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Together for Tomorrow

Geriatric Syndrome

Chronic/Persistent Pain

Learning Objectives

Chronic/Persistent Pain

At the conclusion of the module on chronic/persistent pain and the older adult, the learner should:

KNOW

- Differentiate Nociceptive, Neuropathic, and Nociplastic pain
- Effective interventions for each pain classification

DO

- Practice from an age-friendly, biopsychosocial foundation
- Screen, assess, refer, and treat

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Case

Mr. Wells

Mr. Wells is 68 years old, lives alone, and has recently retired from 45 years of full-time work as a licensed electrician. He continues to work part-time to supplement his income and stay active.

He is 5'10," weights 240 lbs (BMI = 34.4), and has a 25 year history of chronic low back pain and bilateral knee osteoarthritis (OA). He also has HTN and T2D, for which he is prescribed metformin and lisinopril. Neither is well managed.

Mr. Wells is a nonsmoker, says he gets enough exercise at work, and consumes "a few" alcoholic drinks a week (primarily beer).

Mr. Wells is seeing his PCP because he reports increased tingling and burning in his feet and new complaints of headaches, diffuse musculoskeletal pain, and feeling fatigued. He tells his PCP that he takes ibuprofen and acetaminophen everyday for his pain but doesn't think that those drugs are doing much of anything, and he'd like something stronger.

The PCP runs labs, tells him to follow his diet and get some exercise, to take ibuprofen regularly for his pain complaints and to reschedule to come back in two weeks.

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Definitions

- Geriatric Syndrome
- Screening
- Assessment
- Treatment
- Chronic/Persistent Pain

Definitions

Geriatric Syndrome

- A multifactorial condition that is prevalent in older adults and develops when an individual experiences accumulated impairment in multiple systems that compromise their compensatory abilities.

- Common geriatric syndromes include Cognitive Impairment, **Chronic/Persistent Pain**, Delirium, Depression, Falls, Frailty, Incontinence, Malnutrition, Polypharmacy, Pressure Injury, and Sleep Disturbance.

Definitions

Screenings

- Screening tools are tests or measures to evaluate for diseases and health conditions before symptoms appear.
- Screenings allow for earlier management and referral to appropriate providers.
- An age-friendly provider conducts screenings for conditions that are prevalent in older adults.

Definitions

Assessments

- Assessment tools are tests and measures used to evaluate the patient's presenting problem, confirm a diagnosis, determine its severity, and aid in identifying specific treatment options.

- An age-friendly provider uses appropriate assessments, makes referrals, and communicates with the patient's care providers.

Definitions

Treatment

- An age-friendly care provider considers the 4Ms when making treatment recommendations so that what matters to the patient is always part of the plan of care.

- An age-friendly provider communicates with the patient, family, and interdisciplinary team.

Definitions

Chronic/Persistent Pain

- Pain that lasts for more than three months and/or beyond the expected healing time period.
- It may or may not be associated with an identifiable cause, can happen anywhere in the body, and may present as musculoskeletal, neurologic, visceral, or referred pain.
- It often interferes with daily life and can lead to depression and anxiety. Increasing age is associated with a greater incidence of chronic/persistent pain.

GLOSSARY

Aging and Pain

Impacts of Persistent Pain in Older Adults

Societal Costs
costs due to the complexity of treatment, mismanagement – incorrect treatment, undertreatment, overtreatment.

Prevalence
the estimated prevalence of chronic pain is 25–50% in community-dwelling elders, reaching up to 80% in individuals living in residential care settings.

Chronic LBP
the prevalence of low back pain among older adults ranges from 21 to 75% leading to functional disability in 60%

Medications
Efficacy and safety of pharmacological treatments for chronic pain in older adults have not been fully evaluated.

The Experience
The experience of chronic pain may change with increased age.

Personal Costs
anxiety, depression, insomnia, and poor quality of life levels.

