Geriatric Refresher Day Managing Pain in the Elderly March 2, 2016

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Objectives

Upon completion of this program, participants will have a better understanding of:

- The prevalence of persistent pain in the older population, especially among residents in long-term care
- The biopsychosocial approach to persistent pain
- The assessment of pain in cognitively intact and impaired older persons
- Clinical considerations in the pharmacotherapy of pain in older persons
- Current guidelines for the use of various analgesic drug classes in the older patient

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Introducing Margaret

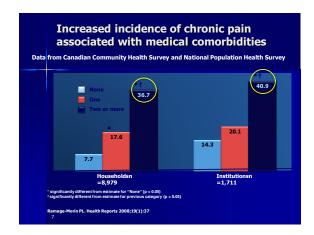
- ■98 year old female
- ■Hx of Bilateral OA in knees, hypothyroidism, GERD, HTN, Dementia
- Medications:
- -Levothyroxine sodium, USP 0.025 mg once daily
- -Lorazepam 1mg, at bedtime
- -Donepezil 10mg, daily
- -Rabeprazole 20 mg once daily
- -Losartan 50 mg once daily
- -Vitamin D 2000 IU once daily
- -Vitamin C 500 mg once daily
- -Ferrous fumarate 300 mg once daily
- -Domperidone 10 mg TID
- -Acetaminophen 500 mg TID

Pain in Canada

- Under recognized and undertreated
- Prevalence of chronic pain increases with age
- Prevalence of chronic pain as high as 65% in community dwelling seniors and 80% of older adults living in LTC facilities

Hadjistavropoulos, Marchildon et al.2009, Hadjistavropoulos, Gibson et al.2010

Increased incidence of chronic pain in institutionalized elderly patients Data from Canadian Community Health Survey and National Population Health Survey Men Women Both Sexes 31.2 25.7 14.0 15.9 15.5 Households 18 to 64 Households 55 or Older n=30,713 **significantly different from estimate for biasonicidal population apped 65 or older (p < 0.05) **significantly different from estimate for biasonicidal population apped 65 or older (p < 0.05) **significantly different from estimate for biasonicidal population (p < 0.05) **significantly different from estimate for institutional apped 45 or older (p < 0.05) **Ramage-Morin PL. Health Reports 2008;15(1):377



"Actual prevalen LTC facilities is a In a literature review of 27 st.	moving ta	rget
Research method	No. of studies	Prevalence
Residents' self-report	10	~60% – 70%
Chart review	8	3.7%* - 64%
Mixed method, ie, interview, observation, chart review	6	~40% – 60%
Observation	1	47%
Questionnaire to residents	1	66%
Questionnaire to LTC managers This study looked at excruciating pain only	1	37%
Pain prevalence derived from MDS most varied results and tended to		vielded the
Takai Y, et al. Pain Manag Nurs 20	010;11:209	

in the nursing	
Sources of pain	Frequency
Low back	40%
Arthritic (knee, hip, shoulder, neck)	29%
Previous fractures	14%
Neuropathies	11%
Leg cramps	9%
Foot	8%
Claudication	8%
Headache	6%
Generalized	3%
Neoplasm	3%

Pain Prevalence in Older Adults and Gaps in Treatment Across Care Setting

Setting	Prevalence of pain	No Pain Treatment?
Nursing Home (551 OA/6 NHs) (Reynolds et al., 2008)	51.4% intact 47.7% impaired	20% intact 44% impaired
Hospital (367 OA/8 hosp) (Gianni et al., Arch Geront & Geriatrics, 2010)	67% pain present	51% no treatment or inadequate for intensity
Emerg Dept (1454 >65 hip fx) (Herr & Titler, Emerg Nsg, 2009)	Mean pain intensity=7	40% patients no analgesic ordered
Home Care (2779 OA) (Maxwell et al., 2008)	48% daily pain	22%

Prevalence, causes and consequences of pain *Teaching points*

- Prevalence of pain is high among older people, even higher among LTC residents
- Determining the actual incidence of pain depends on method, sensitivity, and consistency of assessment
- Multiple causes of pain among older patients; musculoskeletal disorders are most common
- The consequences of pain are often profound and severe; detrimental to psychosocial health and quality of life

