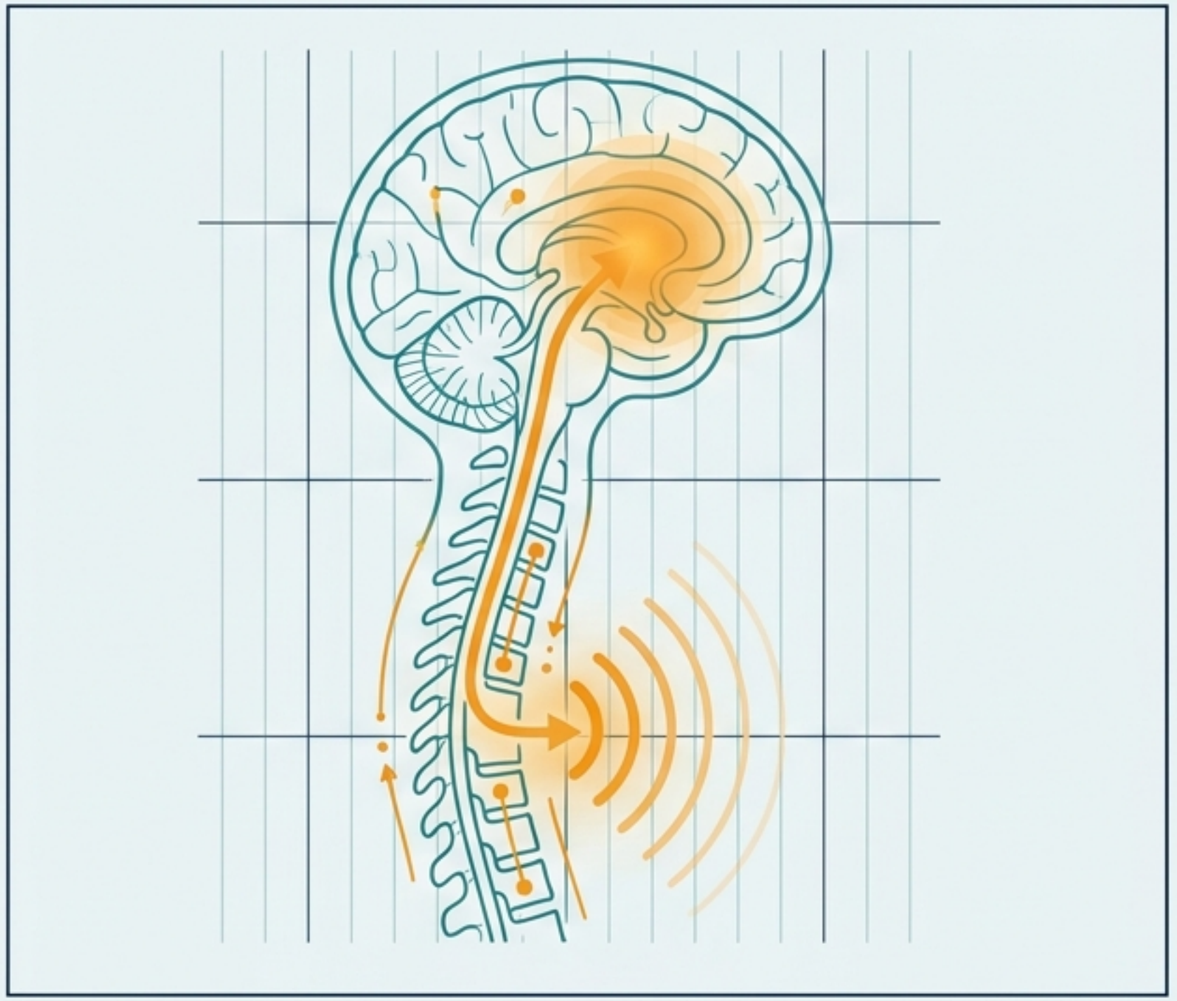
Fibromyalgia is a central sensitisation syndrome, not a peripheral tissue injury.



Pain Amplifier Concept: Amplified CNS Pain Signals

Core Definition

Fibromyalgia represents a fundamental disorder of pain processing — a ‘software’ issue in the central nervous system, characterized by chronic widespread pain, fatigue, sleep disturbance, and cognitive dysfunction.

