identify opioids not included in IA drug panels, including semisynthetic & synthetic opioids

Interpretation of UDT Results

Positive Result

Demonstrates recent use

- Most drugs in urine have detection times of 1-3 d
- Chronic use of lipid-soluble drugs: test positive for ≥1 wk

Does not diagnose

- Drug addiction, physical dependence, or impairment

Does not provide enough information to determine

- Exposure time, dose, or frequency of use

Negative Result

Does not diagnose diversion

- More complex than presence or absence of a drug in urine

May be due to maladaptive drug-taking behavior

- Bingeing, running out early
- Other factors: eg, cessation of insurance, financial difficulties

Interpretation of UDT Results, cont'd

Be aware

Testing technologies & methodologies evolve

Differences exist between IA test menu panels vary

- Cross-reactivity patterns
  - Maintain list of all patient's prescribed & OTC drugs
    - Assist to identify false-positive result
- Cutoff levels

Time taken to eliminate drugs

- Document time of last use & quantity of drug(s) taken

Opioid metabolism may explain presence of apparently unprescribed drugs

Examples of Metabolism of Opioids

Codeine

Morphine

6-MAM*

$t_{½}$=25-30 min

Heroin

$t_{½}$=3-5 min

Hydrocodone

Hydromorphone

Oxycodone

Oxymorphone

*6-MAM=6-monoacetylmorphine

Interpretation of UDT Results

Use UDT results in conjunction w/ other clinical information

Investigate unexpected results

- Discuss w/ the lab
- Schedule appointment w/ patient to discuss unexpected/abnormal results

Chart results, interpretation, & action

Do not ignore the *unexpected* positive result

- May necessitate closer monitoring &/or referral to a specialist

Gourlay DL, et al. *Urine Drug Testing in Clinical Practice, The Art & Science of Patient Care*. Ed 4. 2010.

ER/LA Opioid Use in Pregnant Women

No adequate & well-controlled studies

Only use if potential benefit justifies the risk to the fetus

Be aware of the pregnancy status of your patients

If prolonged use is required during pregnancy:
- Advise patient of risk of neonatal withdrawal syndrome
- Ensure appropriate treatment will be available

Be Ready to Refer

Be familiar w/ referral sources for abuse or addiction that may arise from use of ER/LA opioids

SAMHSA substance abuse treatment facility locator

http://findtreatment.samhsa.gov/TreatmentLocator/faces/quickSearch.jspx

SAMHSA mental health treatment facility locator

http://findtreatment.samhsa.gov/MHTreatmentLocator/faces/quickSearch.jspx

Unit 3

Pearls for Practice

Anticipate and Treat Common Adverse Effects

Use Informed Consent and Patient Provider Agreements

Use UDT and PDMP as Valuable Sources of Data About your Patient

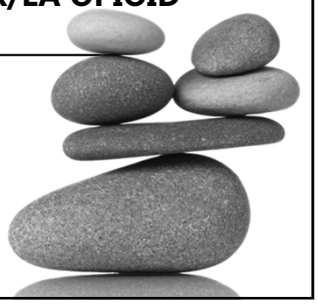
However, know their limitations

Monitor Patient Adherence, Side Effects, Aberrant Behaviors, and Clinical Outcomes

Refer Appropriately if Necessary

COUNSELING PATIENTS & CAREGIVERS ABOUT THE SAFE USE OF ER/LA OPIOID ANALGESICS

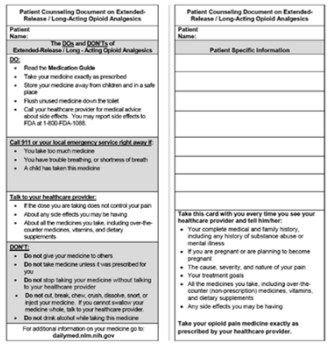
Unit IV



Use **Patient Counseling Document** to help counsel patients

Download:
www.er-la-opioidrems.com/IwgUI/rems/pdf/patient_counseling_document.pdf

Order hard copies:
www.minneapolis.cenveo.com/pcd/SubmitOrders.aspx


Patient Counseling Document on Extended-Release / Long-Acting Opioid Analgesics

Patient Name:

The DOs and DON'Ts of Extended-Release / Long - Acting Opioid Analgesics

DO:
- Read the Medication Guide
- Take your medicine exactly as prescribed
- Store your medicine away from children and in a safe place
- Flush unused medicine down the toilet
- Call your healthcare provider for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

Call 911 or your local emergency service right away if:
- You take too much medicine
- You have trouble breathing, or shortness of breath
- A child has taken this medicine

Talk to your healthcare provider:
- If the dose you are taking does not control your pain
- About any side effects you may be having
- About all the medicines you take, including over-the-counter medicines, vitamins, and dietary supplements

DON'T:
- Do not give your medicine to others
- Do not take medicine unless it was prescribed for you
- Do not stop taking your medicine without talking to your healthcare provider
- Do not cut, break, chew, crush, dissolve, snort, or inject your medicine. If you cannot swallow your medicine whole, talk to your healthcare provider.
- Do not drink alcohol while taking this medicine

For additional information on your medicine go to: dailymed.nlm.nih.gov

Patient Counseling Document on Extended-Release / Long-Acting Opioid Analgesics

Patient Name:

Patient Specific Information

Take this card with you every time you see your healthcare provider and tell him/her:
- Your complete medical and family history, including any history of substance abuse or mental illness
- If you are pregnant or are planning to become pregnant
- The cause, severity, and nature of your pain
- Your treatment goals
- All the medicines you take, including over-the-counter (non-prescription) medicines, vitamins, and dietary supplements
- Any side effects you may be having

Take your opioid pain medicine exactly as prescribed by your healthcare provider.

