

Pearls and Pitfalls in Pharmacologic Management of Pain In Older Persons

Bruce A. Ferrell, MD

INTRODUCTION

Pain is a common problem. It is the most dreaded symptom and an important source of suffering for most elderly persons. Epidemiologic studies estimate that 25-50% of community dwelling elderly persons have important pain problems. As many as one in five older persons take analgesic medications on a regular basis. Of these, almost two-thirds take prescription analgesics. Pain is also common in nursing homes. As many as 70% of nursing home residents suffer pain that is often under-recognized and under-treated.

Pain assessment and management are important issues of quality of care and quality of life for older patients. Poorly relieved pain is an important cause of functional impairment, decreased ambulation, depression, decreased socialization, sleep disturbance, slow rehabilitation and increased health care utilization and costs. Older persons with pain, especially those near the end of life, rely heavily on family and informal caregivers. For these patients and their caregivers, pain can be a metaphor for death, resulting in substantial suffering.

Most pain can be relieved. For those near the end of life, physicians have a moral and ethical obligation to provide comfort and dignity during their remaining lives.

OBJECTIVES:

Slide #1



The objectives of this module are:

1. To understand principles of pain management in older persons. Elderly persons often vulnerable to both under-recognition of pain and under-treatment.
2. To be able to prescribe analgesic drugs appropriately for older persons. Not all analgesic strategies may be appropriate for all older persons. Because of altered goals of care, existing barriers to some care strategies, and a higher risk-benefit ratio for many drugs in older persons, it is important to understand these issues in this population.
3. To be able to apply appropriate non-drug strategies for older persons. Many non-drug strategies are quite effective. In this setting, patient and caregiver education cannot be over emphasized.

The approach to pain assessment and management requires a different approach compared to younger persons. The elderly population can be characterized as a very heterogeneous population. It varies remarkably in persons who differ physiologically, the way

they react to medication and socio-economically. Some individuals may seem to be well preserved physiologically until a very old age. Some individuals are quite frail, with multiple medical problems and severe disabilities, though comparably young in chronological age.

The burden of disease and disability increase with age. This fact complicates many interventions and treatment of underlying disease. Eventually many older patients develop attenuated goals of treatment and realistic expectation of cure becomes remote. Heroic, high risk, and often technical solutions that are applied routinely in younger populations, are often futile, resulting in additional needless suffering in patients near the end of life. In this setting, it is particularly important to distinguish aggressive futile treatment of underlying disease, with the aggressive treatment of pain and other symptoms that is not only justified but obliged.

Elderly patients often exhibit greater risk-benefit ratios for many treatment strategies. Elderly have:

- Higher side-effects for most drugs
- More frequent complications from diagnostic tests
- Higher co-morbidities (multiple medical problems)
- More drug-disease interactions
- Take more medications
- Have more drug-drug interactions

Slide #2



Understanding pain in terms of pathophysiology may help clinicians choose therapy more effectively. Treatment strategies targeted specifically to underlying pain mechanisms are likely to be more effective. Most pain can be classified into four main types.

- Nociceptive pain is probably the most common mechanism by which pain is produced. It usually arises from stimulation of pain receptors. Nociceptive pain may be visceral or somatic and can come from tissue inflammation, mechanical deformation, ongoing injury or tissue destruction. Examples include arthritis, trauma, ischemia, tumors, and burns. Nociceptive pain usually responds well to traditional analgesic medication and relief of underlying cause.
- Neuropathic pain results from a pathophysiological process that involves peripheral nerves or central pain pathways and processing. Examples include peripheral neuropathies, nerve trauma (e.g., post amputation, phantom limb), and post-stroke thalamic pain syndromes. These pain problems do not respond as favorably to traditional

approaches, however they have been observed to respond occasionally to unconventional therapies such as tricyclic anti-depressants, anti-convulsants, and anti-arrhythmic drugs.

- Mixed or unspecified pain is unusual and regarded as having mixed or unknown mechanisms. Treatment is even less predictable and may require various trials of combined approaches. Examples include some headaches and some vasculopathic syndromes.
- Psychologically mediated pain is a rare disorder when psychological factors are judged to have the only role in pain onset, severity and exacerbation. Examples may include conversion reactions or some somatoform disorders. Patients with these disorders may benefit from specific psychiatric interventions, but traditional medical interventions for analgesia are not indicated.

Pearl: Most experts believe that age related changes in pain sensation are subtle and probably not clinically significant.