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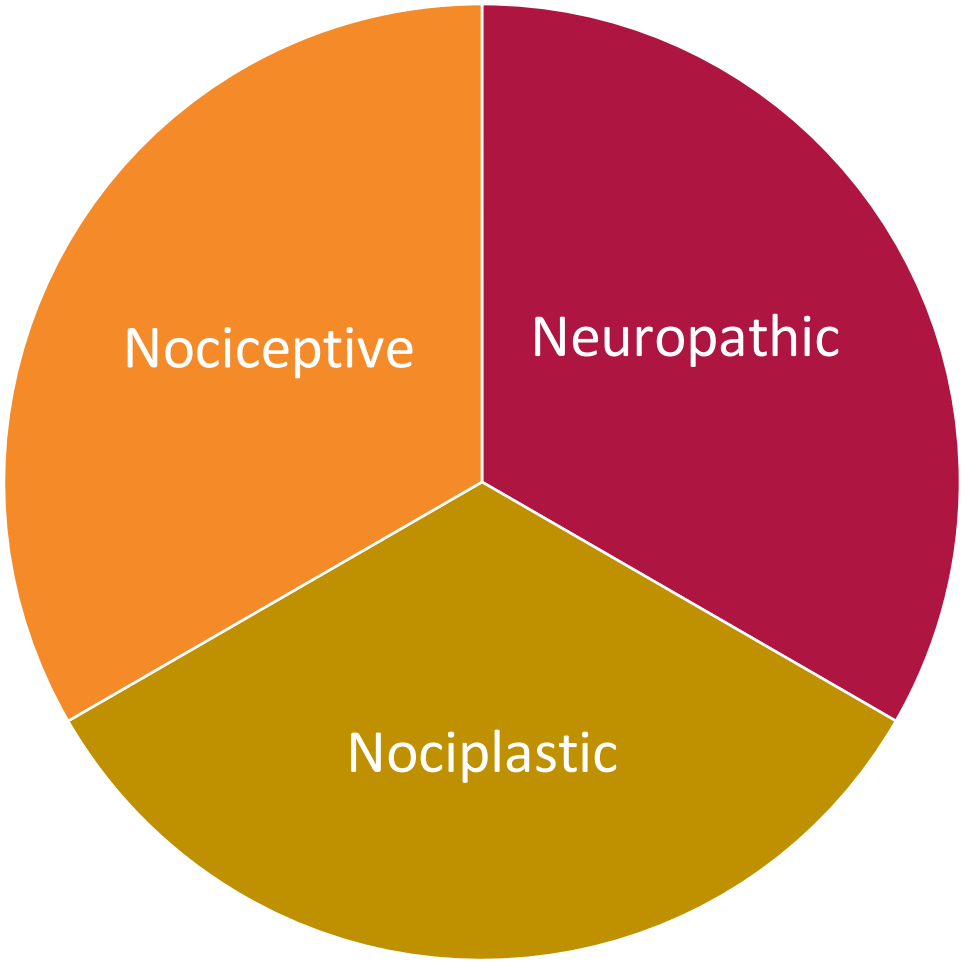
Types of Pain

Pain Classifications



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Nociceptive Pain

What is it?

Pain from actual or threatened damage to non-neural tissue

How:

Activation of nociceptors – sensory receptors found in skin, muscle, joints, bone, and viscera.

Examples:

- Acute nociceptive pain: pain related to tissue damage and activation of nociceptors from a cut, broken bone, muscle pain, tendon damage
- Chronic nociceptive pain: pain in muscles, bones, joints, or tendons that arises from an underlying disease such as persistent inflammation in rheumatological diseases or structural changes in osteoarthritis

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Neuropathic Pain

What is it?

Pain caused by a lesion or disease of the somatosensory nervous system. It is not caused by the activation of nociceptors.

How:

Nerve pressure or nerve damage after surgery or trauma, viral infections, vascular malformations, alcoholism, neurological conditions such as multiple sclerosis, and metabolic conditions such as diabetes. It may also be a side effect of certain medications.

Examples:

- Tingling, burning sensations in the feet of a patient:
  - T2D
  - HIV-associated neuropathy
  - Levofloxacin

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Nociplastic Pain

What is it?

Pain that arises from altered nociception despite no clear evidence of actual or threatened tissue damage causing the activation of peripheral nociceptors or no evidence of disease or lesion of the somatosensory system causing the pain

How:

Central sensitization – increased responsiveness of nociceptive neurons in the CNS to normal or subthreshold afferent input. CS is defined as an amplification of neural signaling within the CNS that elicits pain hypersensitivity

Peripheral sensitization – increased responsiveness or reduced threshold to nociceptive neurons in the periphery

Examples:

- Fatigue, generalized, nonspecific pain in the upper quadrant, head, and jaw 6 months after a shoulder injury.

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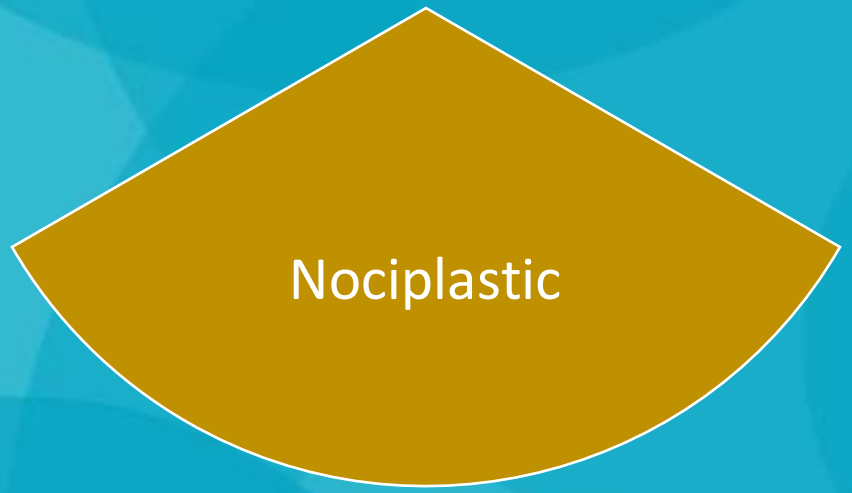
Nociplastic Pain