"Normal" Aging: Changes in Brain Morphology

- Atrophy of prefrontal gray matter

 Raz et al, Cerebral Cortex 1997; 7: 268
- Atrophy of thalamus
 - Van Der Werf et al, Cog Brain Res 2001; 11: 377
- Diminished frontal white matter integrity
 - Pfefferbaum et al, NeuroImage 2005

ronic Pain is associated with changes Brain Structure and Function in Older Adults
Preliminary Evidence: Older adults with CLBP have structural brain changes including significant reduction in Gray Matter Volume in the posterior parietal cortex and middle cingulate WM volume of the left hemisphere and impaired attention and mental flexibility. Buckalew N, et al. Pain Med. 2008
Brain Structure and function is different in older patients with CLBP. Deficits in brain morphology associated with pain duration and poor physical function. Buckalew N, et al Pain Medicine 2010

IMPLICATIONS

- Pain is associated with WM damage over and above that associated with aging.
- Chronic non-malignant pain is associated with alterations in brain morphology in older adults, above and beyond those associated with normal aging.
- Understanding what biologically drives subjective pain-associated disability may open the door to newly targeted treatments.

INADEQUATE PAIN TREATMENT IN OLDER ADULTS

- Consequences of untreated pain in older persons
 - -Impaired ambulation
 - -Depression, Anxiety
 - Social isolation
 - -Sleep restriction
 - -Behavioural problems
 - -Anorexia, weight loss -Deconditioning, increased falls

Additional Consequences:

-self tx with OTC medications, old Rxs, shared meds., or alcohol

Ann Intern Med. 2008;148:141-6 J Am Geriatr Soc. 2009;57:1331-46

Common misconceptions among patients and caregivers about pain

- "Pain is an inevitable part of aging, and nothing can be done about it."
- "Elderly patients, especially those who are cognitively impaired, have a higher tolerance for pain."
- "Elderly patients and people who are cognitively impaired cannot be accurately assessed for pain."
- "Patients say they are in pain to get attention."
- "The patient doesn't look like he or she is in pain and therefore is probably not really in pain."

American Medical Directors Association.
Pain management in the long term care setting. Columbia MD: 2012

More common misconceptions among patients and caregivers about pain

- "Elderly patients are likely to become addicted to pain medications."
- "To acknowledge pain is a sign of personal weakness."
- "Acknowledging pain will mean undergoing intrusive and possibly painful tests."
- "Acknowledging pain will lead to a loss of independence."
- "Pain always indicates the presence of a serious disease."
- "Use of opioids is the only effective means for treatment of significant pain."

American Medical Directors Association.

Pain management in the long term care setting. Columbia MD: 2012

Why assess pain?

"The most common reason for unrelieved pain is the failure of staff to routinely assess pain and pain relief

"Assessment should not be viewed as a single event but as part of an ongoing process."

- Hadjistavropoulos T, et al. Clin J Pain. 2007;23(1 Suppl):S1

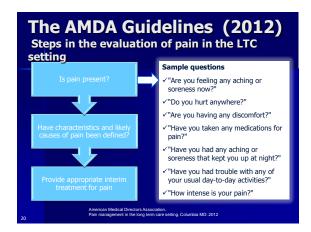
"Being sensitive and open to clues of suffering can also enhance the diagnostic yield of the history and reduce unnecessary diagnostic testing or treatments."

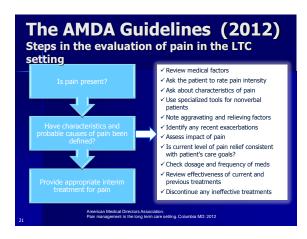
"Recognizing that a patient is suffering can increase patient rapport, confidence, and compliance."