Slide #3 & #4

Pharmacologic Changes with Aging	Pharmacologic Changes with Aging
<ul style="list-style-type: none"> • Increased fat/lean body ratio • GI absorption unchanged • Renal clearance decreases predictably 	<ul style="list-style-type: none"> • Hepatic metabolism changes slightly <ul style="list-style-type: none"> – Conjugation unchanged – Cytochrome oxidation variable • Common disorders effect pharmacology <ul style="list-style-type: none"> – Hypoalbuminemia – Atrophic gastritis (H. Piloni) – Sensitivity to anticholinergic effects

Elderly persons often exhibit significant changes in pharmacologic response to many drugs.

- Increased fat/lean body ratio. Most older people gain weight up until the last years of life. During the last years of life they may lose substantial muscle mass along with a loss of body fat. The result is a larger fat compartment that may alter volume of distribution for many lipid soluble drugs. Lipid soluble drugs such as benzodiazepines, methadone, and others may have a prolonged half-life in many older persons
- Absorption is usually unchanged with aging. Unless accompanied by disease states such as atrophic gastritis, surgical alteration of the bowel or other more unusual diseases, absorption remains relatively unaffected by aging alone.
- It is well known that renal clearance decreases predictably with aging. This can have profound effects on excretion of drugs that rely on renal clearance of the drugs or their active metabolites. Meperidine (Demerol) has an active metabolite that is cleared by the kidney, making it a problematic drug for most elderly persons and those with renal failure.
- Normal aging has been shown to be associated with altered hepatic metabolism. Cytochrome oxidation varies widely in older populations and can have an effect on those

drugs metabolized by oxidation. On the other hand, conjugation is largely unchanged with aging. Thus, drugs like morphine that is largely eliminated by conjugation are usually tolerated reasonably well. There have been observations of decreased hepatic arterial blood flow with aging; however, portal circulation does not seem to be affected as much. Thus first pass kinetics remain largely unchanged in most elderly patients.

- Other common diseases and disorders often affect analgesic drugs. Hypoalbuminemia may affect those drugs that are highly protein bound, resulting in a lower volume of distribution and higher swings in serum levels. Atrophic gastritis and the presence of H. Piloni can affect gastric pH and alter absorption of some drugs. Finally, elderly persons are highly sensitive to anticholinergic effects of many drugs. Anti-histamines, major tranquilizers, anti-emetics all have high rates of anticholinergic effects including constipation, confusion and even movement disorders.

Pitfall: Lipid soluble drugs such as benzodiazepines, methadone and other psychotropic drugs often have prolonged half-lives in elderly persons due to the increased fat reservoir as a result of the fat/lean body weight changes that occur with normal with aging.

Slide #5



Assessment is the most important aspect of pain management. The importance of accurate assessment cannot be over-stated. Moreover, the successful management of pain in this population requires continuous re-assessment for optimum pain relief, early detection and management of side effects. Initial pain assessment is necessary to develop a rational approach to initial pain strategies and timely re-evaluation must be provided to identify next-steps in pain management strategies.

Most patients (even those with mild to moderate cognitive impairment) can report pain accurately and reliably. As in all pain assessment, a multidimensional and multidisciplinary evaluation is often indicated. There are no reliable biological markers of pain. The most accurate and reliable marker of pain remains the patients self-report. A variety of scales have been devised to estimate pain intensity including 0-10 verbal scales, graphic picture scales such as “happy face” scales and “pain thermometers”. Because of common disabilities among the elderly (e.g. hearing impairment, visual impairment, decreased manual dexterity) a single scale may not be appropriate for all patients. It is important to use a scale that is appropriate given the disabilities of individual patients.

Slide #6

Tips for Assessment of Pain in Those with Cognitive Impairment

- Most patients with mild to moderate cognitive impairment can report pain reliably
- Frame questions in the “here and now”
- Use questions answered by “yes or no”
- Use repetition and validating questions
- Use communication aids (glasses, hearing aids, lighting, positioning)
- Give time for responses

Assessment in patients with significant cognitive impairment may be more difficult. This slide summarizes some tips for more accurate assessment of pain in those with cognitive impairment. It is often helpful to frame the questions in the “here and now”. For example “Are you having pain right now?” or “Does it hurt right here?” Asking for reports that rely on the patient’s memory or complex descriptions may be difficult to illicit and less reliable in those with cognitive impairment. Validating questions may help. For example one might ask, “Do you have pain all the time?” and later ask, “Does your pain ever go away?” or “Do you have times when you don’t have pain?” These questions help validate pain reports in many patients. Of course, as in all geriatric assessment, it helps to make sure patients are comfortable, sitting up, have good ambient light, and use their glasses and hearing aids during the evaluation; and that plenty of time is allowed for patients that have substantial psychomotor retardation.

