sfCare Learning Series

Pain

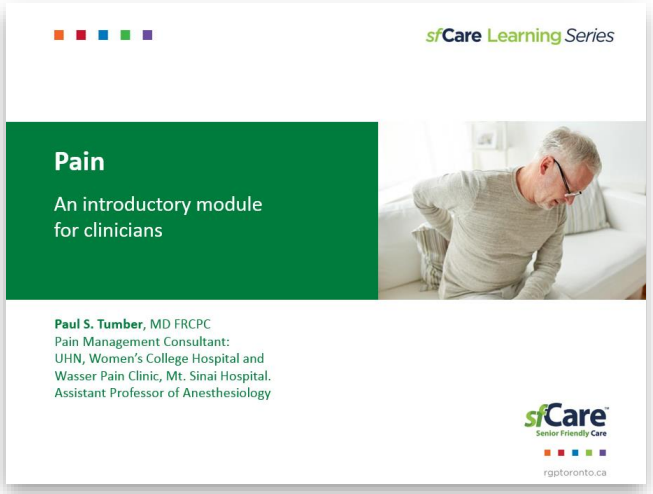
An introductory module for clinicians

Paul S. Tumber, MD FRCPC
Pain Management Consultant:
UHN, Women's College Hospital and
Wasser Pain Clinic, Mt. Sinai Hospital
Assistant Professor of Anesthesiology

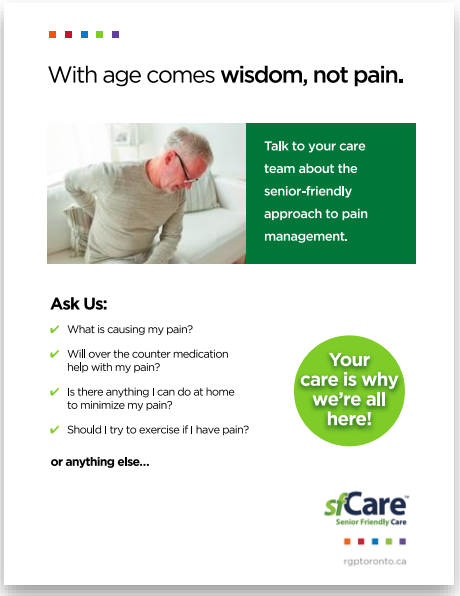
sfCare™
Senior Friendly Care

rgptoronto.ca

This module is part of the sfCare approach



PowerPoint Presentation



8.5 x 11 Poster

Patient Handout

2

Objectives

1. Identify the physiologic changes in older adults that impact pain management
2. Describe a structured approach to the detection of pain in older adults
3. Give examples of non-pharmacological strategies for pain management in older adults
4. Recognize considerations for pharmacotherapy use to treat pain in older adults
5. Apply a senior friendly approach to pain