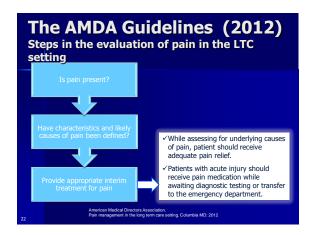
Lesho Ep. Arch Intern Med 2003; 163:2429

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AMDA PAIN MANGEMENT GUIDELINES 2009 Recognition Assessment Treatment Monitoring







PAIN IN OLDER PERSONS **RECOGNITION** Non-specific signs and symptoms suggestive of pain:

- Frowning, grimacing, fearful facial expressions, grinding of teeth Bracing, guarding, rubbing
- Fidgeting, increasing or recurring restlessnéss
- Striking out, increasing or recurring agitation
- Eating or sleeping poorly



A biopsychosocial approach to pain Teaching points

- Feelings of social isolation and depression share similar neurobiological and chemical pathways as pain
- A biopsychosocial approach recognizes the individual's total pain experience
- A commitment to an interdisciplinary care model can optimize the management of pain, suffering, and related disability among the elderly

Pain Assessment Tools Unidimensional scales • Numeric Rating Scale • Verbal Rating Scale • Visual Analog Scale • Visual Analog Scale • Faces Pain Rating Scale • Faces Pain Rating Scale • Multidimensional scales • Brief Pain Inventory¹ • McGill Pain Questionnaire¹ • Neuropathic Pain Scale² 1. Brunton S. J Fam Pract. 2004;53(suppl 10):53 2. Galer BS et al. Clin J Pain. 2002;18:297

Unidimensional pain assessment scales Verbal Pain Intensity Scale Verbal Pain Intensity Scale Verbal Pain Intensity Scale Visual Analog Scale

Abbey Pain Scale		•
For measurement of pain in people with dementia who cannot verbalise. How to use scale: While observing the resident, score questions 1 to 6	Abbey Pain Scale	
Name of resident: Name and designation of person completing the scale:		
Date: Time: Latest pain relief given was	Brief, 6-item scale that takes only a few minutes to complete. Items of the APS	
Q1. Vocalisation eg. whiterpring, groaning, crying Absent 0 Mild 1 Moderate 2 Severe 3	measure aspects of the pain experience on a 4-point scale of severity:	
Q2. Facial expression eg: looking tense, frowning grimacing, looking frightened Q2 About 0 Mat 1 Moderate 2 Servere 3	Vocalizations Facial expressions	
Q3. Change in body language eg: flogeting, rocking, guarding part of body, withdrawn Absent 0 Mild 1 Moderale 2 Severe 3	Changes in body language Behavioural changes	
Q4. Behavioural Change eg: increased confusion, refusing to eat, alteration in usual Q4	 Physiological changes Physical changes. 	
Absent 0 Mild 1 Moderate 2 Severe 3		
eg: temperature, puise or blood pressure outside normal Q5 limits, perspiring, flushing or pallor Aboersi 0 Alidi 1 Moderale 2 Severe 3	The Total Pain Score provides an indication of pain severity as	
Q6. Physical changes eg: skin tears, pressure areas, arthritis, contractures, previous injuries. Abover 0 AMV 1 Moderate 2 Severe 3	Delow 0 - 2 3 - 7 8 - 13 14+ No pain Mild Moderate Severe	
Add scores for 1 – 6 and record here Total Pain Score		
Now tick the box that matches the	Abbey, J, De Bellis, A, Piller, N, et al. Funded by the JH & JD Gunn Medical Research Foundation 1998 – 2002	
Total Pain Score 0-2 3-7 8-13 14+ No pain Mild Moderate Severe		
Finally, tick the box which matches the type of pain Chronic Acute Chronic		
•		
PAINAD Scale		
	<u></u>	
The Pain Assessment in Advanced Dementia (PAINAD) Scale Items	This is a 5-item scale that assesses the following:	
Breathing independent of vocalization Normal for vocalization Normal period of period of period of lyperventilation. Stoles respirations.	Breathing	
Negative None Occasional moan or Repeated troubled calling	Vocalization Facial expression	
vocalization groam. Love-level out. Loud meaning or greaming. Crying, a negative or disapproving quality.	Body language Consolability	
Factal Smiling or expression inexpressive inexpressive		
Body language Relaxed Tense, Distressed Rigid, Fists clenched.	Each item is scored on a 0-2 scale, with higher scores	
pushing away. Striking out.	indicating greater pain intensity.	
Consolability No need to console Distracted or reassured by voice or touch. Unable to console, distract or reassure.		
Total	Advanced Dementia	
The total score ranges from 0-10 points. Scores to be interpreted as follows:	may Warden V, et al. J Am Med Dir Assoc 2003; 4:9	
▶ 1-3=mild pain▶ 4-6=moderate pain		
> 7-10=severe pain		
toma 32 Brief Pain Inventory Date / _ / _ Time	Brief Pain Inventory (BPI)	
Date	The BPI measures pain and its	
other than these everyday kinds of pain today? I. Yes 2. No One of pain today? No Complete	functional impact, on a 0-10 scale:	
2) On the diagram shade in the areas where you feel pain. Put an X on the area that haris the most. (Circle the one number that describes how, thering the peet 24 hours, pain has interfered with your: A Geometic activity		
the past 24 hours, pain has interfered with your: A. General activity	a) Pain intensity • Worst	
the pare 24 hours, pain has interfered with your. A. Gosenia Activity 0 1 2 3 4 5 6 7 8 9 10 Does not Completely interferes interferes	Worst Least Average	
Right Lab Light Does not Completely interferes	Worst Least Average Right now	
Right — Lab Lab Does not merrior Completely subcifices	Worst Least Average Right now b) Interference with: General activity Mood	
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The property of the property o	Vorst Least Average Right now b) Interference with: General activity Wood Walking ability Nomal work Social relations Sleep	
The same ray ray may be you thing the one surface may 12 2 3 5 6 7 8 9 30 These are a surface markets. The same ray ray may be you thing the one surface may 12 2 have a surface may 12 2 have a surface may 12 2 have a surface may 12 have a sur	Vivorst Least Average Right now Interference with: General activity Mod Walking ability Nomal work Social relations Sleep Enjoyment of life Higher total scores BPI indicate	
2.3 Please are your gain by writing the one sureduce part 2 hours, and part 2 hours, are made to	Vost Least Average Right now b) Interference with: General activity Mod Walking ability Normal work Social relations See Finjoyment of life Higher total scores BPI indicate greater pain interference.	