FDA. *EXTENDED-RELEASE (ER) AND LONG-ACTING (LA) OPIOID ANALGESICS: RISK EVALUATION AND MITIGATION STRATEGY (REMS).* Modified 08/2014. www.fda.gov/downloads/DrugsDrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/UCM431136.pdf

Collaborative for REMS Education

Counsel Patients About Proper Use

Explain	**Instruct patients/ caregivers to**
• Product-specific information about the prescribed ER/LA opioid • How to take the ER/LA opioid as prescribed • Importance of adherence to dosing regimen, handling missed doses, & contacting their prescriber if pain cannot be controlled	• Read the ER/LA opioid **Medication Guide** received from pharmacy **every time** an ER/LA opioid is dispensed • At every medical appointment explain all medications they take

Collaborative for REMS Education

Counsel Patients About Proper Use, cont'd

Counsel patients/caregivers:
- On the most common AEs of ER/LA opioids
- About the risk of falls, working w/ heavy machinery, & driving
- Call the prescriber for advice about managing AEs
- Inform the prescriber about AEs

Prescribers should report serious AEs to the FDA:
www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Forms/UCM163919.pdf
or **1-800-FDA-1088**

Warn Patients

Never break, chew, crush or snort an oral ER/LA tablet/capsule, or cut or tear patches prior to use
- May lead to rapid release of ER/LA opioid causing overdose & death
- When a patient cannot swallow a capsule whole, prescribers should refer to PI to determine if appropriate to sprinkle contents on applesauce or administer via feeding tube

Use of CNS depressants or alcohol w/ ER/LA opioids can cause <u>overdose & death</u>
- Use with alcohol may result in rapid release & absorption of a potentially fatal opioid dose
- Other depressants include sedative-hypnotics & anxiolytics, illegal drugs

Warn Patients, cont'd

Misuse of ER/LA opioids can lead to death
- Take **exactly** as directed*
- Counsel patients/caregivers on risk factors, signs, & symptoms of overdose & opioid-induced respiratory depression, GI obstruction, & allergic reactions
- Call **911** or poison control **1-800-222-1222**

***Serious side effects, including death, can occur even when used as recommended**

Do not abruptly stop or reduce the ER/LA opioid use
- Discuss how to safely taper the dose when discontinuing

Co-Prescribing Naloxone

Naloxone:
- An opioid antagonist
- Reverses acute opioid-induced respiratory depression but will also cause withdrawal and reverse analgesia
- Administered intramuscularly and subcutaneously
- Intranasal formulation currently under consideration with the FDA

Available as:
- Naloxone kit (w/ syringes, needles)
- EVZIO™ (naloxone HCl) auto-injector
- NARCAN nasal spray

What to do:
- Encourage patients to create an 'overdose plan'
- Involve and train family, friends, partners and/or caregivers
- Check expiration dates and keep a viable dose on hand
- In the event of known or suspected overdose, administer Naloxone and **call 911.**

When to Consider Co-Prescribing Naloxone:

Those at a higher risk for opioid overdose including…

- Taking opioid high-doses for pain (50 mg/day equiv)
- Receiving rotating opioid medication regimes (at risk for incomplete cross tolerance)
- On opioid preparations with increased overdose risk
- With respiratory disease (COPD, emphysema, asthma)
- With renal or hepatic impairment
- Concurrent benzodiazepine use

Abuse Deterrent/Tamper Resistant Opioids

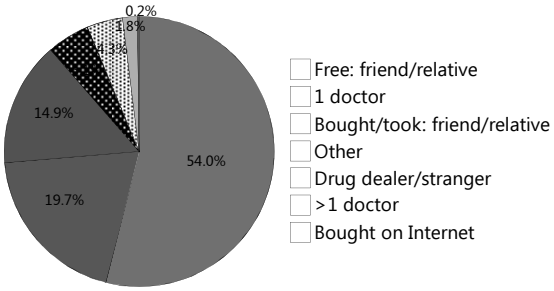
- Response to growing nonmedical use problem
- An ER/LA opioid with physical barrier to *deter* extraction
  - less likely to be crushed, injected, or snorted
- Consider these formulations as one part of an overall REMS strategy
- There is mixed evidence on the impact of ADF/TR on misuse
- Remember overdose is still possible if taken orally in excessive amounts

Protecting the Community

Caution Patients

- **Sharing ER/LA opioids w/ others may cause them to have serious AEs**
  - Including death
- **Selling or giving away ER/LA opioids is against the law**
- **Store medication safely and securely**
- **Protect ER/LA opioids from theft**
- **Dispose of any ER/LA opioids when no longer needed**
  - Read product-specific disposal information included w/ ER/LA opioid

Source of Most Recent Rx Opioids Among Past-Year Users (2011-2012)



SAMHSA (2013). *Results from the 2012 National Survey on Drug Use and Health: Summary of National Findings.* NSDUH Series H-46, HHS Publication No. (SMA) 13-4795. Rockville, MD.

Educate Parents: Not in My House

Step 1: Monitor

- Note how many pills in each prescription bottle or pill packet
- Keep track of refills for all household members
- If your teen has been prescribed a drug, coordinate & monitor dosages & refills
- Make sure friends & relatives—especially grandparents—are aware of the risks
- If your teen visits other households, talk to the families about safeguarding their medications

Rx Opioid Disposal

New "Disposal Act" expands ways for patients to dispose of unwanted/expired opioids

Decreases amount of opioids introduced into the environment, particularly into water

Collection receptacles
Call DEA Registration Call Center at **1-800-882-9539** to find a local collection receptacle

Mail-back packages
Obtained from authorized collectors

Voluntarily maintained by:
- Law enforcement
- Authorized collectors, including:
  - Manufacturer
  - Distributer
  - Reverse distributer
  - Retail or hospital/clinic pharmacy
    - Including long-term care facilities

Local take-back events
- Conducted by Federal, State, tribal, or local law enforcement
- Partnering w/ community groups

DEA National Prescription Drug Take-Back Day on April 30, 2016

DEA. *Federal Register.* 2014; 79(174):53520-70. Final Rule. Disposal of Controlled Substances. [Docket No. DEA-316] www.deadiversion.usdoj.gov/fed_regs/rules/2014/2014-20926.pdf
DEA. Disposal Act: General Public Fact Sheet. www.deadiversion.usdoj.gov/drug_disposal/fact_sheets/disposal_public.pdf

Other Methods of Opioid Disposal

If collection receptacle, mail-back program, or take-back event unavailable, throw out in household trash