Clinical Framework

Embedded within the biopsychosocial model, it requires active, multifaceted management rather than passive biomedical cure.

The demographic profile and clinical burden in Australian practice

Prevalence & Demographics

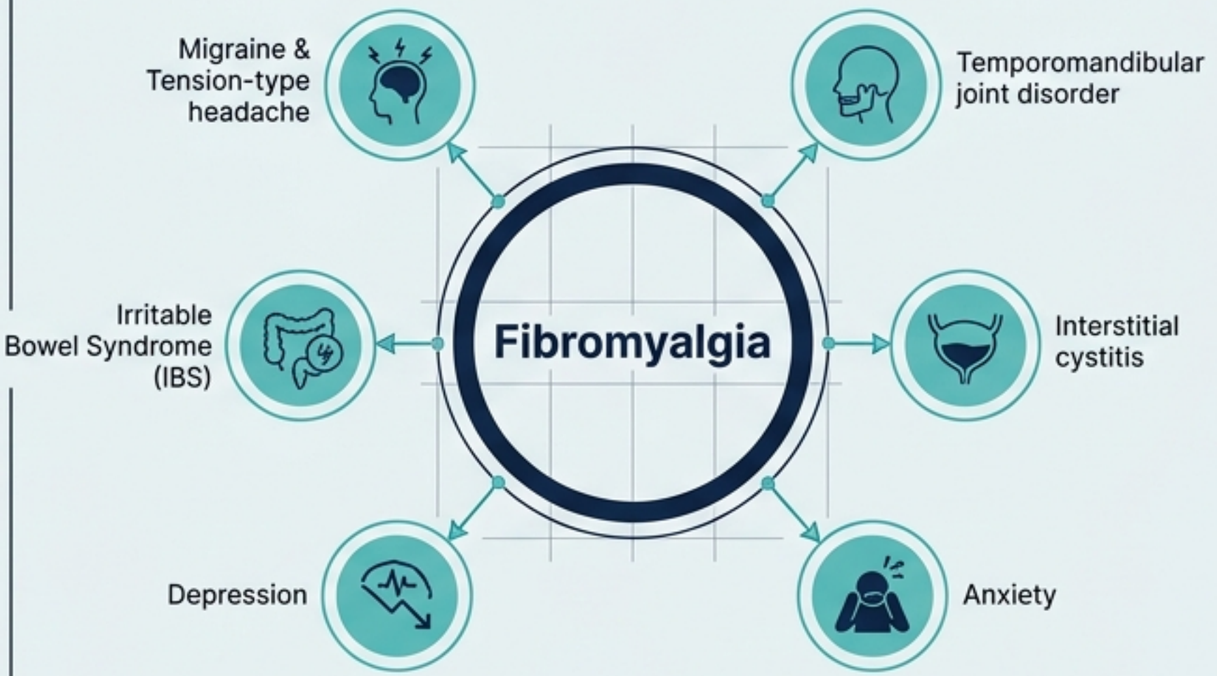
1
2–5%
of the Australian adult population.

3
Peak onset between
30 and 60
years of age.

2
3:1
Female-to-Male ratio.

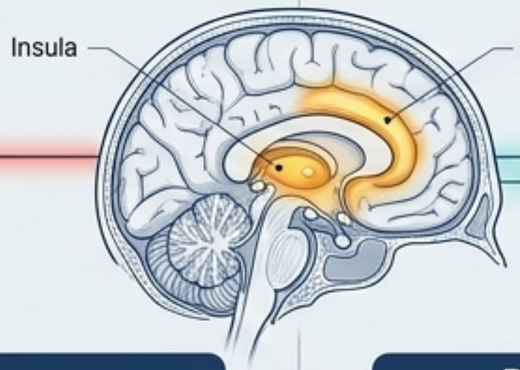
4
10–15%
of the general population experience chronic widespread pain (CWP).

Clinical Cluster Diagram



Systemic Impact: Represents a significant economic burden driven by healthcare utilization, lost productivity, and disability payments.

The central sensitisation amplifier: altered nociceptive processing.



Ascending Facilitation (Turned UP)

- Increased excitability of dorsal horn neurons causes **'wind-up'** and **expanded receptive fields**.
- Driven by neurochemical imbalances: elevated **Substance P** and **Glutamate** in cerebrospinal fluid.