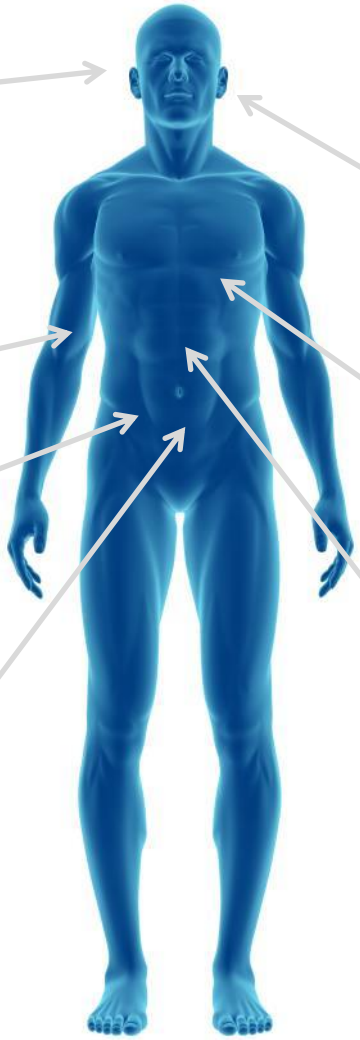
Physiologic changes with aging*

Nervous System
- loss of nerve fibres
- slowed nerve conduction velocity

Musculoskeletal
decreased muscle mass

Renal System
decreased creatinine clearance

Gastrointestinal System
decreased gut motility



Pain Modulation
impaired

Hepatic System
decreased hepatic blood flow

Body Composition
increased fat / decreased body water

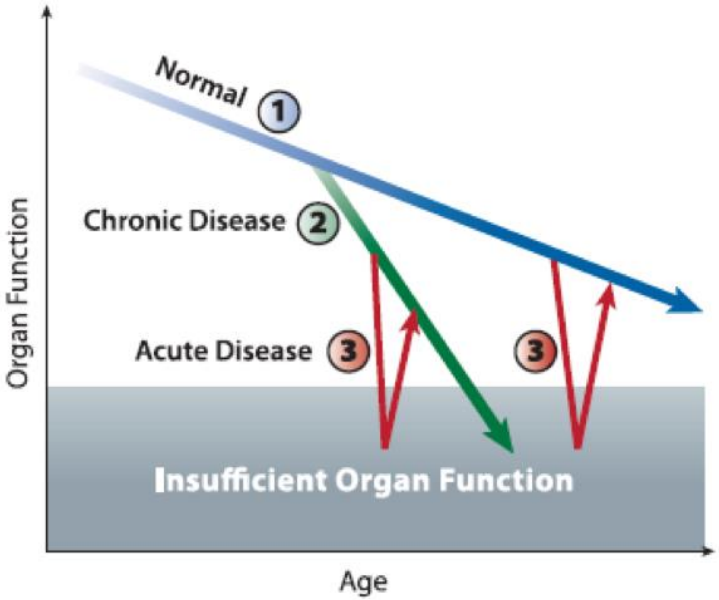
sfCare Senior Friendly Care

Challenges in the older adult

- "Homeostenosis"
- Frail: impaired bio-psychosocial function
- Multiple comorbidities:
  - Osteoarthritis
  - Osteoporosis
  - Dementia
  - Diabetes
- Polypharmacy
  - Drug interactions and adverse effects
  - Increased sensitivity to certain medications (e.g., benzodiazepines)

sfCare Senior Friendly Care

Organ function declines over time



Adapted from Bouchon[22]. Used with permission.

Rivera, R. and Antognini, J.F. Perioperative Drug Therapy In Elderly Patients. Anesth 2009; 110: 1176-81

- Organ function declines over time in normal, healthy humans, as indicated by Line 1.
- Chronic disease will accelerate this decline, as noted by Line 2.
- Acute disease will cause temporary, rapid but reversible declines, as shown by Line 3.
- Regardless of cause, reserve function is lost when organ function declines into the shaded area.

Barriers to pain management in older adults

Barriers encompass bio/psychosocial/spiritual issues

- Cost
- Caregiver burnout / transportation
- Impairments
  - Mood
  - Cognition
  - Physical (falls)

sfCare Senior Friendly Care

Barriers to pain management in older adults (cont.)

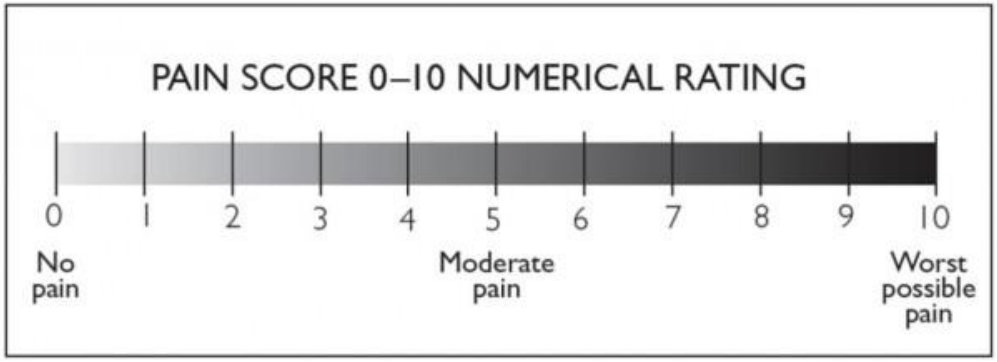
Barriers encompass bio/psychosocial/spiritual issues