Pearl: Most patients with dementia or delirium can report pain reliably at the moment.

Slide # 7

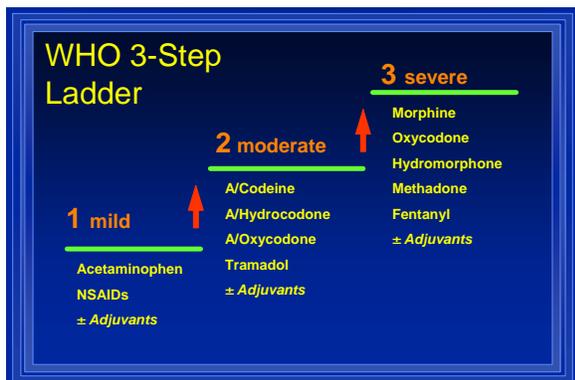
Pain Behaviors in Cognitively Impaired Patients

● Facial grimace	● Withdrawal
● Body posture	– Sleeping
● Guarding	– Decreased response
– Physical exam	● Vocalizations
– Daily activities	– Moaning
● Agitation	– Groaning
– Delirium	– Screaming

For patients with profound cognitive impairment, it is important to ask family members and other caregivers about complaints and behaviors that may provide clues. A variety of behaviors have been associated with pain. Some patients when in pain become agitated, combative and highly verbal, while others become withdrawn or show very subtle behavior changes. Because of wide variations in individual behaviors, a behavioral pain scale has not

been devised that is valid or reliable for most patients. Nonetheless, individual behaviors observed by persons who know an individual patient's usual or typical behavior may be very helpful in pain assessment. Behaviors such as guarding during examination or during routine activities, body posture, or a new onset of delirium may indicate the presence of pain.

Slide #8



The World Health Organization step-wise approach provides a reasonable model for pain management for most older patients. Inherent in this model is the accurate assessment of pain followed by appropriate choice of analgesic medications. Safe, albeit less potent analgesics are recommended for patients with mild pain. More potent, and more dangerous drugs reserved for severe and more recalcitrant pain. Important points include:

- If a patient presents with severe pain, they should be started on a potent analgesic such as morphine. There is no reason to delay in an effort to prove failure of milder analgesics in a patient who presents with obviously severe pain.
- Adjuvant analgesic medications, drugs often used for neuropathic pain, may appropriate at any level in addition to other more traditional analgesic drugs. These drugs should be started early for patients with neuropathic pain.

Pearl: *More than 80% of pain can be manage using the WHO approach.*

Slide #9



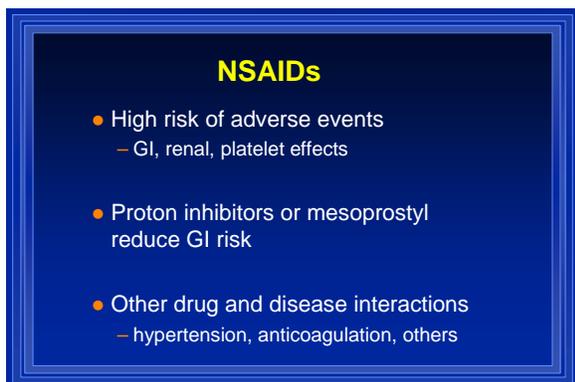
Acetaminophen is safe and effective for most elderly patients and is the drug of choice for most patients with mild to moderate pain of musculo-skeletal origin. A common mistake, is not giving enough. The usual dose is 650 – 1000 mg every 6 hours or 4 times a day. This dose is safe and effective for many elderly patients, including those who have a limited alcohol intake. Patients who are heavy drinkers of alcohol or have hepatic insufficiency or abnormal liver enzymes should be reduced to half the usual dose. Concerns about renal toxicity with long-term ingestion are probably overstated. In the final analysis, acetaminophen remains as effective and far safer available NSAIDs or other analgesic medications for most patients with mild to moderate pain.

Patients should be cautioned about acetaminophen as an added ingredient in many over the counter preparation and prescription combinations.