Margaret: Signs of agitation

Physical exam

 Range of motion has visibly decreased; extreme difficulty stretching both knees

Behaviours observed

Wincing, groaning, rigidity, irritability

Recent symptoms of verbal agitation

• Frequent requests for attention, complaining

MMSE score: 12



Are pain self-reports valid in the cognitively impaired? Here's a rule of thumb

- MMSE scores ≥18: typically capable of providing valid self-report
- MMSE scores ≤13: least likely to provide valid reports.
- Nonetheless, self-report should be attempted with all patients
 - Some individuals with low MMSE scores can self-report pain
 - Use single-answer, close-ended questions (and patience) to elicit information

Hadjistavropoulos T, et al. Clin J Pain. 2007;23(1 Suppl):S1

Consequences of unrelieved pain in persons with dementia

Physical	Psychosocial
Gait impairment	Decrease in daily activities
Decreased appetite	Impaired cognition
Sleep disturbances	Verbal aggression
Agitation	Depression
Physical combativeness	Social isolation
Wandering	Learned helplessness

Shega J, et al. J Pain. 2007;8:373

	the role of pain ptive behaviours?
Wandering	Pain severity is negatively associated with the frequency of wandering behaviors
	(Odds Ratio = 0.77, p < .001 95% CI = 0.73, 0.81)
Aggression	Pain severity is positively associated with the frequency of aggressive behaviors
	(Odds Ratio = 1.04, p < 0.001, 95% CI = 1.01, 1.08)
Agitation	Pain severity is positively associated with the frequency of agitated behaviors
	(Odds Ratio = 1.17, p < 0.001, 95% CI = 1.13, 1.20)

KEY COMPONENTS OF PAIN ASSESSMENT

- Measurement of Pain:
 - Using standardized scales in a format that is accessible to the individual.
- Cause of Pain:
 - Examination and investigation to establish the cause of pain.

Pain Assessment Tool

"... It is important to utilize a scale that is appropriate for the individual and document and use the same tool with each assessment."

