Challenges in Chronic Pain Management

Michael Paletta MD FAAHPM
VP Medical Affairs, Hospice of Michigan & Arbor Hospice
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Disclaimer & Disclosure

- No financial relationships relevant to this subject matter
- No corporate or commercial relationships to report
- Opinions are those of the speaker and not necessarily the policy of Hospice of Michigan / Arbor Hospice
Objectives

- Summarize the controversies over use of opioids for managing chronic pain
- Discuss physiologic and pharmacologic factors to consider when using analgesics in elderly persons
- Share recommendations and guidelines for approaching chronic pain problems in older adults
Pretest: True or False?

• Physical dependence, tolerance, and addiction are interchangeable terms
• Doctor shopping and pharmacy shopping are indicators of addiction
• Long acting opioids are more dangerous than immediate release agents
• Use of opioids in elderly persons with chronic pain is contraindicated
• ECF regulations make it nearly impossible to effectively manage pain
• CDC guidelines discourage the use of opioids in treating chronic pain
Chronic Pain
Controversies and Challenges

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The Bad Old Days

• Opium, laudanum, cocaine available in patent medicines as late as 1920
• Use of opioids as Rx analgesics occurred concurrent with restrictions on public access and criminalization of possession/use without Rx
• Advances in analgesia and opioid pharmacology accompanied improved anesthesia and surgical techniques
• Opioids were reserved for post-surgical and sometimes for late terminal pain; neither patients or doctors expected all pain to be relieved
Then things started to change…

- Continuing advances in pharmacology led to safer, purer opioids 1970s
- Hospice medicine pushed frontiers of pain management 1980s; new ideas on dependence and addiction, with research supporting efficacy and safety
- Mass marketing of pharmaceuticals improved access of strong analgesics
- Primary care physicians and others began to apply concepts developed in terminal patients to the management of chronic, nonterminal pain
Golden Age of Pain Control

- JCAHO in 2000 recognized the “right of individuals to appropriate assessment and management of pain,” and published guidelines and management standards for use in hospitals
- US Congress declared on 2001 a “Decade of Pain Control and Research”
- In HPM, industry leaders including Porter Story, Ira Byock, Russ Portnoy and others cited moral and ethical imperatives to use all available tools including opioids to diminish suffering in persons with advanced disease
The Bad Old Days Redux

• Now, over 30% of adult Americans report acute or chronic pain; in older adults the prevalence of chronic pain is > 40%.
• In 2014, pharmacies dispensed 245 million Rx for opioids; 65% of these were for short-term tx but > 10 million persons received long-term opioids
• 37% of 44,000 overdose deaths in 2013 were from pharmaceutical opioids (while heroin accounted for 19%)
• 2014 estimate of Americans addicted to opioids: 2.5 million
An Abnormal New Normal

• Opioid analgesics successfully relieve many types of acute pain, improve function and recovery, and relieve suffering in terminally ill persons

• Benefits of opioids in managing chronic non-terminal pain are less clear

• Diversion of physician opioid prescriptions to non-medical use, and subsequent addiction and overdose death is considered an epidemic by CDC

• Public policy, law enforcement, and public health officials are examining ways to ensure effective pain relief while limiting diversion & improper use
Meanwhile, in Michigan…

Advisory Committee on Pain and Symptom Mgmt (2014):
• 3 million MI residents sought treatment for pain (EPIC-MRA)
• 730,000 treated for diabetes (MDCH Diabetes Update)
• 165,000 admitted for heart disease (MDCH CVD Fact Sheet)
• 52,000 treated for invasive cancer (MDCH Cancer Brief)
• 2012 admissions: 5% listed cancer pain dx; 72% listed chronic pain dx
Meanwhile, in Michigan…

- Michigan now 18th of 50 states in opioid overdose deaths
- 2009-2012: 24% of persons dead from overdose had no Rx in MAPS
- Of 930 opioid overdose deaths, 88% did not involve heroin or cocaine
- Michigan Prescription Drug and Opioid Abuse Commission announced by Governor Snyder in June
- LARA to publish updated CME recommendations for MI providers
Michigan MAPS Program

- LARA administers the Michigan Automated Prescription System (MAPS)
- “Identify and prevent drug diversion at physician, pharmacy, patient levels”
- Patient-specific reports of Schedule 2-5 Rx history to uncover duplicate Rx, multiple prescribers, and pharmacy-shopping behaviors
- Access limited to health professionals and law enforcement agencies
- Physicians can register online at BPL-MAPS@Michigan.gov
Chronic Pain
Pharmacology and Physiology

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Receptors

- Opioids exert analgesic effects by binding to *mu*-opioid receptors densely concentrated in brain regions that regulate pain perception.
- *Mu* receptors are also found in brainstem areas (respiratory depression) and small intestine (opioid-induced constipation).
- Opioids also bind to *kappa* and *delta*-opioid receptors in other tissues, and to other neurotransmitter receptors and transporters (euphoria).
- Pharmacokinetics and bioavailability of different opioids vary widely, affecting potency, onset, and duration of effects.
Tolerance & Dependence