Pitfall: The maximum dose of acetaminophen should be reduced by 50-75% in patients with hepatic insufficiency or alcohol abuse.

Pitfall: Many older persons take over the counter drugs that contain acetaminophen without telling their physician. Care must be taken to avoid acetaminophen toxicity.

Slide #10



NSAIDs

- High risk of adverse events
 - GI, renal, platelet effects
- Proton inhibitors or mesoprostyl reduce GI risk
- Other drug and disease interactions
 - hypertension, anticoagulation, others

Non-steroidal anti-inflammatory drugs are effective for mild to moderate pain in older persons. Of concern is a high risk of adverse events associated with these medications. NSAIDs are associated with GI bleeding and renal insufficiency. Some cause platelet dysfunction, and other drug-drug and drug-disease interactions. Interactions have been described patients taking ACE inhibitors and diuretics resulting in hypertension and increased risk of renal insufficiency. For younger and healthy individuals the FDA has recognized that 3-4% of persons taking NSAIDs may have a serious GI event including GI bleeding requiring a transfusion, ulceration with perforation or obstruction. For elderly persons, those on steroid medications, or those with multi-system failure, the risk may be more that twice that high.

The concomitant use of proton pump inhibitors or mesoprostyl may reduce the added risk of GI complications by half. Because many older persons may not tolerate mesoprostyl, the use of a proton pump inhibitor is justified for most patients taking NSAIDs.

The COX-2 NSAIDs may have the potential to reduce the risk of GI toxicity. These new drugs are as effective as older NSAIDs and often require only once a day administration. However, they appear to have similar effects on the kidney and may have similar other drug-drug and drug-disease interactions. Effects on platelet function are more controversial and patients who require aspirin prophylaxis for cardiovascular events should continue to take aspirin daily. Although studies are promising, they remain controversial because of the high cost of therapy.

Pearl: The combination of opioid and NSAID are particularly helpful in boney metastasis such as breast cancer.

Slide #11



Opioid drugs are effective for elderly patients with most kinds of pain. Opioids are probably underutilized in older persons, and may be safer than NSAIDs or some other drug strategies for many older persons.

It is appropriate to use short acting opioids for intermittent or episodic pain. Long acting drugs should be used for those with continuous pain, or those with frequent (several times a day) pain.

Orally active, short acting drugs, such as hydrocodone (Vidodin), oxycodone (Percocet), morphine (Roxanol), hydromorphone (Dilaudid), etc behave very similarly. They reach peak pain relief in 60 to 90 minutes. They are eliminated from the body in a very predictable way by conjugation in the liver with metabolites that have little activity, and excreted in the urine with a half-life of 3-4 hours. They reach steady state after 4-5 half-lives, usually attainable in 24-36 hrs.

Morphine does have a partially active metabolite (morphine-6-glucuronide) that may accumulate in renal failure or anuria. These patients (often near the end of life) should be dosed as needed to avoid accumulation of the metabolite.

Morphine and oxycodone are now available orally in a wax matrix slow release formula that delays absorption and provides for continuous analgesia. The half-life of these preparations are 8, 12, or 24 hrs depending on the product. These preparations should not be chewed or crushed, causing immediate release medication. Extended released granules in capsules are available that can be opened and pushed through a g-tube or sprinkled on other food. Using extended release preparations significantly lengthens titration and time to reach steady state. Doses should not be adjusted any more frequently than every 2-4 days. In most cases, it is best

to titrate quickly using short acting medication to reach pain relief and steady states quickly, then switch to longer acting preparations for long term pain control.

Pearl: Morphine is the strong opioid of choice for most elderly persons with severe pain because it is the oldest, best understood and most predictable.

Pearl Opioid addiction a behavioral problem that is extremely rare in elderly persons. Fear of addiction is a significant barrier for health care providers and patients resulting in needless suffering.

Pearl: Pseudo addiction is a term applied to behaviors such as hoarding medications, escalating doses and requests for early refills by legitimate patients. Usually escalation of doses and appropriate control of pain reduces this behavior. Misunderstanding of this behavior can lead to inappropriate labeling of patients as addicts, eroding patient relationships and compromising care.