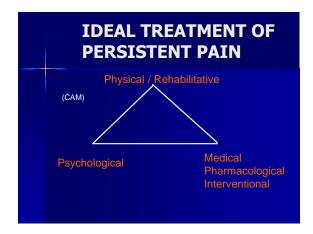
AGS Guidelines. J Am Geriatr Soc. 2002;50(6 Suppl):\$205

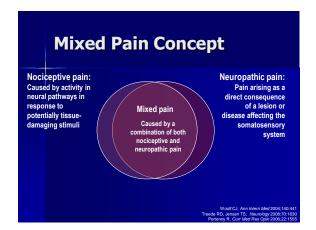
Cognition	Verbal Communication	Scales
Intact	Intact	Numeric Rating Scale (NRS) Verbal Descriptor Scale (VDS)
Intact	Limited	Faces Pain Scale Faces Pain Scale Revised (FPS-R)
Impaired	Intact	Pain Assessment in Advanced Dementia (PAINAD)
Impaired	Limited	Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC)
http://www.geriatricp.	ain org/Content/Assessment/In	npaired/Documents/PACSLAC_Tool.pdf

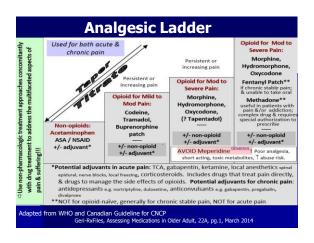
Treating Pain in the Elderly Considerations in the elderly The Analgesic Ladder Which drug? Safe prescribing Dosing Dealing with agitation

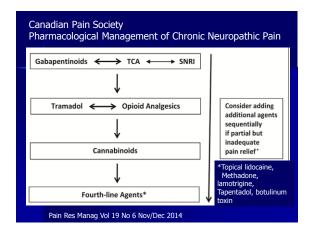
Margaret: Pain profile Pain scores: -Worst pain 9/10 -Least pain 6/10 -Average pain: 8/10 Pain is described as generalized and widespread, but worse in knees Difficulty sleeping; no interest in social activities MMSE score: 22 BPI score: 47/70

Pain Management Goals Decrease pain Improve function Physical Psychological Social Minimize risk Patient Physician Society









AGS RECOMMENDATIONS
■ Initial and Maintenance - Acetaminophen particularly for musculoskeletal pain ■ Acute Flares - NSAIDS AND COX-2 selective inhibitors may be considered RARELY - Exercise caution due to ↑ CV/GI risk):
 Limit 7-10 days: Consider topical NSAID Opioids for all patients with moderate-to-severe pain American Medical Directors Association. Pain management in the long term care setting. Columbia MD: 2012

	Pharmacological changes in the elderly				
	Concern	Normal aging	Possible effects		
	GI function	GI transit times Possibly enhanced opioid- related dysmotility	• 💠 effects of oral CR drugs		
	Transdermal Absorption	Mostly unchanged	N/A		
	Distribution	• ^fat:lean ratio	 ↑ volume of distribution for lipophilic drugs; ↑ drug t½ 		
	Anticholinergic effects	Confusion, constipation, incontinence, movement disorders	Risk enhanced by neurologic disease		
45	American Gerlatrics Society Guidelines. J Am Gerlatr Soc 2009;57(8):1331				

	the elder	
Concern	Normal aging	Possible effects
Hepatic metabolism	◆oxidation (variable) NB: Unchanged conjugation and first-pass effect	• 🌴 drug t½
Renal excretion	V GFR	 ◆ excretion, prolonged effect of active metabolites

Opioid Therapy

- Opioid therapy for elderly patients can be safe & effective (Grade B) provided that appropriate precautions are taken:
 - Lower starting doses
 - Slower titration
 - Longer dosing interval
 - More frequent monitoring
 - Tapering of benzodiazepines (Grade C). (2010 Opioid Guidelines for CNCP)
- Consider opioids for all patients with
 - Moderate-severe pain
 - Functional impairment or decreased QOL due to pain
 - Efficacious for nociceptive and neuropathic pain conditions

American Geriatrics Society Guidelines. J Am Geriatr Soc 2009;57(8):1331: American Medical Directors Association. Pain management in the long-term care setting. Columbia MD: 2012

Initiating opioid therapy in older adults

Opioid-naïve patients

- "Start low, go slow"
- Begin with an immediate-release preparation
- Once total daily dose is established, convert to an equivalent dose of a long-acting formulation when possible
- PRN meds: Treat breakthrough pain—prescribe a short-acting, immediate-release preparation
 - Dosing: ~10% to 15% of the total daily opioid dose every hour

National Opioid Use Guideline Group, 2010 American Medical Directors Association. Pain manage