- **Tolerance** refers to the decrease in opioid potency with repeated administration; increasing doses are needed to achieve the same effect.
- Tolerance to analgesia develops more quickly than tolerance to respiratory depression; raising doses to control pain increases risk of overdose.
- **Dependence** refers to the development of withdrawal symptoms upon abrupt discontinuation of opioids after a significant period of use.
- Gradual dose reduction allows down-regulation of receptor sensitivity and prevents withdrawal symptoms.
Addiction (DSM-V)

- Pronounced craving for the drug
- Obsessing thinking about acquiring and using the drug
- Erosion of inhibitory control over efforts to reduce or cease drug use
- Compulsive drug taking despite obvious harmful effects
- Studies suggest addiction has heritability rates similar to diabetes, asthma, and hypertension
Pseudo-addiction

- Behavior seen in persons whose pain is being inadequately treated
- Common features are borrowing Rx from others, self-medicating with alcohol or benzodiazepines, or using multiple doctors or pharmacies
- Interpreted by inexperienced physicians as ‘drug-seeking’
- Unlike truly addicted persons, these behaviors CEASE IMMEDIATELY once adequate analgesia is provided and relief is achieved
Physiology of the Elderly

• **Frailty** now recognized as a distinct biologic process, independent of common disease states yet possibly initiated or worsened by disease.

• Age-related molecular and disease states result in a syndrome of weakness, weight loss, sarcopenia, fatigue, and susceptibility to poor outcomes. Falls, disability, dependency and death are the unfortunate common endpoints.

• Neuroendocrine dysregulation, inflammatory cytokines, and diminished immunologic reserves are more compelling than hepatic/renal issues per se
Pharmacology of the Elderly

- Age and disease-related decline in renal and hepatic function affect drug metabolism, clearance of toxic metabolites, and serum level consistency.
- **Bioavailability** of numerous drugs is affected by loss of fat & sarcopenia.
- **Polypharmacy** in many older adults increases risk for ADRs and drug-drug interactions. Removing Rx and simplifying drug regimens is often helpful.
- **Delirium** can have many causes; causes can elude clinicians when frail persons are on numerous medications and supplements.
Peculiar to the Aged

- Older persons may minimize pain reporting out of fear--fear of becoming addicted, fear of abandonment, fear that their disease is progressing.
- Cognitive impairment may hamper use of some pain assessment scales, and undermine even a simple analgesic regimen.
- Older persons may be ashamed of and hide their use of alcohol or cannabis.
- They may associate increased pain with impending loss of independence, and eventual NH placement.
Depression + Pain

• Pain experiences have psychological and interpretive components in all ages
• Anxiety and depression commonly accompany chronic pain in older adults
• When psychological problems coexist with pain, psych interventions alone are not likely to be successful; as is true with analgesics alone
• Palliative care teams use a multidisciplinary approach, especially in older adults with complex pain issues
• Some antidepressants, like TCA, are effective adjuvant co-analgesics
Peculiar to the Facility

• Many misperceptions about ECF regulations complicate pain management. Residents in severe pain are entitled to a POC including opioids if needed.
• Most regulatory limits concern chain of custody and access to C-II agents, and to the mixing of analgesics with anxiolytics and neuroleptics
• Liability rarely attaches to a well documented rationale of pain control
• Group homes, AFCs, and AL facilities are more challenging due to limits of caregiver training and infrequency of surveillance
Pharmacokinetics-based Dosing

- Advantages of short-acting (IR) opioids: rapid onset of action (relief), and rapid dissolution of effect once dose is held
- Disadvantages: higher likelihood of side effects with IR preparations, and need for multiple daily doses to achieve relief
- Advantages of long acting (ER) opioids: need fewer daily doses, and lower risk of typical side effects
- Disadvantages: accidental / improper high dose effects last many hours
WHO took away my ladder?

- The World Health Organization analgesic ladder remains a valid strategy
- Severity of pain determines which is the first step of the ladder
- Maximizes use of APAP and NSAID before escalating to opioids
- Starts with weaker opioids, and then combination-therapy agents
- Strong opioids are reserved for those with severe or unresponsive pain
- Mechanisms for GDR and ‘stepping down’ often overlooked or ignored
Simple, Safe, Effective...Underutilized

- Acetaminophen is a potent analgesic—almost never used properly. Scheduled doses give better relief and require fewer mg than PRN.

- NSAIDs (in properly selected persons) are also effective when **consistent serum levels** are maintained with scheduled dosing.

- Non-aspirin salicylates (Disalcid, Trilisate) can be effective in many persons; these have been replaced in many formularies by COX-2 agents.

- Co-analgesic adjuvants (steroids, anticonvulsants) can potentiate pain Rx.
WWPDD?