Slide #12



The Strategy for Severe Pain

- Use short acting drug for fast titration
 - IV morphine or dilaudid drip
- Switch to oral drugs when stable
 - Use sustained release preparations
 - Use short acting preparations for breakthrough
 - Increase long acting when >4 doses of breakthrough meds used in 24 hr.
- Avoid IM and SQ

Use an aggressive strategy to provide comfort to patients with severe pain or pain that is out of control. These patients may include those with trauma or advanced cancer pain. Start with potent short acting medications that can be titrated rapidly. Avoid IM and subcutaneous routes because they have more unpredictable absorption and risk for adverse events. Then switch to oral medications. Remember to provide short acting drugs along with sustained release preparations for breakthrough pain. The key here is titration with frequent assessment and re-assessment for pain control and to monitor for side effects. The principle here is not unlike the use of acute anticoagulation requiring titration from heparin to Coumadin.

Slide #13

Trans-derm Fentanyl

- Long half-life (72 hr) requires slow titration
 - requires attention to break-through meds
- Drug reservoir is in the skin, not the patch
 - patch removal may not halt absorption
- Incomplete cross-tolerance with other opioids
- Effective dose may vary between individuals

Transderm fentanyl is a product that can be helpful in patients unable to swallow pills, but it can also be problematic in elderly persons. This product delivers medication to the skin, which then becomes the reservoir for the drug. Studies suggest the function of the skin as a reservoir for this drug is relatively stable despite large variations in subcutaneous fat and atrophic skin found in many frail elderly people. The long half-life may be longer than 72 hours in many older persons, resulting in long delays for titration and dose escalation. Also there has been noted to be incomplete cross-tolerance to fentanyl often resulting in difficulty predicting the appropriate equianalgesic dosing. In the final analysis, transderm fentanyl should not be initiated in opioid naive patients and should probably be reserved for those unable to take safer and more predictable oral sustained release preparations.

Pitfall: The peak effect of transdermal fentanyl may take as long as 24 hours.

Pitfall: Early removal of a transdermal fentanyl patch (less than 72hrs) may not change the expected half-life of 72 hours or longer.

Pitfall: Transdermal fentanyl patches should not be cut, broken or ingested resulting in immediate release fentanyl.

Slide #14

Methadone

- Propensity for drug accumulation
 - Lipid soluble
 - Oxidation by cytochrome system
- Short analgesic half life (8-12 hr)
- Long serum half life (18 hr)

Methadone is a potent opiate receptor agonist whose use for pain control has waxed and waned. Methadone is often difficult to titrate because of its long half-life (18-24 hours or

sometimes longer in elderly persons) and propensity for drug accumulation in older patients. It has no active metabolites; it is highly lipid soluble and metabolized by cytochrome oxidation in the liver. Unfortunately, the drug's analgesic half-life is often much shorter, requiring q12 or q8 hour dosing for optimum analgesia. This property is onerous in older patients with altered distribution and modified hepatic metabolism. Methadone should be prescribed by clinicians who have considerable expertise with its use or in closely monitored settings.

Pitfall: Methadone is metabolized by the cytochrome oxidase enzymes in the liver, the activity of which may decline variably aging and result in unpredictable pharmacokinetics in older persons.

Slide #15



Several opioid analgesic drugs are often problematic in older persons and should be relegated to second line therapy. More predictable analgesia and fewer side effects are usually provided by other analgesic choices.

- Meperidine (Demerol) should be avoided because of its active metabolite that tends to accumulate in persons with renal insufficiency. This metabolite causes CNS excitement, delirium and seizures.
- Mixed agonist-antagonist opioid drugs have been developed and marketed with the hope of reducing unwanted side effects of narcosis and addictive potential. Unfortunately the prediction of equipotent dosages for these drugs is often problematic and they are often associated with delirium in the elderly. Some of these drugs can reverse the effects of pure opioid antagonists and cause immediate withdrawal symptoms.

Slide #16

New Opioids



- Avinza
 - Sustained release morphine
 - 24 hr dosing
 - Wax matrix, immediate release and sustained release spherules
 - Can be sprinkled on food or pushed through G-Tubes
 - Should not be crushed or chewed
- Kadian
 - Wax matrix, sustained release spherules

Two new drugs you should be aware of include Avinza and Kadian. Both are sustained release morphine preparations wax matrix spherules. The advantage of these drugs is an 18 to 20 hour half-life making them a once a day dosage. Avinza has both immediate release and sustained release spherules and may have some advantage of a faster onset of action and more steady serum level over 24 hrs.