- Take drugs out of original containers
- Mix w/ undesirable substance, e.g., used coffee grounds or kitty litter
  - Less appealing to children/pets, & unrecognizable to people who intentionally go through your trash
- Place in sealable bag, can, or other container
  - Prevent leaking or breaking out of garbage bag
- Before throwing out a medicine container
  - Scratch out identifying info on label

Prescription Drug Disposal

FDA lists especially harmful medicines – in some cases fatal w/ just 1 dose – if taken by someone other than the patient

- Instruct patients to check medication guide

Flush down sink/toilet if no collection receptacle, mail-back program, or take-back event available

- **As soon as they are no longer needed**
  - So cannot be accidentally taken by children, pets, or others
- **Includes transdermal adhesive skin patches**
  - Used patch worn for 3d still contains enough opioid to harm/kill a child
  - Dispose of used patches immediately after removing from skin
- **Fold patch in half so sticky sides meet, then flush down toilet**
- **Do NOT place used or unneeded patches in household trash**
  - Exception is Butrans: can seal in Patch-Disposal Unit provided & dispose of in the trash

Unit 4

Pearls for Practice

Establish Informed Consent

Counsel Patients about Proper Use

Appropriate use of medication
Consequences of inappropriate use

Educate the Whole Team

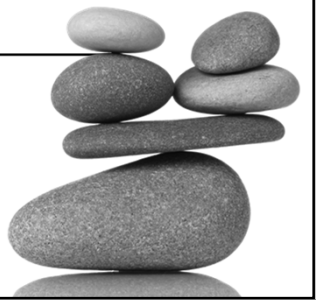
Patients, families, caregivers

Tools and Documents Can Help with Counseling

Use them!

GENERAL DRUG INFORMATION FOR ER/LA OPIOID ANALGESIC PRODUCTS

Unit V



General ER/LA Opioid Drug Information

Prescribers should be knowledgeable about general characteristics, toxicities, & drug interactions for ER/LA opioid products:

ER/LA opioid analgesic products are scheduled under the Controlled Substances Act & can be misused & abused

Respiratory depression is the most serious opioid AE	**Constipation is the most common long-term AE**
Can be immediately life-threatening	Should be anticipated

For Safer Use: Know Drug Interactions, PK, & PD

CNS depressants can potentiate sedation & respiratory depression

Some ER/LA products rapidly release opioid (dose dump) when exposed to alcohol
Some drug levels may increase without dose dumping

Use w/ MAOIs may increase respiratory depression
Certain opioids w/ MAOIs can cause serotonin syndrome

Can reduce efficacy of diuretics
Inducing release of antidiuretic hormone

Methadone & buprenorphine can prolong QTc interval

Drugs that inhibit or induce CYP enzymes can increase or lower blood levels of some opioids

Opioid Tolerant

Tolerance to sedating & respiratory-depressant effects is critical to safe use of certain ER/LA opioid products, dosage unit strengths, or doses

Patients must be opioid tolerant before using

- Any strength of transdermal fentanyl or hydromorphone ER
- Certain strengths or daily doses of other ER products

Opioid-tolerant patients are those taking at least

- 60 mg oral morphine/day
- 25 mcg transdermal fentanyl/hr
- 30 mg oral oxycodone/day
- 8 mg oral hydromorphone/day
- 25 mg oral oxymorphone/day
- An equianalgesic dose of another opioid

FOR 1 WK OR LONGER

Key Instructions: ER/LA Opioids

Individually titrate to a dose that provides adequate analgesia & minimizes adverse reactions

Times required to reach steady-state plasma concentrations are product-specific

Refer to product information for titration interval

Continually re-evaluate to assess maintenance of pain control & emergence of AEs

Key Instructions: ER/LA Opioids, cont'd

During chronic therapy, especially for non-cancer-related pain, periodically reassess the continued need for opioids

If pain increases, attempt to identify source, while adjusting dose

When an ER/LA opioid is no longer required, gradually titrate dose downward to prevent signs & symptoms of withdrawal in physically dependent patients

Do not abruptly discontinue

Common Drug Information for This Class

Limitations of usage	Dosage reduction for hepatic or renal impairment	Relative potency to oral morphine
• Reserve for when alternative options (eg, non-opioids or IR opioids) are ineffective, not tolerated, or otherwise inadequate • Not for use as an as-needed analgesic • Not for mild pain or pain not expected to persist for an extended duration • Not for acute pain	See individual drug PI	• Intended as general guide • Follow conversion instructions in individual PI • Incomplete cross-tolerance & inter-patient variability require conservative dosing when converting from 1 opioid to another – Halve calculated comparable dose & titrate new opioid as needed

Transdermal Dosage Forms

Do not cut, damage, chew, or swallow

Exertion or exposure to external heat can lead to fatal overdose

Rotate location of application

Prepare skin: clip - not shave - hair & wash area w/ water

Monitor patients w/ fever for signs or symptoms of increased opioid exposure

Metal foil backings are not safe for use in MRIs

Drug Interactions Common to this Class

Concurrent use w/ other CNS depressants can increase risk of respiratory depression, hypotension, profound sedation, or coma
Reduce initial dose of one or both agents

Avoid concurrent use of partial agonists* or mixed agonist/antagonists† with full opioid agonist
May reduce analgesic effect &/or precipitate withdrawal

May enhance neuromuscular blocking action of skeletal muscle relaxants & increase respiratory depression

Concurrent use w/ anticholinergic medication increases risk of urinary retention & severe constipation
May lead to paralytic ileus

*Buprenorphine; †Pentazocine, nalbuphine, butorphanol

Drug Information Common to This Class

Use in opioid-tolerant patients

- See individual PI for products which:
  - Have strengths or total daily doses only for use in opioid-tolerant patients
  - Are only for use in opioid-tolerant patients at all strengths

Contraindications

- Significant respiratory depression
- Acute or severe asthma in an unmonitored setting or in absence of resuscitative equipment
- Known or suspected paralytic ileus
- Hypersensitivity (e.g., anaphylaxis)
- See individual PI for additional contraindications

Unit 5

Pearls for Practice

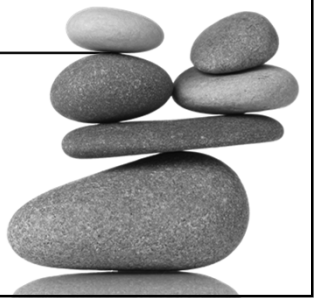
Patients MUST be opioid-tolerant in order to safely take most ER/LA opioid products

Be familiar with drug-drug interactions, pharmacokinetics and pharmacodynamics of ER/LA opioids

Central nervous system depressants (alcohol, sedatives, hypnotics, tranquilizers, tricyclic antidepressants) can have a potentiating effect on the sedation and respiratory depression caused by opioids.