- Attitudes and belief system:
  - Tendency to under report pain / stoicism
  - Catastrophizing, fear of injury, fear of impending loss of independence, death and hopelessness
  - Poor compliance, addiction concern
- Health care:
  - Polypharmacy
  - Myths about pain treatments, including opioids
  - Lack of knowledge or resources

sfCare Senior Friendly Care

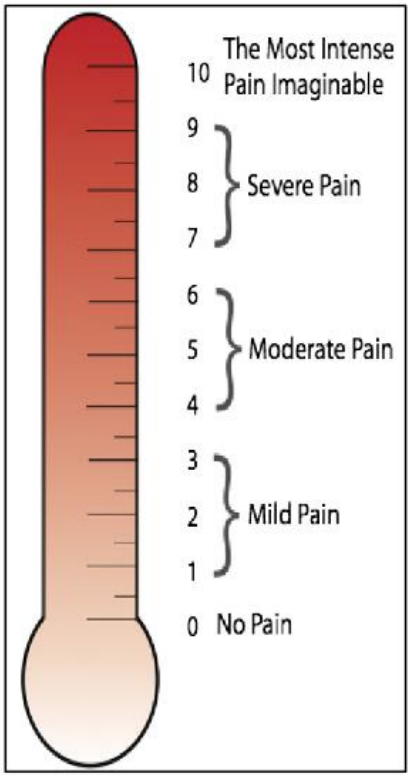
How to assess pain

Numeric Rating Scale (NRS)



Wong-Baker FACES Pain Rating Scale

Iowa Pain Thermometer



NRS and Iowa Pain Thermometer reproduced with permission from Keela Herr, PhD, RN, AGSF, FGSA, FAAN, College of Nursing, University of Iowa, 2019.

...ask about F.I.F.E.

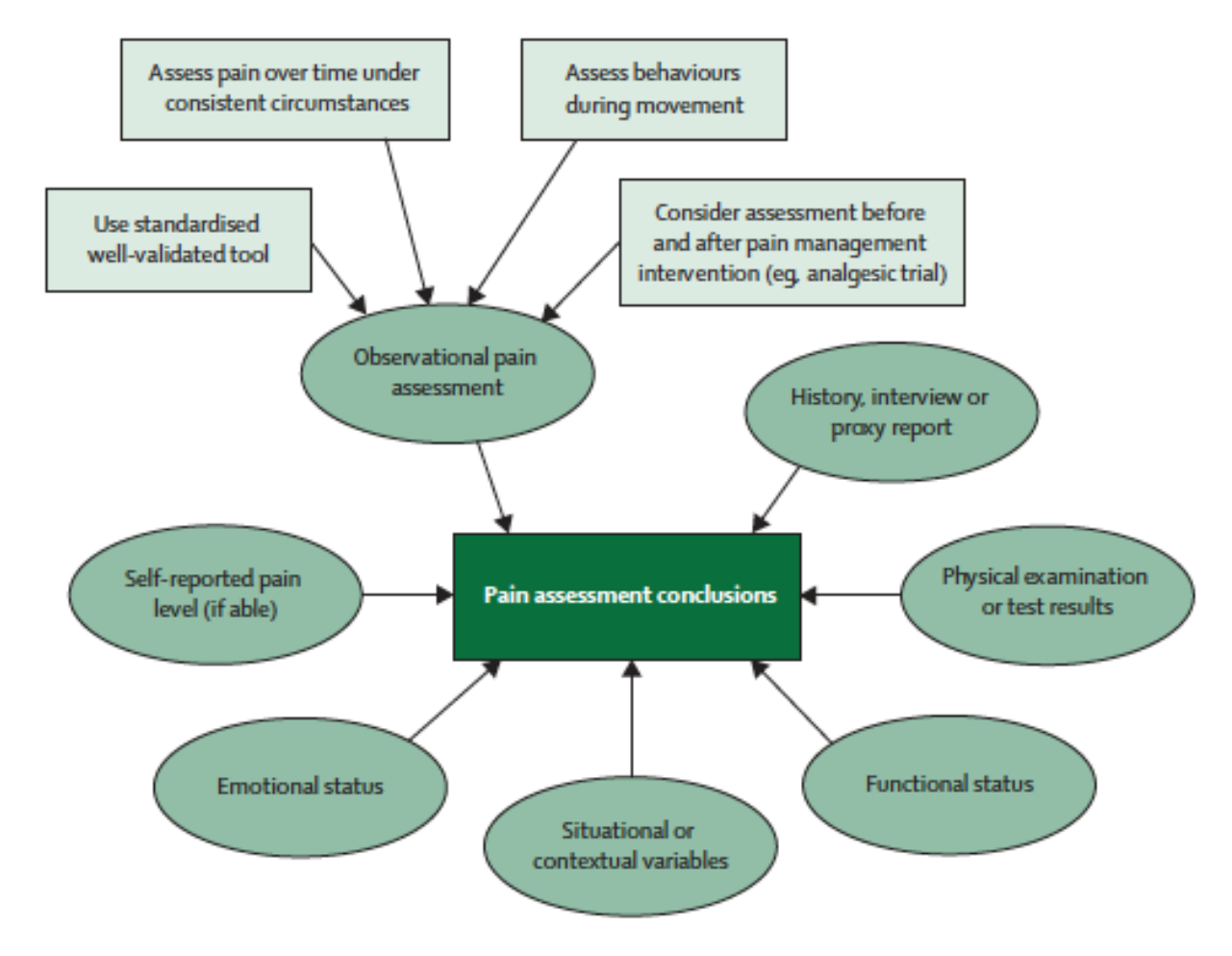
(Feelings, Ideas, Function, Expectations)