Slide #17 & 18

Adjuvant Analgesic Drugs

- Anticonvulsants
- Antidepressants
- Antiarrhythmics
- Muscle relaxants
- Steroids

Adjuvant Analgesic Drugs

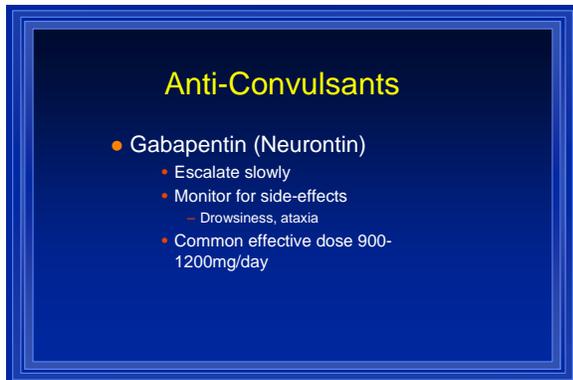
- Work best for neuropathic pain
- Only partially effective
- Often limited by significant side effects in elderly persons

The so-called "adjuvant" analgesic drugs are medications technically not classified as analgesics, but have been found to be helpful in certain recalcitrant pain syndromes. The term adjuvant is a misnomer because these non-opioid drugs may be the primary pain-relieving pharmacologic intervention in some cases. Some anticonvulsant drugs, anti-depressant drugs and some anti-arrhythmic drugs may be found useful in neuropathic pain problems. The mechanisms of action may be related to activity of sodium channels, or modulation of serotonin and nor-epinephrine neurotransmitters. The activity of these medications on non-neuropathic pain is less predictable and usually less effective. Most of these drugs are not FDA approved specifically for pain management. Muscle relaxants may be helpful in patients with severe muscle spasm, spasticity or muscle cramps. Steroids may be helpful in many conditions where inflammation, induration, or local swelling may be contributing to pain mechanisms.

These drugs work best when used in addition to other pain management strategies and are rarely completely successful as single agents. Most have high side effects in elderly patients that may limit dose or duration of therapy. The best advice is to use those with the lowest known side-effect profiles and then anticipate and monitor carefully for side effects.

Pearl: Adrenal cortical steroids may be helpful in reducing pain associated with acute inflammatory events such as tumor infiltration of nerves or in bone metastasis.

Slide #19



Of the anticonvulsant drugs, gabapentin (Neurontin) is approved by the FDA for the management of post-herpetic neuralgia. Also, studies suggest at least partial effectiveness for a variety of other neuropathic pain syndromes including diabetic neuropathy. Studies suggest that a dose of 1200-3600 mg per day may be effective in a significant number of patients. In older patients, larger doses are often poorly tolerated due to somnolence and other side effects. Of particular concern is the occurrence of ataxia that may increase the risk of falls. Fortunately, many older patients may respond to lower doses. One caveat is to start with low dose and escalate doses slowly to prevent many of the side effects.

Slide #20



Anti-depressants and some anti-arrhythmic medications may also be useful for neuropathic pain. In fact there is a large body of early literature on the effects of tricyclic antidepressants (particularly amitriptyline) on a variety of neuropathic conditions.

Unfortunately, amitriptyline has a high side-effect profile and is no longer favored in most elderly patients. Side effects of tricyclic anti-depressants in elderly patients include somnolence and significant anticholinergic effects that are often poorly tolerated in older patients. Studies suggest that desipramine may be as effective as amitriptyline with fewer problems. Of special note is the fact that the newer serotonin re-uptake inhibitor antidepressants are not effective for pain management. Although they may be very helpful in management of concomitant depression, they have little or no effect on pain mechanisms.

Slide #21



Non-pharmacologic approaches used alone or in combination with appropriate pharmacologic strategies should be an integral part of pain management for most patients. Non-drug strategies include a broad range of treatments and physical modalities. Education programs, behavioral therapy, exercise, acupuncture, TENS, chiropractic, relaxation and massage techniques are each helpful in some patients. Many patients use these approaches, whether their physician is aware of not. Although many of these interventions provide short-term relief, few have been shown to have broad success in randomized controlled trials. None-the-less, these interventions used in combination with appropriate drug regimens often improve overall pain management and enhance therapeutic effects that may reduce the escalation of drug doses to toxic levels.

Pearl: Cognitive-behavioral therapy that enhances positive coping strategies and reduce maladaptive behavior have been shown to be highly successful in randomized controlled trials.