Signs and Symptoms

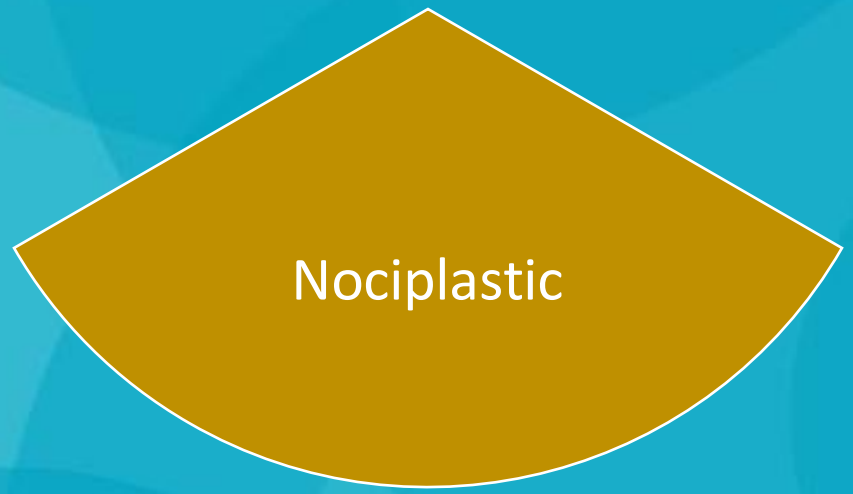
Hyper-responsiveness to painful and nonpainful sensory stimuli

- Hyperalgesia: Increased pain from a stimulus that normally provokes pain
- Allodynia: Pain from a stimulus that does not normally provoke pain.

Associated features, including:

- Fatigue
- Sleep disturbance
- Cognitive disturbances
- Hypersensitivity to environmental stimuli
- Anxiety and depressed mood

Nociplastic Pain



Differentiating Features

- Hyperactivity and connectivity in and between brain regions involved in pain
- Decreased activity of brain regions involved in pain inhibition
- Elevated cerebrospinal fluid substance P and glutamate concentrations, decreased GABAergic transmission
- Changes in the size and shape of grey and white matter regions involved in pain processing
- Glial cell activation

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Risk Factors

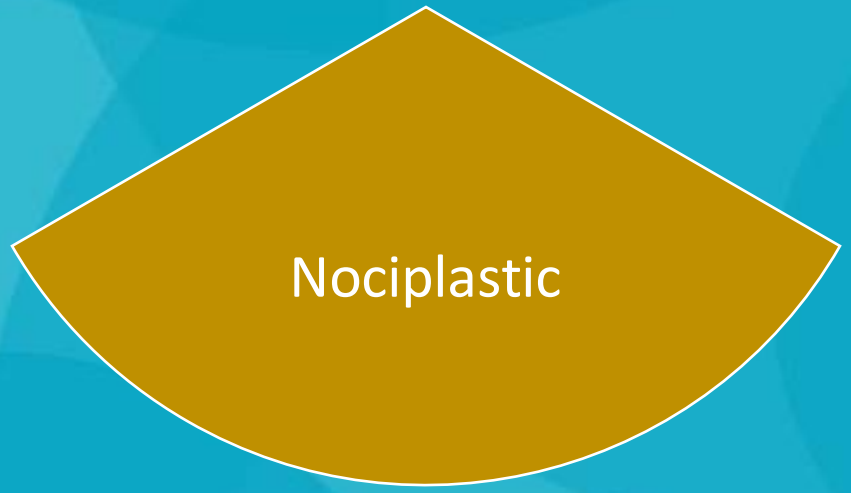
Chronic/Persistent Pain

BIOLOGIC: Autoimmune inflammatory diseases, Advanced age, Metabolic disorders, Female

PSYCHOLOGICAL: Mental health diagnoses

SUBSTANCE ABUSE: Tobacco, alcohol, sedatives, opioids

Risk Factors



Chronic/Persistent Pain

SOCIAL: Loneliness, low health literacy, limited access to medical and behavioral care

SURGICAL HISTORY: Past surgeries, repeated surgeries

PRIOR PAIN: Poorly controlled pain post-op, poorly managed prior pain episodes

Screening

Assessment

Treatment

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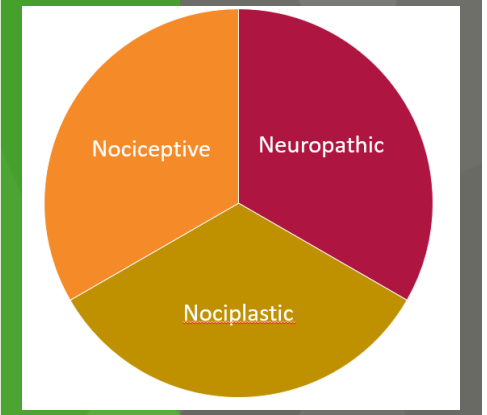
Think Back to the 3 Pain Classifications