sfCare Senior Friendly Care

Ask the patient these F.I.F.E questions

Question	Example questions
Feelings	▪ How does your chronic pain make you feel about yourself? ▪ What specific fears or worries do you have about your condition?
Ideas	▪ Do you have any ideas about what may be causing your pain, beyond what you have been told by your healthcare provider? ▪ What do you think about the meaning of this pain?
Function	▪ What does your chronic pain prevent you from doing? ▪ What would you like to be able to do (goals)?
Expectations	▪ What did you expect was going to happen at today's clinic visit? ▪ What is your expectation about the future of your condition? ▪ What do you think about this treatment plan?

Pain assessment in older adults with dementia



Thomas Hadjistavropoulos, Keela Herr, Kenneth M. Prkachin, Kenneth D. Craig, Stephen J. Gibson, Albert Lukas, Jonathan H. Smith, Lancet. Dec 2014

sfCare Senior Friendly Care

Pain assessment in older adults who can't self report

- Consider causes of pain (e.g. nerve damage, arthritis)
- Observe patient behaviors (e.g. eating, walking)
- Use proxy reports (family, caregivers, etc.)
- Attempt a cautious analgesic trial (and observe the response to treatment)

Herr, K et al. Pain Assessment in the Patient Unable to Self-Report: Position Statement With Clinical Practice Recommendations. Pain Manag Nurs 2011: 230-250

sfCare Senior Friendly Care

How to manage pain

There are four strategies for managing pain in older adults…

1. Physical strategies
2. Psychological strategies
3. Procedural interventions
4. Pharmacotherapy

Makris, U. et al. Management of Persistent Pain in the Older Patient. A Clinical Review. JAMA. 2014; 312(8): 825-836. Pharmacological Management of Persistent Pain in Older Persons. American Geriatrics Society, 2009.