Slide #22

Anesthetic, Surgical, and High-tech Interventions

- Nerve blockaid
- Analgesic pumps
 - external
 - implantable
- Spinal stimulation
- Cordotomy

While common drug and non-drug approaches are the mainstay of pain management, health care providers may need to consider other high tech strategies for patients with recalcitrant pain. High-tech pain management often requires substantial expertise for specific procedures, special equipment, or surgical and anesthetic techniques. Primary care providers may need to refer patients to those with special expertise for these procedures.

Trigger point injections have been used extensively for the treatment of myofascial pain syndromes. Local injection of trigger points followed by stretching and reconditioning of muscles often with physical therapy, pain often subsides.

Continuous opioid infusions are highly effective for providing rapid titration and steady state analgesic drug levels. Continuous infusions, maintained by continuous pump via intravenous, subcutaneous, or intrathecal or epidural routes have become the method of choice for many patients with severe recalcitrant pain. These methods are safe and effective for many frail elderly persons compared to intermittent injections. Whether these methods are appropriate for non-cancer related pain remains more controversial. These techniques are very expensive but they are often reimbursed by many party payers. In general, these techniques should be used only when the oral route of administration is no longer viable.

Pearl: Focused radiation therapy for local pain relief should be considered for cancer related pain.

Slide #23

Family and Caregiver Education

- Diagnosis, prognosis, natural history of disease
- Assessment strategy
- Analgesic strategy
- Side-effect management
- Cognitive-behavioral skills

Most older patients are dependent on family and other informal caregivers for their activities of daily living and many health care decisions. The importance of patient and

caregiver education cannot be overstated. Studies have shown that patient education programs alone significantly improve overall pain management. Such education programs commonly include information about the nature of pain, how to use pain assessment instruments, medications, and non-pharmacologic strategies. Whether the program is conducted one-on-one or organized in groups, it should be tailored to patients' needs and level of understanding. The use of suitable written materials and appropriate methods of reinforcement are important for the success of the programs.

Slide #24 & Slide #25

The image shows two blue-bordered boxes with white text. The left box is titled 'Barriers to Pain Management in Older Persons' and lists three main categories: Assessment, Treatment, and Institutional or Systems Problems. The right box is titled 'Over-Coming Barriers' and lists five strategies: Vigilant assessment, Establish clear goals of care, Simplify drug regimens, Use safe, predictable drugs and administration strategies, and Use multi-modal, multi-disciplinary approaches.

Barriers to Pain Management in Older Persons	Over-Coming Barriers
<ul style="list-style-type: none"> ● Assessment ● Treatment ● Institutional or Systems Problems <ul style="list-style-type: none"> – Regulation – Logistics - Access – Financial 	<ul style="list-style-type: none"> ● Vigilant assessment ● Establish clear goals of care ● Simplify drug regimens ● Use safe, predictable drugs and administration strategies ● Use multi-modal, multi-disciplinary approaches

Health care providers often encounter substantial barriers to providing appropriate pain management for many older persons. We have identified some of the common barriers such as problems in assessment and common problems in treatment. Clinicians should be aware of common institutional barriers to pain management such as need for duplicate prescriptions, nursing home limitations, and home care limitations. Overcoming these common barriers can result in safe and successful relief of most pain and much needless suffering. Clearly, clinicians need to become skilled at accurate and reliable assessment of pain in older individuals. Making plans for the appropriate pain management strategy requires clear identification of the goals of care, putting problems in perspective and realizing limitations and outcomes. Often it is helpful and practical to simplify drug regimens as much as possible. Use safe, predictable drugs and administration strategies to anticipate, prevent and reduce side effects more effectively. Finally, older persons clearly benefit from a multimodal and multi-disciplinary approach that provides appropriate identification and expertise to manage complex problems.

Pearl: All federal and state drug enforcement agencies recognize the legitimate need and use for potent opioids and other drugs for the management of pain in patients near the end of life. Most state medical boards provide recommendations for appropriate prescribing.

Pitfall: Some neighborhood pharmacies do not carry potent narcotics for fear of robbery. Contingency plans should be made for providing convenient access.

Pitfall: Some nursing homes limit usefulness of heating pads and ice packs for fear of injury.