Screening for Types of Pain

- **Do you have pain?**
- **Based on descriptors provided and medical history:**
  - **Nociceptive**
    - Is it managed by current interventions (NSAIDS, activity)
  - **Neuropathic**
    - Do you experience new or worsening burning sensations, pins and needles?
  - **Nociplastic**
    - Are you very sensitive to noises, temperature changes, or bright lights?
    - Are you experiencing widespread pain, general fatigue, or headaches?



Screening

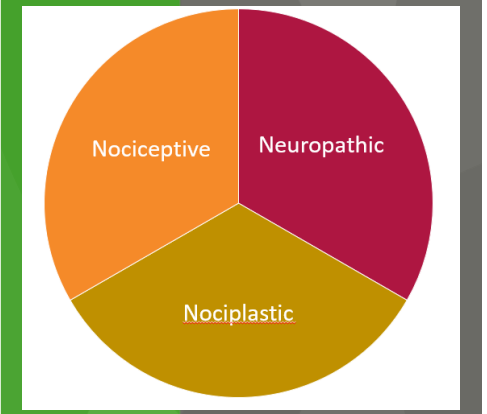
Patient Health Questionnaire-4 (PHQ-4)

Instructions: Over the last two weeks, how often have you been bothered by the following problems?

0 = Not at all; 1 = Several days; 2 = More than half the days; 3 = Nearly every day

1. Feeling nervous, anxious, or on edge
2. Not being able to stop or control worrying
3. Feeling down, depressed, or hopeless
4. Little interest or pleasure in doing things

Scoring Instructions:
Total score is determined by adding together the scores of each of the four items. Scores are rated as normal (0-2), mild (3-5), moderate (6-8), and severe (9-12).
Total score ≥3 for first 2 questions suggests anxiety.
Total score ≥3 for last 2 questions suggests depression.



Total Summed Score

- Anxiety Score
- Depression Score

Numeric Pain Questionnaire

The patient is asked to make three pain ratings, corresponding to:

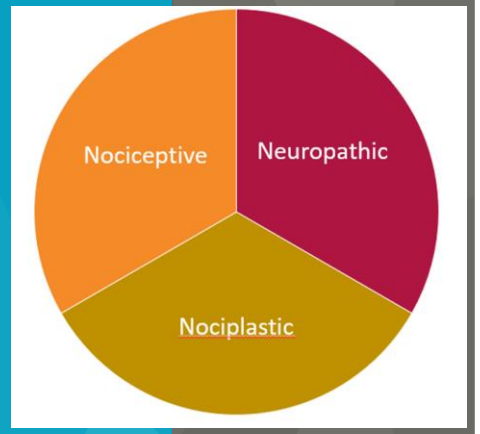
current

best

worst

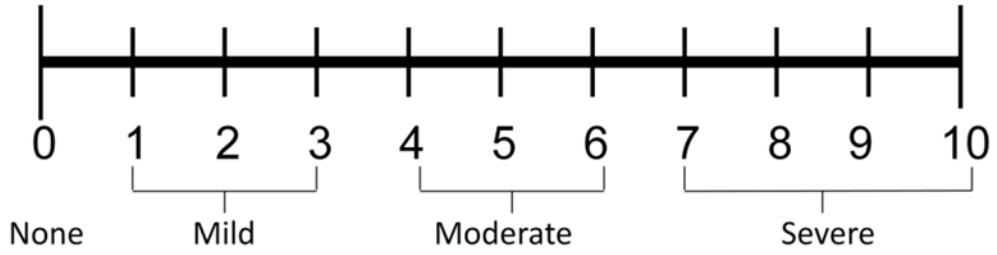
experienced over the past 24 hours.

The average of the 3 ratings is used to represent the patient's level of pain over **the previous 24 hours**



Patient Instructions (adopted from (McCaffery, Beebe et al. 1989):

"Please indicate the intensity of current, best, and worst pain levels over the past 24 hours on a scale of 0 (no pain) to 10 (worst pain imaginable)"



PEG Scale (Pain, Enjoyment, General Activity)

PEG Scale Assessing Pain Intensity and Interference (Pain, Enjoyment, General Activity)