How to manage pain

1. Physical Strategies

The mainstay of persistent pain management includes:

- Massage therapy
- Physiotherapy
- Physical activity

Physical activity can reduce pain:

1. **Neuromuscular:** decreased joint load, better joint stability, increased energy absorption by muscles
2. **Periarticular:** flexibility, connective tissue health, bony mass
3. **Intra-articular:** cartilage, reduced inflammation, improved joint nutrition
4. **General fitness:** reduced comorbidity, weight loss, aerobic fitness, psychosocial wellbeing, placebo, improved self-efficacy

Clin Geriatr Med 32 (2016) 737-762

sfCare Senior Friendly Care

How to manage pain

1. Physical Strategies (cont.)

- ✓ Exercise with a friend / group (YMCA, senior center, community)
- ✓ Calendar
- ✓ Set goals
- ✓ Smartphone fitness app / fitbit, etc.
- ✓ Vary the exercise type (resistance, aerobic, aquatic, walking route, etc.)
- ✓ Pick activities that the person enjoys
- ✓ Websites: American Geriatrics Society, Arthritis foundation, American Diabetes Association, Centres for Disease Control and Prevention, etc.

sfCare Senior Friendly Care

How to manage pain

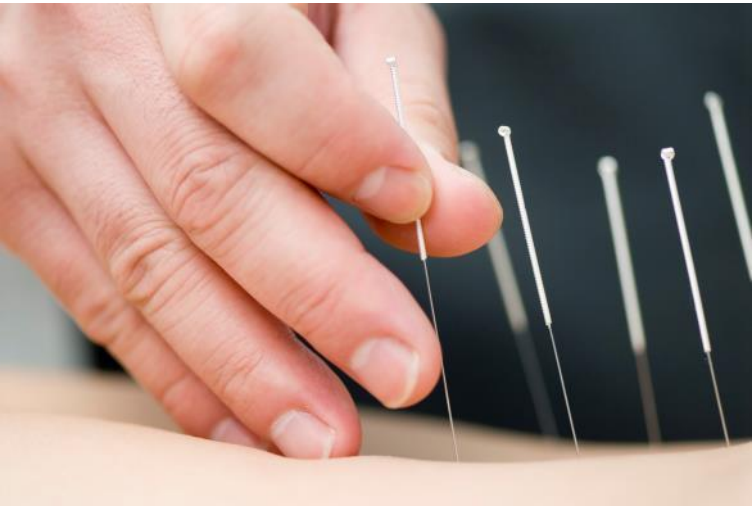
2. Psychological Strategies

- Education. Reassurance. Support.
- Address misbeliefs: hurt does not equal harm
- Cognitive Behavioral Training
- Meditation / Mindfulness-Based Relaxation
- Shared Decision-Making Model

sfCare Senior Friendly Care

How to manage pain

3. Procedural Strategies



- Examples:
  - Acupuncture
  - Trigger point injections
  - Joint injections
- Appropriate for a select population of older adults
- Limited role for persistent pain states

sfCare Senior Friendly Care

How to manage pain

4. Pharmacotherapy

- Over-the-counter medications
- Opioids
- Pharmacotherapy for neuropathic pain

sfCare Senior Friendly Care

How to manage pain

4. Pharmacotherapy

Over-the-counter

Acetaminophen

- Well-tolerated (minimal adverse effects)
- Still considered first line agent for mild pain, osteoarthritis
- Ceiling effect on analgesia
- Maximum initial dose is 1000mg orally up to four times a day
- Chronic dosing should reduce to maximum 2500mg / day (especially for older adults)
- Beware liver toxicity if overdose, alcoholic, malnourished

Oscier and Milner. Perioperative use of paracetamol. Anaesthesia 2009; 64: 65-72

sfCare Senior Friendly Care

How to manage pain

4. Pharmacotherapy

Over-the-counter

Older adults are especially vulnerable!

NSAIDs

- All NSAIDS and coxibs inhibit the cardioprotective effects of ASA; thus avoid in patients at risk of heart attack or stroke
- All NSAIDs can cause renal dysfunction
- All NSAIDS and coxibs can cause peptic ulcer disease (less risk with coxibs), may need to add proton-pump inhibitor if long-term use or at risk population (older adult; using corticosteroids; prior history of ulcers; using anticoagulants or ASA, alcohol)
- May increase blood pressure or worsen CHF

Karsh, J. Anti-inflammatory drugs: What is safe? CMAJ. 175(5) 2006; 449

How to manage pain

4. Pharmacotherapy

Over-the-counter

Older adults are especially vulnerable!