- A relevant patient **history** including onset, duration, quality, severity, ameliorating and exacerbating effects of the pain
- Physical **exam** confirming stigmata of pain effects and functional ability
- **Medication review**, including OTCs, and previous efforts at pain control
- **Goals of care** discussion, including their caregivers where appropriate
- Consider role of **non-Rx** therapies (PT, OT, massage, etc.)
- Consider role of **co-analgesics** (anticonvulsants, NSAIDs, anxiolytics)
WWPDD?  Cont’d

• 1. Use a short-acting opioid, LOW dose, interval based on kinetics
• 2. Determine the dose of MME* needed to provide comfort over 24 hours
• 3. Convert those MME to a long-acting agent
• 4. Keep the low-dose short-acting agent available for ‘rescue’ doses (BTP)
• 5. Properly dosed persons have satisfactory relief, few or no side effects from the ER agent, and rarely seem to need the IR rescue dose
PRN Dosing: Patient’s Experience
Long Acting / Extended Release

Drug Serum Level

Dose

Pain

Time
Scheduled Doses with LA/ER
Rookie Mistakes

• Surrendering the plan of care to the patient / caregiver
• Treating chronic pain with only PRN dosing; using wrong intervals
• Prescribing opioids without following the medical model (as in WWPDD?)
• Fail to maximize OTC analgesics and non-Rx therapy before starting opioids
• For PCPs: assuming that the hospital doctors’ regimen will be valid as OP
• Failing to define goals for pain regimen, including when to reverse therapy
Evidence Based Guidelines

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American Pain Society

• Comprehensive review of the available literature (as of 2009), stratified by the strength and quality of the methodology and design.

• Categorized by ‘Key Questions” about what the literature actually supports with strong evidence and high quality data.

• Not useful to clinicians as a ‘cook-book’ for case management, rather, a thorough summary of the limits of what can be called evidence-based due to quality and methodologic limits of chronic pain research studies.
Evidence is incomplete or missing on:

- Persons with chronic pain who are likely to benefit from opioid therapy
- Those who are at risk for experiencing adverse opioid events
- Individuals at risk for aberrant drug-related behaviors
APS: “No reliable data...”

- On benefits or potential harms of planned opioid rotation in chronic pain
- On benefits or harms related to opioid contracts or treatment agreements
- On impact of urine drug screening on patient outcomes
- Studies of the effects of institutional prescribing policies tend to focus on # of Rx instead of on patient outcomes
- To date there have been no full cost-effectiveness analyses of opioids for chronic non-cancer pain.
Centers for Disease Control, 2016

- Published *Guideline for Prescribing Opioids for Chronic Pain*, March 2016, edited by Deborah Dowell MD, Tamara Haegerich PhD, Roger Chou MD
- “Recommendations for primary care physicians who are prescribing opioids for chronic pain outside of active cancer treatment, palliative care, and end of life care.”
- Twelve recommendations for approaching chronic pain management. Not a cook-book either-- but more useful as a guide to clinicians.
1. Non-pharmacologic therapy and non-opioid therapy are preferred for chronic pain. Clinicians should use opioids only if the expected benefits for both pain and function are believed to outweigh risks to the patient.

2. Before starting opioid therapy, clinicians should establish treatment goals with all patients, and consider how and under what circumstances opioid therapy will be discontinued.
3. Before starting, and periodically during opioid therapy, clinicians should discuss with patients known risks and realistic benefits of opioids, and define patient and clinician responsibilities, respectively.

4. When initiating opioids for chronic pain, clinicians should prescribe immediate-release opioids instead of long-acting / extended release agents.

5. When opioids are started, clinicians should prescribe the lowest effective dose, use caution when using >50 MME/day, and avoid using >90 MME
6. When using opioids for acute pain, prescribe the lowest effective dose of immediate-release opioid, and give no greater quantity than that needed for the expected duration of distressing pain (3 days or less preferred).

7. Clinicians should evaluate benefits and harms with patients within 1 to 4 weeks of starting opioids, and whenever escalating doses are required. Ongoing therapy should be re-assessed every 3 months. If benefits do not outweigh harms, clinicians must maximize other therapies and taper the opioid toward eventual discontinuation.
8. During ongoing therapy, clinicians should evaluate risk factors for opioid related harms. Care plans should incorporate strategies to mitigate risk, including offering naloxone when factors that increase risk for overdose (such as history of prior overdose, or concurrent use of benzodiazepines) are present.

9. Clinicians should review the patient’s history of controlled substance Rx using the state monitoring program data (where available) at initiation and every 3 months thereafter.
• 10. When prescribing opioids for chronic pain, clinicians should use urine drug testing before initiation and at least annually to exclude illicit drug use.

• 11. Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible.

• 12. Clinicians should offer evidence-based treatment for patients who develop opioid-use disorders (such as medication-assisted therapy with buprenorphine or methadone).
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Questions / Comments

Michael Paletta MD FAAHPM
Hospice of Michigan / Arbor Hospice
mpaletta@hom.org
No Facebook. No Twitter. Get over it.
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