1. What number best describes your pain on average in the past week?

0	1	2	3	4	5	6	7	8	9	10
No Pain										Pain as bad as you can imagine

2. What number best describes how, during the past week, pain has interfered with your enjoyment of life?

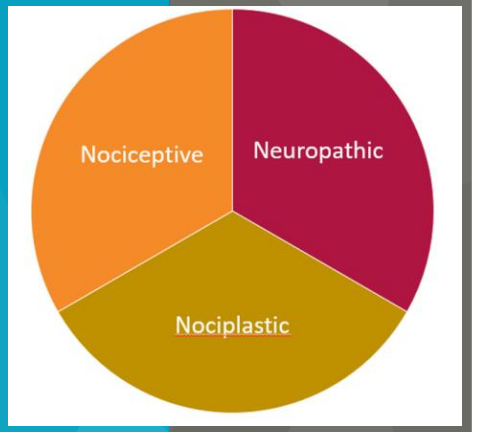
0	1	2	3	4	5	6	7	8	9	10
	Does not interfere								Completely interferes	

3. What number best describes how, during the past week, pain has interfered with your general activity?

0	1	2	3	4	5	6	7	8	9	10
	Does not interfere								Completely interferes	

Computing the PEG Score.
Add the responses to the three questions, then divide by three to get a mean score (out of 10) on overall impact of points.

Using the PEG Score.
The score is best used to track an individual's changes over time. The initiation of therapy should result in the individual's score decreasing over time.



The patient is asked to make three pain ratings, corresponding to:

Average
Enjoyment of life
General activity

over the past week

The average of the 3 ratings is used to represent the patient's level of pain **over the past week**

Neuropathic Pain

Examples include:

- Leeds Assessment of Neuropathic Symptoms and Signs Pain Scale (LANNS)
- Self LANNS (sLANNS)
- Douleur Neuropathique (DN4)
  - valid for diabetic neuropathies
- painDETECT

Neuropathic

The LANNS and s-LANNS

- 7-item pain scale
  - sensory descriptors and sensory examination.
- 5 are symptom related
  - Pins and needles
  - Change color (mottled, redder)
  - Sensitive to touch
  - Electric shocks
  - Hot, burning pain
- 2 are examination items.
  - Rubbing
  - Pressure