NSAIDs (cont.)

- Lowest dose
- Shortest duration
  - consider drug holidays to allow GI / GU system to recover
  - Assess analgesic efficacy
  - Not indicated for neuropathic pain
- Protect from ulcers
- Monitor kidney function

Karsh, J. Anti-inflammatory drugs: What is safe? CMAJ. 175(5) 2006; 449

sfCare Senior Friendly Care

How to manage pain

4. Pharmacotherapy

Opioids

"Opioid therapy for older adult patients can be safe and effective…"

- ✓ Lower starting dose
- ✓ Slower titration
- ✓ Longer interval between doses
- ✓ More frequent monitoring
- ✓ Tapering of benzodiazepines

2017 Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain, R17 Recommendation Statement

How to manage pain

4. Pharmacotherapy

Opioids

Reducing risk from opioid use:

1. Educate patient and caregiver about signs of overdose, e.g. slurred or drawling speech, emotional lability, ataxia, nodding off…
2. Avoid opioids in cognitively impaired older adults living alone, unless ongoing medication supervision can be organized
3. Consider a three-day "tolerance check"
4. Monitor renal function

2017 Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain, R17 Recommendation Statement

How to manage pain

4. Pharmacotherapy

Opioids

Opioid prescribing cautions for the older adult:

1. Start titration at no more than 50% of the suggested initial dose and lengthen time interval between dose increases
2. Among strong opioids, oxycodone and hydromorphone may be preferred
3. Morphine solutions are preferable to tablets in some situations (e.g. patients with swallowing problems)
4. For older adults on benzodiazepines, try to taper the dose to reduce the risk of falls and cognitive impairment

2017 Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain, R17 Recommendation Statement

How to manage pain

4. Pharmacotherapy

Neuropathic pain

	Drug class	Examples
1st Line	Tricyclic Antidepressants	Nortriptyline, desipramine
	Anticonvulsants	Gabapentin, pregabalin (carbamazepine: tic douloreux)
	SNRI	Duloxetine, venlafaxine
2nd Line	Tramadol Opioids	
3rd Line	Cannabinoids	Sativex buccal spray, dronabinol
4th Line	SSRI	
	Topical lidocaine	
	Methadone	
	Other anticonvulsants	Lamotrigine, topiramate, valproic acid

Moulin DE, et al. Pharmacological management of chronic neuropathic pain: Revised consensus statement from the Canadian Pain Society. Pain Res Manage 19(6) Nov/Dec 2014

How to manage pain

First line medications for neuropathic pain

Tricyclic Antidepressants Adverse Effects

- Common: dry mouth, drowsiness, confusion, orthostatic hypotension, urinary retention / prostatism, constipation, arrhythmia
- Amitriptyline: greatest anticholinergic side effects, possible weight gain, glaucoma
- Nortriptyline: least adverse cardiac arrhythmia risk, reduced anticholinergic side effects
- Desipramine: less sedation

How to manage pain

First line medications for neuropathic pain

Gabapentinoids for older adults

START LOW
GO SLOW

- Monitor closely and reduce dose (check creatinine clearance)
- Risks:
  - cognitive impairment
  - ataxia / falls
  - weight gain, etc.

sfCare Senior Friendly Care

How to manage pain

First line medications for neuropathic pain

Serotonin Noradrenaline Reuptake Inhibitors

- Duloxetine is FDA-approved in diabetic neuropathy and fibromyalgia
- SSRI's are not as useful in neuropathic pain

	Trade name	Initial dose	Max dose	Adverse effects
Venlaxafine	Effexor	37.5mg/ day	225mg/ day	Nausea, dizziness, sedation, diaphoresis, hypertension
Duloxetine	Cymbalta	30mg/ day	60mg/ day	Sedation or insomnia, nausea, ataxia, dry mouth: avoid if narrow angle glaucoma - incr. bleeding risk - hyponatremia