SPECIFIC DRUG INFORMATION FOR ER/LA OPIOID ANALGESIC PRODUCTS

Unit VI



Specific Characteristics

Know for opioid products you prescribe:

Drug substance	**Formulation**	**Strength**	**Dosing interval**
Key instructions	**Use in opioid-tolerant patients**	**Product-specific safety concerns**	**Relative potency to morphine**
Specific information about product conversions, if available		**Specific drug interactions**	

For detailed information, refer to online PI:
DailyMed at www.dailymed.nlm.nih.gov Drugs@FDA at www.fda.gov/drugsatfda

Morphine Sulfate ER Capsules (Avinza)

Capsules 30 mg, 45 mg, 60 mg, 75 mg, 90 mg, and 120 mg

Dosing interval	• Once a day
Key instructions	• Initial dose in opioid non-tolerant patients is 30 mg • Titrate in increments of not greater than 30 mg using a minimum of 3-4 d intervals • Swallow capsule whole (do not chew, crush, or dissolve) • May open capsule & sprinkle pellets on applesauce for patients who can reliably swallow without chewing; use immediately • MDD:* 1600 mg (renal toxicity of excipient, fumaric acid)
Drug interactions	• Alcoholic beverages or medications w/ alcohol may result in rapid release & absorption of potentially fatal dose • P-gp* inhibitors (e.g., quinidine) may increase absorption/exposure of morphine by ~2-fold
Opioid-tolerant	• 90 mg & 120 mg capsules for use in opioid-tolerant patients only
Product-specific safety concerns	• None

* MDD=maximum daily dose; P-gp= P-glycoprotein

Buprenorphine Buccal Film (Belbuca)

75 mcg, 150 mcg, 300 mcg, 450 mcg, 600 mcg, 750 mcg, and 900 mcg

Dosing interval	• Every 12 h (or once every 24 h for initiation in opioid naïve patients & patients taking less than 30 mg oral morphine sulfate eq
Key instructions	• Opioid-naïve pts or pts taking <30 mg oral morphine sulfate eq: Initiate treatment with a 75 mcg buccal film, once daily, or if tolerated, every 12 h - Titrate to 150 mcg every 12 h no earlier than 4 d after initiation - Individual titration to a dose that provides adequate analgesia and minimizes adverse reaction should proceed in increments of 150 mcg every 12 h, no more frequently than every 4 d • When converting from another opioid, first taper the current opioid to no more than 30 mg oral morphine sulfate eq/day prior to initiating Belbuca - If prior daily dose before taper was 30 mg to 89 mg oral morphine sulfate eq, initiate with 150 mcg dose every 12 h - If prior daily dose before taper was 90 mg to 160 mg oral morphine sulfate eq, initiate with 300 mcg dose every 12 h - Titration of the dose should proceed in increments of 150 mcg every 12 h, no more frequently than every 4 d

Buprenorphine Buccal Film (Belbuca) cont'd

Key instructions	• Maximum dose: 900 mcg every 12 h due to the potential for QTc prolongation • Severe Hepatic Impairment: Reduce the starting and incremental dose by half that of patients with normal liver function • Oral Mucositis: Reduce the starting and incremental dose by half that of patients without mucositis • Do not use if the package seal is broken or the film is cut, damaged, or changed in any way
Specific Drug Interactions	• CYP3A4 inhibitors may increase buprenorphine levels • CYP3A4 inducers may decrease buprenorphine levels • Benzodiazepines may increase respiratory depression • Class IA and III antiarrhythmics, other potentially arrhythmogenic agents, may increase risk for QTc prolongation and torsade de pointes
Use in Opioid-Tolerant Patients	• Belbuca 600 mcg, 750 mcg, and 900 mcg are for use following titration from lower doses of Belbuca
Product-Specific Safety Concerns	• QTc prolongation and torsade de pointes • Hepatotoxicity
Relative Potency: Oral Morphine	• Equipotency to oral morphine has not been established.

Buprenorphine Transdermal System (Butrans)

Transdermal System 5 mcg/hr, 7.5 mcg/hr, 10 mcg/hr, 15 mcg/hr, 20 mcg/hr

Dosing interval	• One transdermal system every 7 d

Key instructions	• Initial dose in opioid non-tolerant patients on <30 mg morphine equivalents & in mild-moderate hepatic impairment: 5 mcg/h
	• When converting from 30 mg-80 mg morphine equivalents, first taper to 30 mg morphine equivalent, then initiate w/ 10 mcg/h
	• Titrate in 5 or 10 mcg/h increments by using no more than 2 patches of the 5 or 10 mcg/h system(s) w/ minimum of 72 h prior between dose adjustments. Total dose from all patches should be ≤20 mcg/h
	• Maximum dose: 20 mcg/h due to risk of QTc prolongation
	• Application
	  • Apply only to sites indicated in PI
	  • Apply to intact/non-irritated skin
	  • Prep skin by clipping hair; wash site w/ water only
	  • Rotate application site (min 3 wks before reapply to same site)
	  • Do not cut
	• Avoid exposure to heat
	• Dispose of patches: fold adhesive side together & flush down toilet