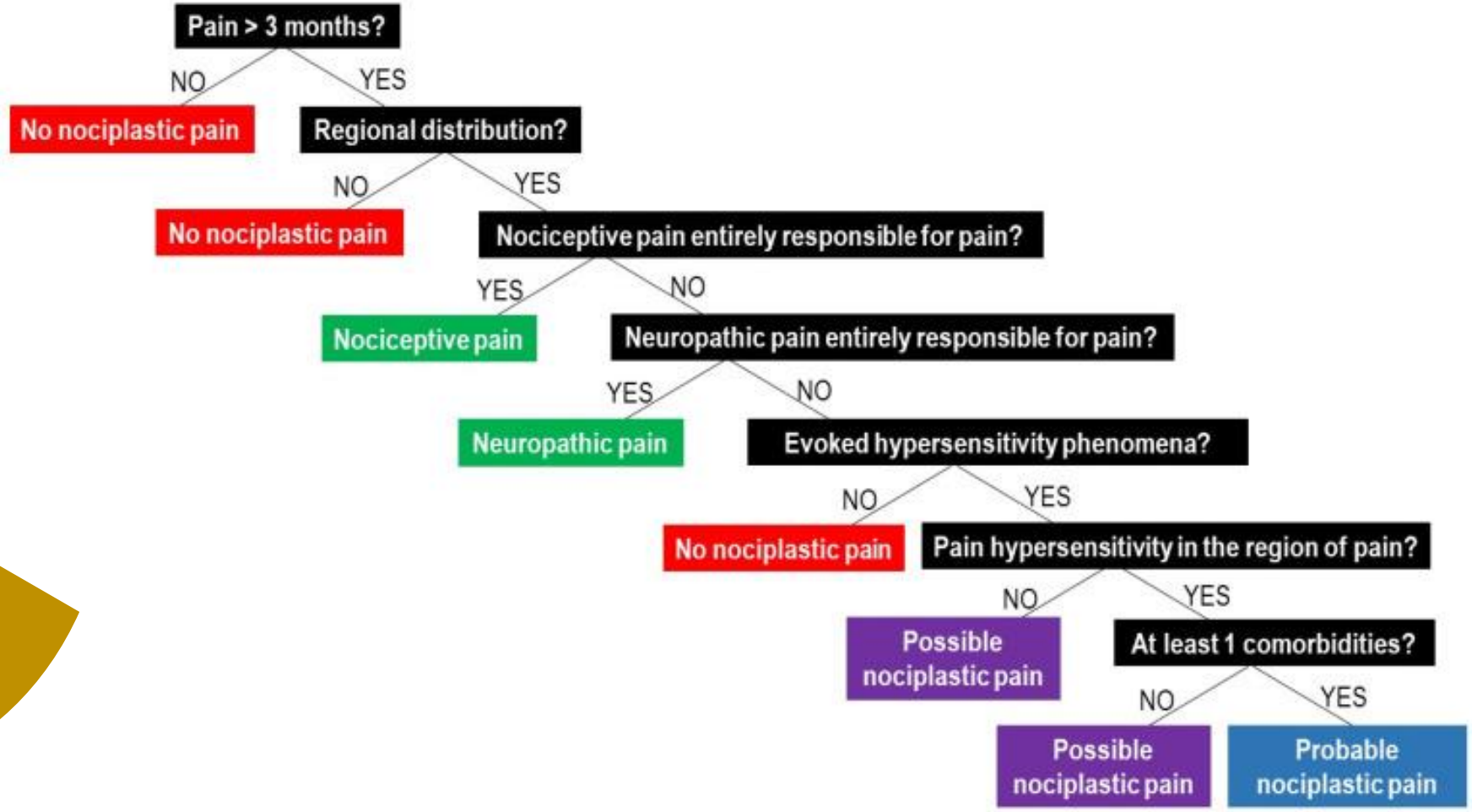
The S-LANSS Pain Score

1.	**In the area where you have pain, do you also have "pins and needles", tingling or prickling sensations?**	
	☐ NO – I don't get these sensations	0
	☐ YES – I get these sensations	5
2.	**Does the painful area change colour (perhaps look mottled or more red) when the pain is particularly bad?**	
	☐ NO – The pain does not affect the colour of my skin	0
	☐ YES – I have noticed that the pain does make my skin look different from normal.	5
3.	**Does your pain make the affected skin abnormally sensitive to touch? Getting unpleasant sensations or pain when lightly stroking the skin might describe this.**	
	☐ NO – The pain does not make my skin abnormally sensitive to touch.	0
	☐ YES – My skin in that area is particularly sensitive to touch.	3
4.	**Does your pain come on suddenly and in bursts for no apparent reason when you are completely still? Words like "electric shocks", jumping and bursting might describe this.**	
	☐ NO – My pain doesn't really feel like this.	0
	☐ YES – I get these sensations often.	2
5.	**In the area where you have pain, does your skin feel unusually hot like a burning pain?**	
	☐ NO – I don't have burning pain	0
	☐ YES – I get burning pain often	1
6.	**Gently rub the painful area with your index finger and then rub a non-painful area (for example, an area of skin further away or on the opposite side from the painful area). How does this rubbing feel in the painful area?**	
	☐ The painful area feels no different from the non-painful area	0
	☐ I feel discomfort, like pins and needles, tingling or burning in the painful area that is different from the non-painful area.	5
7.	**Gently press on the painful area with your finger tip and then gently press in the same way onto a non-painful area (the same non-painful area that you chose in the last question). How does this feel in the painful area?**	
	☐ The painful area does not feel different from the non-painful area.	0
	☐ I feel numbness or tenderness in the painful area that is different from the non-painful area.	3
	Total score:	

Scoring a score of 12 or more suggests pain of predominantly neuropathic origin

Source: Bennett, M *et al* J Pain, Vol 6, No 3 March, 2005 pp 149–158 The S-LANSS Score for Identifying Pain of Predominantly Neuropathic Origin: Validation for Use in Clinical and Postal Research.

Nociplastic Decision Tree (IASP clinical criteria)



Nociplastic

Nociplastic Assessment Tools

Examples include:

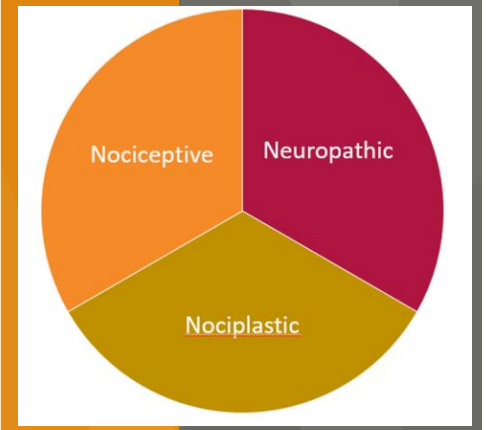
- Central Sensitization Inventory
- McGill Pain Questionnaire

- Self-report outcome measure designed to identify patients who have symptoms that may be related to central sensitization (CS) or central sensitivity syndromes (CSS) such as fibromyalgia, neck injury, temporomandibular joint disorder, migraine/tension headaches, or irritable bowel syndrome

Nociplastic

Treatments/ Management of Pain

- Treatment and management are aligned with the pain classification
- Biopsychosocial approach is critical and includes targeted disease–specific and pain-specific treatments
- Listen to your patient
  - Pain changes – patients with chronic problems will have exacerbations of pain and symptoms,
  - Pain that was initially correctly labelled as chronic nociceptive or neuropathic is now also nociplastic, secondary to a central sensitization mechanism.
  - Consider the 4 Ms:
    - What Matters to the patient
    - What medications need to be changes
    - What about the emotional and cognitive toll of living with chronic pain
    - What impact on mobility has occurred?