How to manage pain

Third line medications for neuropathic pain

Cannabinoids

- Likely only have a modest effect on chronic pain
- CBD component is commonly used for pain management (avoid THC due to its psychoactive effects)
- Do not recommend smoking or inhalation route: more common use seems to be in form of CBD oil
- Problems include supply interruptions and lack of standardization of quality of the product

sfCare Senior Friendly Care

How to manage pain

Fourth line medications for neuropathic pain

Topical Lidocaine

- Mechanism of action: sodium channel blocker
- Most helpful is the 5% Lidocaine patch but this is not available in Canada and thus it is used as a 5-10% cream up to tid.
- Best indication is post-herpetic neuralgia, also can be used in cases of localized allodynia

Other topical agents that have been tried E.g. topical 10% ketamine, 5% amitriptyline, 10% gabapentin. Need compounding pharmacist: expensive

Lynch, ME and Watson, P. The pharmacotherapy of chronic pain: A review. Pain Res Manage 11(1) Spring 2006: 11-33.

How to manage pain

Fourth line medications for neuropathic pain

Topical capsaicin (chili pepper extract)

- Mechanism: reduces pain-related neuropeptides especially substance P, and causes degeneration of epidermal nerve fibres
- Need to use it 4 times a day for up to 6 weeks
- Compliance may drop off due to burning effect on skin
- May be used in cases of small joint arthritis, diabetic neuropathy

Lynch, ME and Watson, P. The pharmacotherapy of chronic pain: A review. Pain Res Manage 11(1) Spring 2006: 11-33.

How to manage pain

Fourth line medications for neuropathic pain

Topical NSAIDs (especially diclofenac) and topical rubefacients (various salicylate preparations)

- May be helpful for acute / localized musculoskeletal pain
- Topical diclofenac (Pennsaid) can provide pain relief in some cases of osteoarthritis

Lynch, ME and Watson, P. The pharmacotherapy of chronic pain: A review. Pain Res Manage 11(1) Spring 2006: 11-33.

sfCare Senior Friendly Care

How to manage pain

Follow up for pharmacotherapy in pain

- Reasonable intervals
- Document:
  - Analgesia, activity, adverse effects, aberrant drug taking behaviors, affect (mood disorder), accurate medication log
  - Helpful to have corroboration of efficacy from family, significant others, workplace, other healthcare providers including pharmacist

Gourlay D.L. et al. Universal Precautions in Pain Medicine: A Rational Approach to the Treatment of Chronic Pain. Pain Medicine 6(2) 2005; 107-112

sfCare Senior Friendly Care

How to manage pain

Remember:

Ask about pain regularly and assess pain systematically (do not “set and forget”)

Believe the patient and family in their report of pain, and relieving factors

Choose pain control options appropriate for the setting, patient and family (think multimodal)

Deliver interventions in a timely, logical and coordinated fashion (team approach)