SUMMARY**Slide #26 & Slide #27**

The image shows two blue-bordered boxes, each containing a 'Summary' section. The left box (Slide #26) lists four bullet points: 'Choose drugs based on:' with sub-points for mechanism of pain, safety and pharmacology of aging, matching pain severity with drug potency, and using combined drug and non-drug strategies; 'Use adequate dose; appropriate route'; and 'Anticipate, prevent and manage side effects'. The right box (Slide #27) lists three bullet points: 'Most pain can be relieved', 'Assess pain accurately and re-assess frequently', 'Avoid common barriers to pain management', and 'Provide patient and caregiver education'.

Clinicians need to choose drugs and non-drug strategies that are safe and effective for frail older persons. Drugs should be chosen with mechanism of pain in mind. Analgesic choices should always match the severity of pain with the known potency and effectiveness of available drugs. Side effects to medications should be anticipated and managed appropriately. And finally, patients often benefit from a combination of drug and non-drug interventions.

Most pain can be eased using modern principles of pain assessment and available treatment methods. Although elderly patients are more sensitive to side effects of most drugs, this does not justify failure to provide effective pain methods, especially near the end of life. Analgesic drugs are safe and effective for the management of pain in older persons. For many older persons, health care professionals need to recognize common barriers to effective pain relief and help develop a simplified plan of care that is appropriate for families and caregiver's settings such as nursing homes, and other care settings.

RESOURCES:

- Ferrell, BA, Acute and chronic pain: in Geriatric Medicine an Evidence-Based Approach, 4th Ed, Cassel CK, et al (Eds), Springer, New York, 2003, pp323-342
- Ferrell BA, Chodosh J, Pain Management, in Principles of Geriatrics and Gerontology, 5th Ed, Hazzard WR, Blass JP, Halter JB, et al (Eds), McGraw Hill, New York, 2003, pp303-321
- Ferrell BA, Whiteman, EJ, Pain, in Geriatric Palliative Care, Oxford University Press, New York, 2003, pp 205-229
- AGS Panel on Persistent Pain in Older Persons: The Management of Persistent Pain in Older Persons, Journal of the American Geriatrics Society, 50:S205-S224, 2002
- Paice JA, Fine PG: Pain at the end of life, in Textbook of Palliative Nursing, Ferrell BR, Coyle N, Oxford University Press, New York, 2001, pp76-90
- Ripamonti C, Dickerson Ed. Strategies for treatment of cancer pain in the new millennium. Drugs 61:955-977, 2001
- Persistent Pain in Older Adults, Weiner DK, Herr K, Rudy TH (Eds). Springer, New York, 2002
- Portenoy RK: Adjuvant analgesics in pain management. In Oxford Textbook of Palliative Care, 2nd Ed, Doyle D, Hanks GW, MacDonald N (Eds), Oxford, Oxford University Press, 1998, pp361-390
- Derby S, Portenoy RK. Assessment and management of opioid-induced constipation. In Topics in Palliative Care Vol. 1, Portenoy RK, Rruera E (Eds), Oxford Press, New York, 1997, pp95-112
- Walsh TD: Prevention of opioid side effects. Journal of Pain and Symptom Management, 5:363-367, 1999
- Robotham M, Harden N, Stacey B, et al. Gabapentin for the treatment of postherpetic neuralgia: a randomized controlled trial. JAMA 280:1837-1842, 1998
- MacLean CH: Quality indicators for the management of osteoarthritis in vulnerable elders. Annals of Internal Medicine, 135:711-712, 2001
- Fainsinger R, Schoeller T, Bruera E: Methadone in the management of cancer pain: a review, Pain 52:137-147, 1993
- Stucki G, Johannesson M, Liang MH. Use of Mesoprostol in the elderly: is the expense justified? Drugs Aging 8:84-88, 1996
- Taha As, Hudson N, Hawkey CJ, et al: Famotidine for the prevention of gastric and duodenal ulcers caused by nonsteroidal anti-inflammatory drugs. N Engl J Med 333:1435-1449, 1996
- Pain and Policy Studies Group. Annual Review of state pain policies 2003. University of Wisconsin, 2003. [Online] Available: <http://www.medsch.wisc.edu/painpolicy/>
- Morrison RS, Wallenstein S, Natale DK, et al: "We don't carry that" - failure of pharmacies in predominantly nonwhite neighborhoods to stock opioid analgesics, New England Journal of Medicine, 342:1023-1026, 2000
- Morrison RS, Magaziner J, Gilbert M, Relationship between pain and opioid anagesics on the development of delirium following hip fracture. Journal of Gerontology, Medical Sciences, 58A(1):76-81, 2003