Treatments/ Management of Pain

- Nociceptive Pain:
  - Chronic:
    - NSAIDS - low efficacy, Consider pain-relieving anti-depressants
    - Investigate prior or current opioid use
    - Thermal agents (heat, cold)
    - Movement (Exercise, activity, rest)
    - Structural support (Assistive devises, braces/wraps)
    - Transdermal drug delivery (Iontophoresis, phono/sonophoresis, topical patches)
    - Neurostimulation (Transcutaneous neuro stimulation, Frequency-specific microcurrent)
    - Physical therapist

- Neuropathic Pain
    - Antidepressants (Tricyclics or SSRIs)
    - Anti-seizure meds (gabapentin or pregabalin)
    - Topical agents (Lidocaine, capsacin)
    - Movement (Exercise, activity, rest)
    - Structural support (Assistive devices, Orthotics, assistive devises)
    - Neurostimulation (Transcutaneous neuro stimulation, Frequency-specific microcurrent)
    - Physical therapist
    - Nutritionist

Treatments/ Management of Pain

- Nociplastic Pain:
  - Primary intervention – patient education
    - Central sensitization
    - Peripheral sensitization
    - Fear Avoidance
    - Ways to enhance self-efficacy
  - Multimodal management
    - Combination of education, physical therapy, counseling, support groups, and (re)connection to activities and relationships.
    - Refer to a pharmacist for MTM
    - Graded activity engagement: Refer to PT
    - Refer to the engage modules on depression and sleep disturbance for more information

Referral to Community Support

- https://www.cdc.gov/arthritis/interventions/self_manage.htm#CDSMP
- Follow this link to the CDC's information on self-management education workshops
  - Disease-specific:
    - Chronic Disease Self-Management Program (CDSMP)
    - Arthritis Self-Help Course
  - Physical Activity Programs
    - Arthritis Foundation Aquatic Program (AFAP)*
    - Walk With Ease (WWE)–Self-directed

- https://www.caregeorgia.org/list11_georgia_senior_centers.htm
- Common services provided:
  - Evidence-based health and wellness programs
  - Meals and nutrition programs
  - Education classes
  - Daily exercise
  - Low vision and diabetes services

Remember Mr. Wells?

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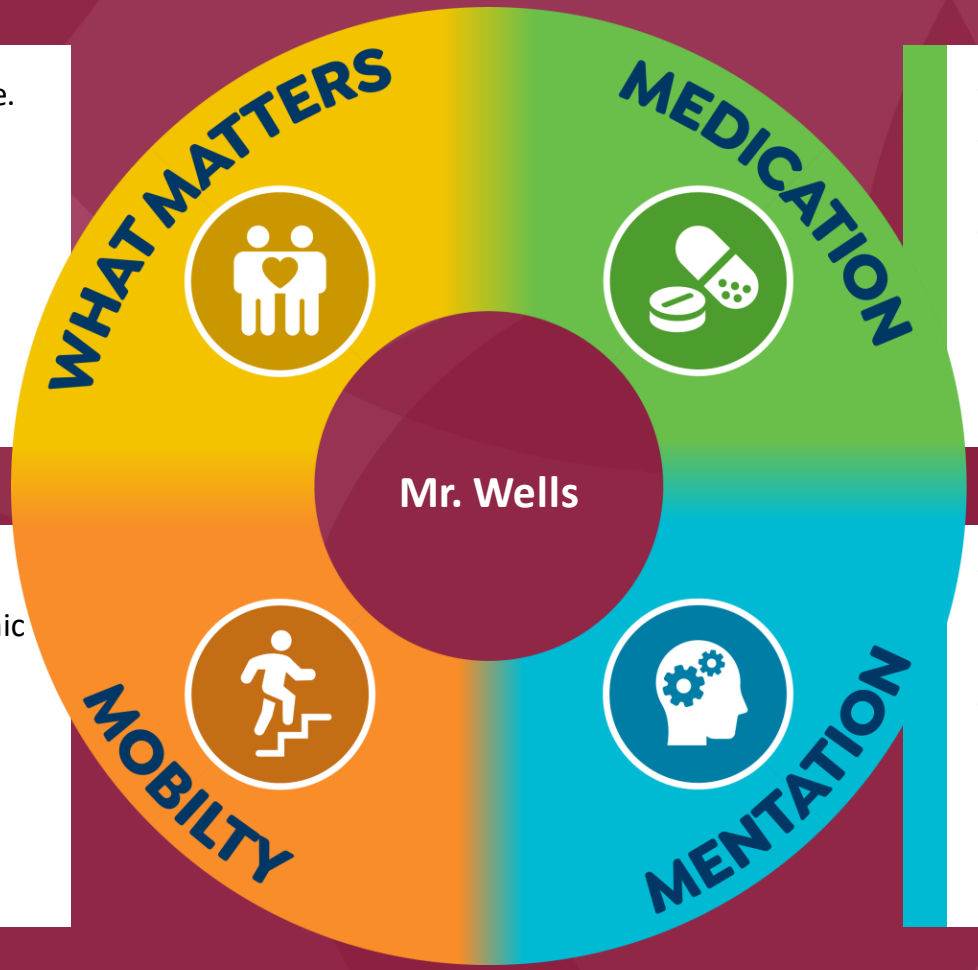
Un-Age-Friendly Care (4Ms)

- PCP ignores his reason for seeking care.