Buprenorphine Transdermal System (Butrans) cont'd

Drug interactions	• CYP3A4 inhibitors may increase buprenorphine levels • CYP3A4 inducers may decrease buprenorphine levels • Benzodiazepines may increase respiratory depression • Class IA & III antiarrythmics, other potentially arrhythmogenic agents, may increase risk of QTc prolongation & torsade de pointe
Opioid-tolerant	• 7.5 mcg/h, 10 mcg/h, 15 mcg/h, & 20 mcg/h for use in opioid-tolerant patients only
Product-specific safety concerns	• QTc prolongation & torsade de pointe • Hepatotoxicity • Application site skin reactions
Relative potency: oral morphine	• Equipotency to oral morphine not established

Methadone Hydrochloride Tablets (Dolophine)

Dosing interval	• Every 8 to 12 h
Key instructions	• Initial dose in opioid non-tolerant patients: 2.5 – 10 mg • Conversion of opioid-tolerant patients using equianalgesic tables can result in overdose & death. Use low doses according to table in full PI • Titrate slowly with dose increases no more frequent than every 3-5 d. Because of high variability in methadone metabolism, some patients may require substantially longer periods between dose increases (up to 12 d). • High inter-patient variability in absorption, metabolism, & relative analgesic potency • Opioid detoxification or maintenance treatment only provided in a federally certified opioid (addiction) treatment program (CFR, Title 42, Sec 8)

Drug interactions	• Pharmacokinetic drug-drug interactions w/ methadone are complex
	  – CYP 450 inducers may decrease methadone levels
	  – CYP 450 inhibitors may increase methadone levels
	  – Anti-retroviral agents have mixed effects on methadone levels
	• Potentially arrhythmogenic agents may increase risk for QTc prolongation & torsade de pointe
	• Benzodiazepines may increase respiratory depression

Methadone Hydrochloride Tablets (Dolophine) cont'd

Opioid-tolerant	• Refer to full PI
Product-specific safety concerns	• QTc prolongation & torsade de pointe • Peak respiratory depression occurs later & persists longer than analgesic effect • Clearance may increase during pregnancy • False-positive UDT possible
Relative potency: oral morphine	• Varies depending on patient's prior opioid experience

Fentanyl Transdermal System (Duragesic)

12, 25, 37.5*, 50, 62.5*, 75, 87.5*, and 100 mcg/hr
(*These strengths are available only in generic form)

Dosing interval	• Every 72 h (3 d)

Key instructions	• Use product-specific information for dose conversion from prior opioid
	• Hepatic or renal impairment: use 50% of dose if mild/moderate, avoid use if severe
	• Application
	  – Apply to intact/non-irritated/non-irradiated skin on a flat surface
	  – Prep skin by clipping hair, washing site w/ water only
	  – Rotate site of application
	  – Titrate using a minimum of 72 h intervals between dose adjustments
	  – Do not cut
	• Avoid exposure to heat
	• Avoid accidental contact when holding or caring for children
	• Dispose of used/unused patches: fold adhesive side together & flush down toilet

Fentanyl Transdermal System (Duragesic), cont'd

Key instructions	**Specific contraindications:** • Patients who are not opioid-tolerant • Management of – Acute or intermittent pain, or patients who require opioid analgesia for a short time – Post-operative pain, out-patient, or day surgery – Mild pain
Drug interactions	• CYP3A4 inhibitors may increase fentanyl exposure • CYP3A4 inducers may decrease fentanyl exposure • Discontinuation of concomitant CYP P450 3A4 inducer may increase fentanyl plasma concentration
Opioid-tolerant	• All doses indicated for opioid-tolerant patients only
Product-specific safety concerns	• Accidental exposure due to secondary exposure to unwashed/unclothed application site • Increased drug exposure w/ increased core body temp or fever • Bradycardia • Application site skin reactions
Relative potency: oral morphine	• See individual PI for conversion recommendations from prior opioid

Morphine Sulfate ER-Naltrexone (Embeda)

Capsules 20 mg/0.8 mg, 30 mg/1.2 mg, 50 mg/2 mg, 60 mg/2.4 mg, 80 mg, 3.2 mg, 100 mg/4 mg

Dosing interval	• Once a day or every 12 h
Key instructions	• Initial dose as first opioid: 20 mg/0.8 mg • Titrate using a minimum of 1-2 d intervals • Swallow capsules whole (do not chew, crush, or dissolve) • Crushing or chewing will release morphine, possibly resulting in fatal overdose, & naltrexone, possibly resulting in withdrawal symptoms • May open capsule & sprinkle pellets on applesauce for patients who can reliably swallow without chewing, use immediately
Drug interactions	• Alcoholic beverages or medications w/ alcohol may result in rapid release & absorption of potentially fatal dose • P-gp inhibitors (e.g., quinidine) may increase absorption/exposure of morphine by ~2-fold
Opioid-tolerant	• 100 mg/4 mg capsule for use in opioid-tolerant patients only
Product-specific safety concerns	• None

Hydromorphone Hydrochloride (Exalgo)

ER Tablets 8 mg, 12 mg, 16 mg, 32 mg

Dosing interval	• Once a day
Key instructions	• Use conversion ratios in individual PI • Start patients w/ moderate hepatic impairment on 25% dose prescribed for patient w/ normal function • Renal impairment: start patients w/ moderate on 50% & patients w/ severe on 25% dose prescribed for patient w/ normal function • Titrate in increments of 4-8 mg using a minimum of 3-4 d intervals • Swallow tablets whole (do not chew, crush, or dissolve) • Do not use in patients w/ sulfite allergy (contains sodium metabisulfite)
Drug interactions	• None
Opioid-tolerant	• All doses are indicated for opioid-tolerant patients only
Product-specific adverse reactions	• Allergic manifestations to sulfite component
Relative potency: oral morphine	• ~5:1 oral morphine to hydromorphone oral dose ratio, use conversion recommendations in individual product information

Hydrocodone Bitartrate (Hysingla ER)

ER Tablets, 20 mg, 30 mg, 40 mg, 60 mg, 80 mg, 100 mg, 120mg

Dosing interval	• Once a day
Key instructions	• Opioid-naïve patients: initiate treatment with 20 mg orally once daily. • During titration, adjust the dose in increments of 10 mg to 20 mg every 3 to 5 days until adequate analgesia is achieved. • Swallow tablets whole (do not chew, crush, or dissolve). • Consider use of an alternative analgesic in patients who have difficulty swallowing or have underlying gastrointestinal disorders that may predispose them to obstruction. • Take one tablet at a time, with enough water to ensure complete swallowing immediately after placing in the mouth. • Use 1/2 of the initial dose and monitor closely for adverse events, such as respiratory depression and sedation, when administering Hysingla ER to patients with severe hepatic impairment or patients with moderate to severe renal impairment.