OPIOID TREATMENT IN OLDER PERSONS : Oral Options

- Assess presence of renal insufficiency as some opioids (or their metabolites) are cleared renally and can accumulate:
 - OxycodonePropoxypheneMorphineMeperidine
- Dose adjustments are necessary for patients with renal insufficiency
- Hydromorphone a preferred choice in patients with renal impairment
- M-Eslon can be opened and put in G-Tubes

OPIOID TREATMENT IN OLDER PERSONS : Transdermal

- Fentanyl Patch
 - Provides around-the-clock pain control
 - Patch changed Q 48-72 H
 - FDA (2005) advises that Fentanyl should only be initiated in opioid tolerant patients who 'who have demonstrated opioid tolerance and require a daily dose of at least 25 mcg/hr"
 - ISMP (US) Medication Safety Alert! (Aug 8 2013)
- Buprenorphine Patch
 - once weekly for moderate pain

What is an optimal dose?

The optimal dose is reached with a balance of three factors:

- 1) Effectiveness: improved function or at least 30% to 50% reduction in pain intensity
- 2) Plateauing: effectiveness plateaus—increasing the dose yields negligible benefit, and
- 3) Adverse effects/complications: adverse effects or complications are manageable.

National Opioid Use Guideline Group, 2010

American Medical Directors Association. Pain management in the long term care setting. Columbia MD: 2012

What is a "watchful dose"?

Chronic non-cancer pain can typically be managed effectively in most patients with morphine (or equivalent) in doses of ≤ 120 mg/day (ASIPP 2012) or ≤ 200 mg/day (Canadian Opioid Guideline).

"Consideration of a higher dosage requires careful reassessment of the pain and of risk for misuse, and frequent monitoring with evidence of improved patient outcomes." (Canadian Opioid Guideline).

Confusion Constipation Drowsiness Most of these adverse effects—apart from constipation—tend to be transient

Monitor and Manage: Adverse Effects of

- Hallucinations
- Itching
- Nausea
- Postural hypotension
- Urinary retention
- Vertigo

American Geriatrics Society Guidelines. J Am Geria Soc 2009;57(8):1331 American Medical Directors Association. Pain management in the long term care setting. Columbia MD: 2012 The consequences of some of these effects on the elderly require special attention (eg, cognitive impairment, risk of falls)

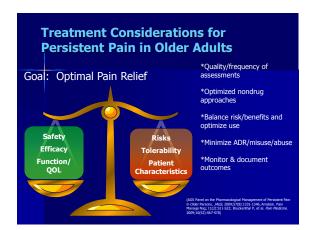
TOPICAL ANALGESIC AGENTS

Lidocaine 5%, Amitriptyline 5%,

Ketoprophen 7.5%, Ketamine 10%

In PLO Gel or Lidoderm TID-QID

■ Buprenorphine Trans Dermal - good for moderate pain in opioid naïve. Patch changed every 7 days ■ Oxycodone /Naloxone ■ Oxycodone CR ■ Tapentadol – IR/CR ■ Fentanyl buccal soluble film - Oral patch for breakthrough palliative care





Analgesic medications for older adults **Summary**

- Use acetaminophen as initial and ongoing agent especially for musculoskeletal pain
- Avoid NSAIDs and coxibs for long-term use
- Use opioids for patients with moderate-to-severe pain; titrate slowly and monitor for adverse effects
- Use adjuvants for neuropathic pain, usually in combination with other analgesics

Margaret

- Physical findings of OA in both knees and restricted to wheelchair
- Difficulty sleeping, waking up around 3:00 am and mobilizing in morning.
- Stopped lorazepam and started Melatonin 3mg.



Margaret

- Initially oxycodone hydrochloride
 2.5mg/acetaminophen 325 mg for 3 weeks then increased to 5.0 mg
- Switched to transdermal buprenorphine 5 mcg/hr. for 1 month - increased to 10 mcg/hr. Acetaminophen 500mg at 6:00 am.



SUMMARY

- A combination of non-pharmacologic and pharmacologic interventions can effectively reduce pain and its burden
- Consider physiological characteristics in older patients
- Pharmacologic modalities can be used safely and effectively to treat pain in older patients

Pain in Older People: Summary

Ask about pain regularly
Assess pain systematically

Believe the patient's and family's reports of pain and what relieves it

Choose appropriate pain control options

Deliver interventions in a timely, logical and coordinated fashion

Empower patients and their families

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