- Told to exercise with no strategy
- No assessment of his knee pain (chronic nociceptive) or foot tingling (neuropathic) or fatigue / diffuse musculoskeletal pain (nociplastic)



- PCP tells him to keep taking ibuprofen
- Does not consider other more appropriate options
- Does not ask about his adherence to meds for T2D or HTN

- Does not inquire about his new status of being retired and possible impacts on his wellbeing
- Does not address his comment about wanting stronger meds

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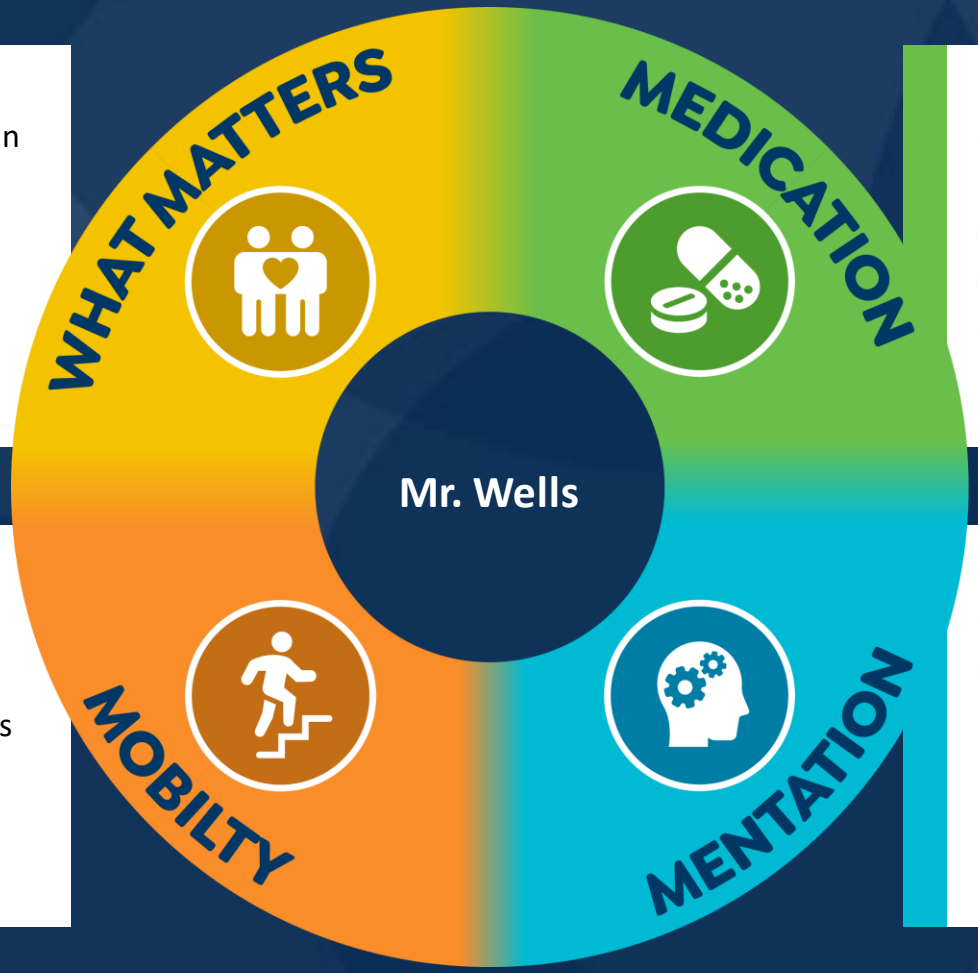
Age-Friendly Care (4Ms)

- PCP listens to descriptions of new symptoms that point to nociplastic pain
- Provide education about diabetes, hypertension, and pain classifications



- Get an accurate picture of current medications
- Encourage less ibuprofen
- Consider other options
- Refer to nutritionist

- Refer to PT
- Patient education on pain
- Exercise prescription and progression
- Referral to community exercise options

- Include a mood screen.
- Ask about his new status of being retired and validate the major life change that retirement can be.

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Chronic / Persistent Pain

Clinical Pearls

Evaluating Chronic/persistent Pain

- Differentiate the type or types of pain through careful assessment
- Consider impacts of co-morbidities on pain presentation

Managing Chronic/Persistent Pain

- Treatments vary depending on type of pain - nociceptive, neuropathic, and nociplastic
- Multimodal management is indicated with referral to other providers experienced in pain management
    - First-line treatment should involve patient education and enhancing self-efficacy

About Engage

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engage is part of Georgia Gear, a multi-institute partnership whose goal is to improve clinical care and quality of life for older adults and their families.

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Geriatric Syndrome

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