Hydrocodone Bitartrate (Hysingla ER), cont'd

Drug interactions	• CYP3A4 inhibitors may increase hydrocodone exposure. • CYP3A4 inducers may decrease hydrocodone exposure. • Concomitant use of Hysingla ER with strong laxatives (e.g., Lactulose) that rapidly increase GI motility may decrease hydrocodone absorption and result in decreased hydrocodone plasma levels. • The use of MAO inhibitors or tricyclic antidepressants with Hysingla ER may increase the effect of either the antidepressant or Hysingla ER.
Opioid-tolerant	• A single dose ≥ 80 mg is only for use in opioid tolerant patients.
Product-specific safety concerns	• Use with caution in patients with difficulty swallowing the tablet or underlying gastrointestinal disorders that may predispose patients to obstruction. • Esophageal obstruction, dysphagia, and choking have been reported with Hysingla ER. • In nursing mothers, discontinue nursing or discontinue drug. QTc prolongation has been observed with Hysingla ER following daily doses of 160 mg. • Avoid use in patients with congenital long QTc syndrome. This observation should be considered in making clinical decisions regarding patient monitoring when prescribing Hysingla ER in patients with congestive heart failure, bradyarrhythmias, electrolyte abnormalities, or who are taking medications that are known to prolong the QTc interval. • In patients who develop QTc prolongation, consider reducing the dose.
Relative potency: oral morphine	• See individual PI for conversion recommendations from prior opioid

Morphine Sulfate (Kadian)

ER Capsules 10 mg, 20 mg, 30 mg, 40 mg, 50 mg, 60 mg, 70 mg, 80 mg, 100 mg, 130mg, 150 mg, 200 mg

Dosing interval	• Once a day or every 12 h
Key instructions	• PI recommends not using as first opioid • Titrate using minimum of 2-d intervals • Swallow capsules whole (do not chew, crush, or dissolve) • May open capsule & sprinkle pellets on applesauce for patients who can reliably swallow without chewing, use immediately
Drug interactions	• Alcoholic beverages or medications w/ alcohol may result in rapid release & absorption of potentially fatal dose of morphine • P-gp inhibitors (e.g., quinidine) may increase absorption/exposure of morphine by ~2-fold
Opioid-tolerant	• 100 mg, 130 mg, 150 mg, 200 mg capsules for use in opioid-tolerant patients only
Product-specific safety concerns	• None

Morphine Sulfate (MorphaBond)

ER Tablets 15 mg, 30 mg, 60 mg, 100 mg

Dosing interval	• Every 8 h or every 12h
Key instructions	• Product information recommends not using as first opioid • Titrate using a minimum of 1 – 2 d intervals • Swallow tablets whole (do not chew, crush, or dissolve)
Specific Drug interactions	• P-gp inhibitors (e.g. quinidine) may increase the absorption/exposure of morphine sulfate by about two-fold
Opioid-tolerant	• MorphaBond 100 mg tablets are for use in opioid-tolerant patients only
Product-specific safety concerns	• None

Morphine Sulfate (MS Contin)

ER Tablets 15 mg, 30 mg, 60 mg, 100 mg, 200mg

Dosing interval	• Every 8 h or every 12 h
Key instructions	• Product information recommends not using as first opioid. • Titrate using a minimum of 1-2 d intervals • Swallow tablets whole (do not chew, crush, or dissolve)
Drug interactions	• P-gp inhibitors (e.g., quinidine) may increase absorption/exposure of morphine by ~2-fold
Opioid-tolerant	• 100 mg & 200 mg tablet strengths for use in opioid-tolerant patients only
Product-specific safety concerns	• None

Tapentadol (Nucynta ER)

ER Tablets 50 mg, 100 mg, 150 mg, 200 mg, 250 mg

Dosing interval	• Every 12 h
Key instructions	• 50 mg every 12 h is initial dose in opioid non-tolerant patients • Titrate by 50 mg increments using minimum of 3-d intervals • MDD: 500 mg • Swallow tablets whole (do not chew, crush, or dissolve) • Take 1 tablet at a time w/ enough water to ensure complete swallowing immediately after placing in mouth • Dose once/d in moderate hepatic impairment (100 mg/d max) • Avoid use in severe hepatic & renal impairment
Drug interactions	• Alcoholic beverages or medications w/ alcohol may result in rapid release & absorption of a potentially fatal dose of tapentadol • Contraindicated in patients taking MAOIs
Opioid-tolerant	• No product-specific considerations
Product-specific safety concerns	• Risk of serotonin syndrome • Angio-edema
Relative potency: oral morphine	• Equipotency to oral morphine has not been established

Oxymorphone Hydrochloride (Opana ER)

ER Tablets 5 mg, 7.5 mg, 10 mg, 15 mg, 20 mg, 30 mg, 40 mg

Dosing interval	• Every 12 h dosing, some may benefit from asymmetric (different dose given in AM than in PM) dosing
Key instructions	• Use 5 mg every 12 h as initial dose in opioid non-tolerant patients & patients w/ mild hepatic impairment & renal impairment (creatinine clearance <50 mL/min) & patients >65 yrs • Swallow tablets whole (do not chew, crush, or dissolve) • Take 1 tablet at a time, w/ enough water to ensure complete swallowing immediately after placing in mouth • Titrate in increments of 5-10 mg using a minimum of 3-7 d intervals • Contraindicated in moderate & severe hepatic impairment
Drug interactions	• Alcoholic beverages or medications w/ alcohol may result in absorption of a potentially fatal dose of oxymorphone
Opioid-tolerant	• No product-specific considerations
Product-specific safety concerns	• Use with caution in patients who have difficulty swallowing or underlying GI disorders that may predispose to obstruction (e.g. small gastrointestinal lumen)
Relative potency: oral morphine	• Approximately 3:1 oral morphine to oxymorphone oral dose ratio