Empower **(educate)** patients and families to take control as much as possible

Carr, Eur J Pain 2001
Frenette, Crit Care Clin, 1999

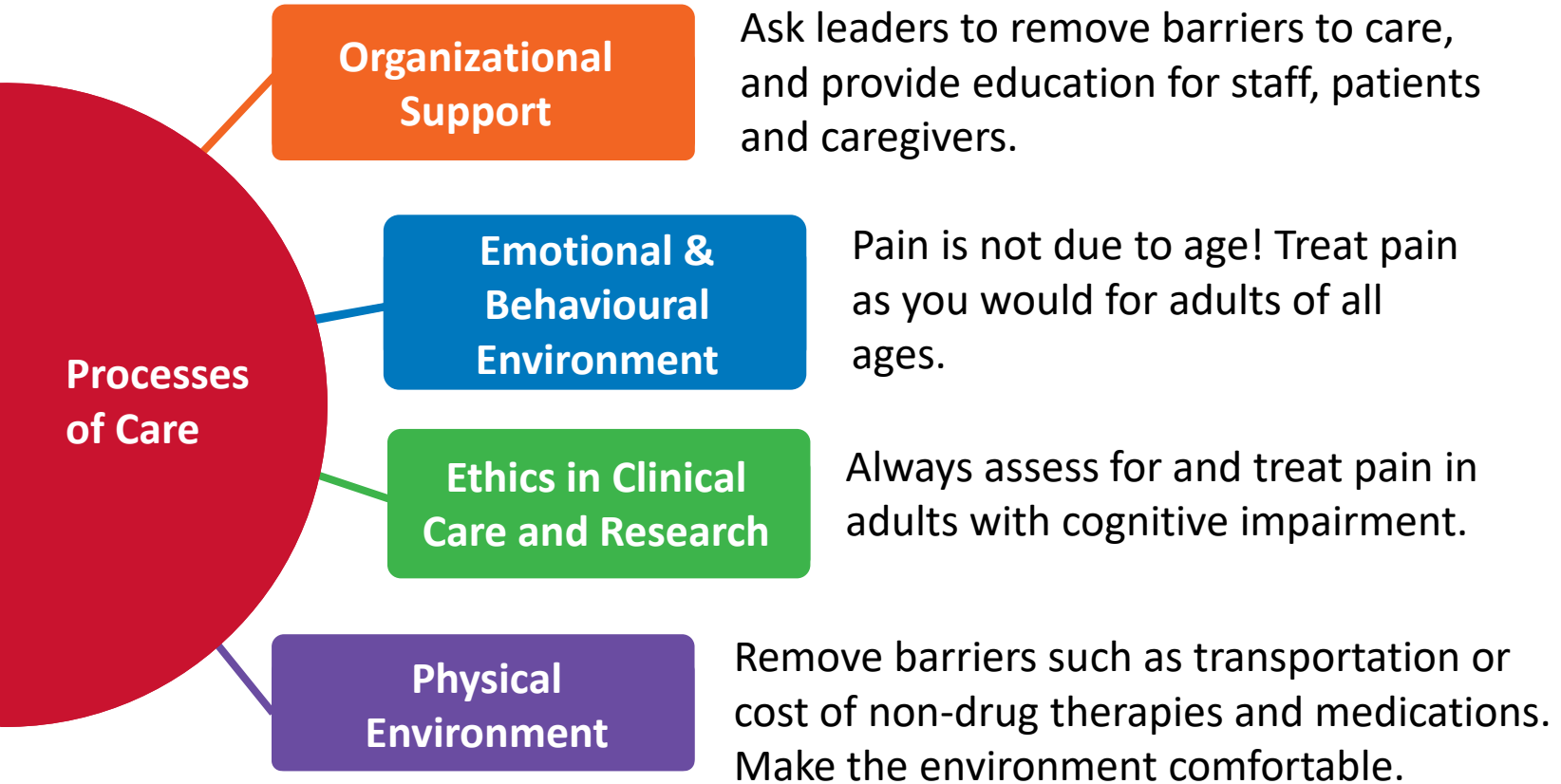
Summary

Consider the outcome of the pain management plan:

1. Reduction in pain
2. Minimization of adverse effects / risk
3. Improvement in activity (leisure, socialization, mobility)
4. Improved quality of life / well-being / satisfaction
5. Reduced polypharmacy / health care utilization / cost

The senior friendly approach

How all healthcare providers can address pain using a **senior friendly care** approach



Discussion questions

- What are some of your barriers to pain management in older adults?
- What is one pain management strategy you might start using after going through this module?
- How can each member of your interprofessional team contribute to pain management?

References

- American Society Geriatrics (2009) Pain Management in Elderly Guidelines
- Fine, Perry G. Treatment Guidelines for the Pharmacological Management of Pain In Older Persons. Pain Medicine 2012; 13: s57-66
- www.geriatricpain.org [U of Iowa]
- www.healthinaging.org [AGS]
- National Institute on Aging
- National Center on Caregiving
- CDC and Prevention

sfCare Senior Friendly Care

The sfCare Learning Series received support from the Regional Geriatric Programs of Ontario, through funding provided by the Ministry of Health and Long-Term Care.

RGPs OF ONTARIO

sfCare™ Senior Friendly Care

V1 July 2019