Oxycodone Hydrochloride (OxyContin)

NEW DOSING INFO

ER Tablets 10mg, 15mg, 20,mg, 30mg, 40mg, 60mg and 80 mg

Dosing interval	• Every 12 h
Key instructions	• Initial dose in opioid-naïve and non-tolerant patients: 10 mg every 12 h • Titrate using a minimum of 1-2 d intervals • Hepatic impairment: start w/ ⅓-½ usual dosage • Renal impairment (creatinine clearance <60 mL/min): start w/ ½ usual dosage • Consider other analgesics in patients w/ difficulty swallowing or underlying GI disorders that predispose to obstruction. Swallow tablets whole (do not chew, crush, or dissolve) • Take 1 tablet at a time, w/ enough water to ensure complete swallowing immediately after placing in mouth
Drug interactions	• CYP3A4 inhibitors may increase oxycodone exposure • CYP3A4 inducers may decrease oxycodone exposure
Opioid-tolerant	• Single dose >40 mg or total daily dose >80 mg for use in opioid-tolerant patients only
Product-specific safety concerns	• Choking, gagging, regurgitation, tablets stuck in throat, difficulty swallowing tablet • Contraindicated in patients w/ GI obstruction
Relative potency: oral morphine	• Approximately 2:1 oral morphine to oxycodone oral dose ratio

Oxycodone Hydrochloride (OxyContin) con't

IMPORTANT

ER Tablets 10mg, 15mg, 20,mg, 30mg, 40mg, 60mg and 80 mg

Key instructions	For Adults: • Single dose greater than 40 mg or total daily dose greater than 80 mg are for use in adult patients in whom tolerance to an opioid of comparable tolerance has been established. • When a dose increase is clinically indicated, the total daily oxycodone dose usually can be increased by 25% to 50% of the current dose. **For Pediatric Patients (11 years and older)** • For use only in opioid tolerant pediatric patients already receiving and tolerating opioids for at least five (5) consecutive days with a minimum of 20 mg per day of oxycodone or its equivalent for at least 2 days immediately preceding dosing with Oxycodon ER. Renal impairment (creatinine clearance <60 mL/min): start w/ ½ usual dosage • If needed, pediatric dose may be adjusted in 1 to 2 day intervals. • When a dose increase is clinically indicated, the total daily oxycodone dose usually can be increased by 25% of the current daily dose.
IMPORTANT:	• Opioids are rarely indicated or used to treat pediatric patients with chronic pain. • The recent FDA approval for this oxycodone formulation was NOT intended to increase prescribing or use of this drug in pediatric pain treatment. Review the product information and adhere to best practices in the literature.

Oxycodone Hydrochloride/Naloxone Hydrochloride (Targiniq ER)

ER Tablets 10 mg/5mg, 20 mg/10 mg, 40 mg/20 mg

Dosing interval	• Every 12 h
Key instructions	• Opioid-naïve patients: initiate treatment w/ 10mg/5mg every 12 h • Titrate using min of 1-2 d intervals • Do not exceed 80 mg/40 mg total daily dose (40 mg/20 mg q12h) • May be taken w/ or without food • Swallow whole. Do not chew, crush, split, or dissolve: this will release oxycodone (possible fatal overdose) & naloxone (possible withdrawal) • Hepatic impairment: contraindicated in moderate-severe impairment. In patients w/ mild impairment, start w/ ⅓-½ usual dosage • Renal impairment (creatinine clearance <60 mL/min): start w/ ½ usual dosage
Drug interactions	• CYP3A4 inhibitors may increase oxycodone exposure • CYP3A4 inducers may decrease oxycodone exposure
Opioid-tolerant	• Single dose >40 mg/20 mg or total daily dose of 80 mg/40 mg for opioid-tolerant patients only
Product-specific safety concerns	• Contraindicated in patients w/ moderate-severe hepatic impairment
Relative potency: oral morphine	• See individual PI for conversion recommendations from prior opioids

Hydrocodone Bitartrate (Zohydro ER)

ER Capsules 10 mg, 15 mg, 20 mg, 30 mg, 40 mg, 50 mg

Dosing interval	• Every 12 h
Key instructions	• Initial dose in opioid non-tolerant patient is 10 mg • Titrate in increments of 10 mg using a min of 3-7 d intervals • Swallow capsules whole (do not chew, crush, or dissolve)
Drug interactions	• Alcoholic beverages or medications containing alcohol may result in rapid release & absorption of a potentially fatal dose of hydrocodone • CYP3A4 inhibitors may increase hydrocodone exposure • CYP3A4 inducers may decrease hydrocodone exposure
Opioid-tolerant	• Single dose >40 mg or total daily dose >80 mg for use in opioid-tolerant patients only
Product-specific safety concerns	• None
Relative potency: oral morphine	• Approximately 1.5:1 oral morphine to hydrocodone oral dose ratio

Naloxone (Narcan)

Dosing interval	• IM or SQ: onset 2-5 minutes, duration >45 min • IV: onset 1-2 min, duration 45 minutes • IN: onset 2-3 min, duration ~ 2 hours
Key instructions	• Monitor respiratory rate • Monitor level of consciousness for 3-4 hours after expected peak of blood concentrations • Note that reversal of analgesia will occur
Drug interactions	• Larger doses required to reverse effects of buprenorphine, butorphanol, nalbuphine, or pentazocine
Opioid-tolerant	• Assess signs and symptoms of opioid withdrawal, may occur w-i 2 min – 2 hrs • Vomiting, restlessness, abdominal cramps, increased BP, temperature • Severity depends on naloxone dose, opioid involved & degree of dependence
Product-specific safety concerns	• Ventricular arrhythmias, hypertension, hypotension, nausea & vomiting • As naloxone plasma levels decrease, sedation from opioid overdose may increase

Summary

Prescription opioid abuse & overdose is a national epidemic. Clinicians must play a role in prevention

Understand how to assess patients for treatment w/ ER/LA opioids

Be familiar w/ how to initiate therapy, modify dose, & discontinue use of ER/LA opioids

Know how to manage ongoing therapy w/ ER/LA opioids

Know how to counsel patients & caregivers about the safe use of ER/LA opioids, including proper storage & disposal

Be familiar w/ general & product-specific drug information concerning ER/LA opioids

IMPORTANT!

Thank you for completing the post-activity assessment for this CO*RE session.

Your participation in this assessment allows CO*RE to report de-identified numbers to the FDA.

A strong show of engagement will demonstrate that clinicians have voluntarily taken this important education and are committed to patient safety and improved outcomes.

THANK YOU!

Thank you!

www.core-rems.org

ER/LA Opioids REMS Knowledge Test

1. Among the risk factors contained in screening tools for predicting aberrant drug-related behavior in patients receiving opioids for chronic pain are family and personal history of substance abuse, legal problems, history of preadolescent sexual abuse, psychological problems and

A. Age (12-15 years)
B. Age (16-45 years)
C. Age (46-75 years)
D. Age (≥ 76 years)
E. Risk is even across age

2. Which of the following is most important to consider when determining a starting dosage of an extended-release/long-acting opioid?

A. Calculation of equianalgesic dosage
B. Presence of cross-tolerance
C. Potential for adverse events
D. Assessment of individual needs
E. Starting dosage listed in the package insert

ER/LA Opioids REMS Knowledge Test

3. A 55-year-old man who is being treated for chronic low back pain after undergoing laminectomy comes for follow-up evaluation. A trial of oxycodone ER therapy is planned. Completion of which of the following is the most appropriate step before initiation of therapy?

A. Oswestry Disability Index
B. Roland Morris Disability Questionnaire
C. Patient-Prescriber Agreement
D. MRI of the lumbar spine
E. Routine blood tests

4. A 63-year-old woman with a history of spinal stenosis and peripheral neuropathy secondary to breast cancer treatment comes for evaluation because of increasingly severe back pain. She reports that the pain started two weeks ago after doing yard work. She underwent chemotherapy 12 years ago. Medications include an opioid. Which of the following is the most appropriate next step?

A. Assure the patient that the heightened sensitivity to pain is to be expected
B. Reevaluate the underlying medical condition
C. Refer the patient to physical therapy and administer a short-acting opioid as necessary
D. Increase extended-release/long-acting opioid therapy dosage for up to one month
E. Consider adding an adjuvant analgesic for neuropathic pain

ER/LA Opioids REMS Knowledge Test

5. Use of ER/LA opioids in pediatric patients <18 years of age deserves special consideration because

A. Safety & effectiveness of most ER/LA opioids has not been established in this population
B. Many children experience chronic pain conditions with indications for ER/LA opioids
C. Starting doses of opioids are reduced by one-third to one-half that in adults
D. Opioid risk screening tools have not been validated in this population
E. Many state laws require consultation with a pediatric pain specialist or pain clinic

6. A 20-year-old woman is brought to the emergency department because of the sudden onset of anxiety and confusion after taking her mother's tapentadol for a severe toothache earlier that evening. The patient has a history of atypical depression treated with selegiline, a MAO inhibitor. She appears agitated and flushed. Temperature is 37.9°C (100.3°F), pulse rate is 103/min, respiratory rate is 24/min, and blood pressure is 117/76 mm Hg. Vision examination shows ocular clonus. Physical examination shows mild hyperreflexia throughout but more noticeable on the lower extremities, and bilateral ankle clonus. Which of the following is the most likely diagnosis?

A. Anticholinergic delirium
B. Neuroleptic malignant syndrome
C. Serotonin syndrome
D. Sympathomimetic toxicity
E. Torsades de pointes

ER/LA Opioids REMS Knowledge Test

7. An inappropriate method to dispose of unused opioid medication is:

A. Return the medication to a pharmacy
B. DEA drug take-back event
C. Mix into cat litter before putting in the regular trash
D. Dispose of medication in the regular trash
E. Flush down the toilet

8. The most important reason a patient should be counseled to never break, cut, chew, or crush a ER/LA opioid tablet or cut or tear patches is because:

A. The medicine will expire
B. It is against the law
C. The dose will be less than prescribed
D. The patient may die

9. To avoid inadvertent overdose and death a patient should be counseled to avoid co-administration of an extended-release/long-acting opioid with which of the following?

A. Alcohol
B. Diphenhydramine
C. St John's wort
D. Aspirin
E. Methamphetamine

ER/LA Opioids REMS Knowledge Test

10. Which of the following extended-release/long-acting opioids is most likely to induce a peak respiratory depression that occurs later and persists longer than the analgesic effect?

A. Fentanyl transdermal patch
B. Hydromorphone ER
C. Methadone
D. Oxycodone CR
E. Tapentadol ER

11. When using an equianalgesic table to rotate opioids (other than methadone), an important step to account for incomplete cross-tolerance among mu opioids includes:

A. Initiatie the new opioid at the calculated equianalgesic dose
B. Increase the calculated equianalgesic dose by 10%-30%
C. Reduce calculated equianalgesic dose by 25-50%
D. Convert and total all opioids to oral morphine equivalents
E. Refer to the package insert for appropriate supplemental rescue dose

ER/LA Opioids REMS Knowledge Test

12. Which of the following most accurately reflects the potency of certain oral opioid analgesics?

A. Hydromorphone ER > oxycodone
B. Morphine > oxycodone
C. Morphone > hydromorphone ER
D. Oxymorphone ER > hydromorphone

13. A 35-year-old man with chronic pain is beginning a trial therapy with morphine extended release-naltrexone. Which of the following is the minimum interval for dose titration?

A. One day
B. Three days
C. Five days
D. Seven days
E. Nine days

14. A positive result of hydromorphone of a urine drug toxicology test for a patient on prescribed morphine can be interpreted as

A. Use of heroin in past month
B. Proof of supplemental hydromorphone
C. Presence of the oxycodone metabolite
D. Presence of the morphine metabolite
E. Presence of semisynthetic opioids