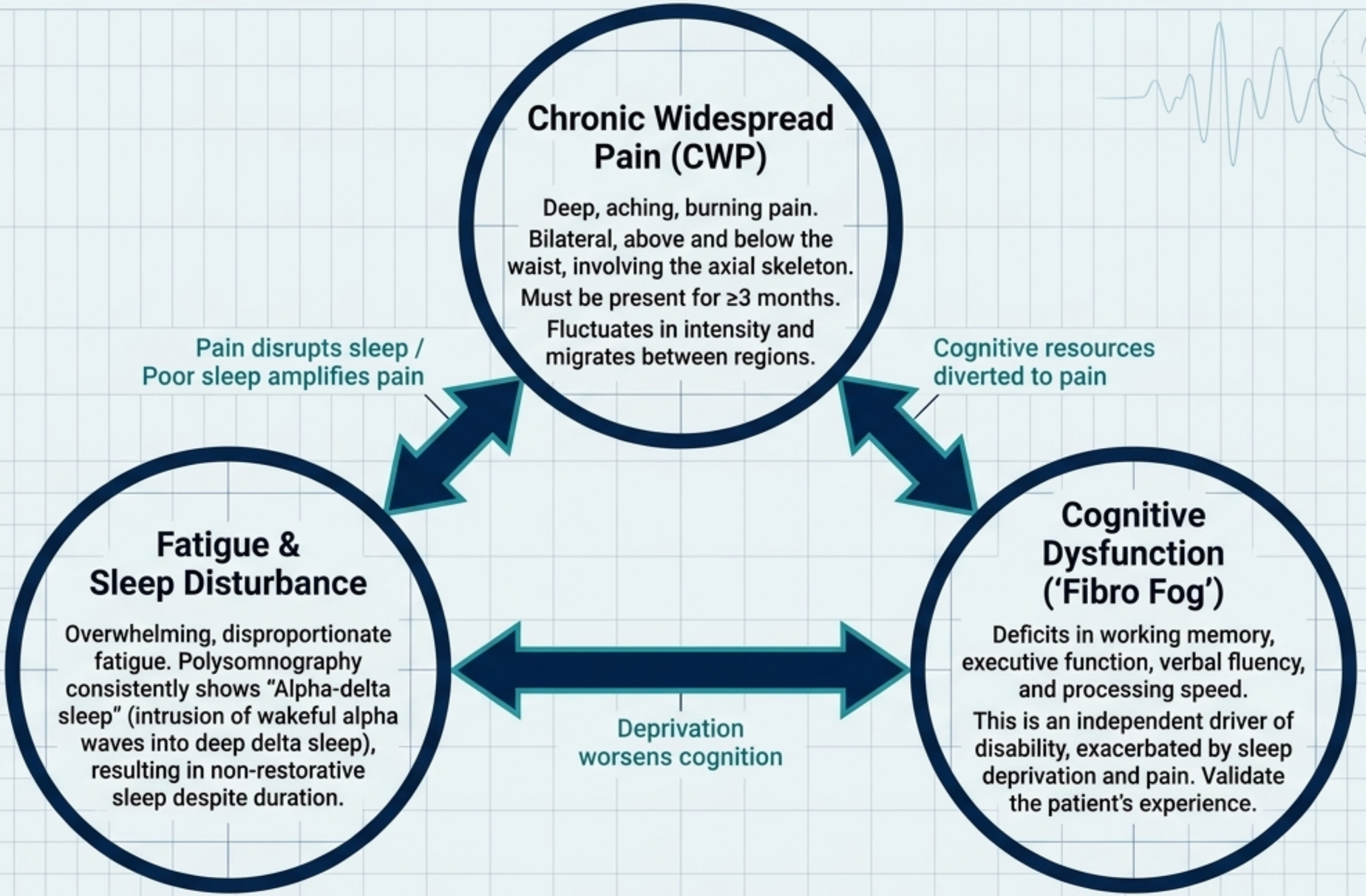
Descending Inhibition Failure (Turned DOWN)

- The brain's natural **pain-dampening pathways** fail to modulate nociceptive input.
- Driven by reduced **Serotonin, Norepinephrine**, and **Dopamine**.

Clinical Correlates:

Results in **allodynia** (pain from non-painful stimuli) and **hyperalgesia** (amplified pain response).
A subset of patients also demonstrate reduced intraepidermal nerve fibre density (**small fibre neuropathy**).

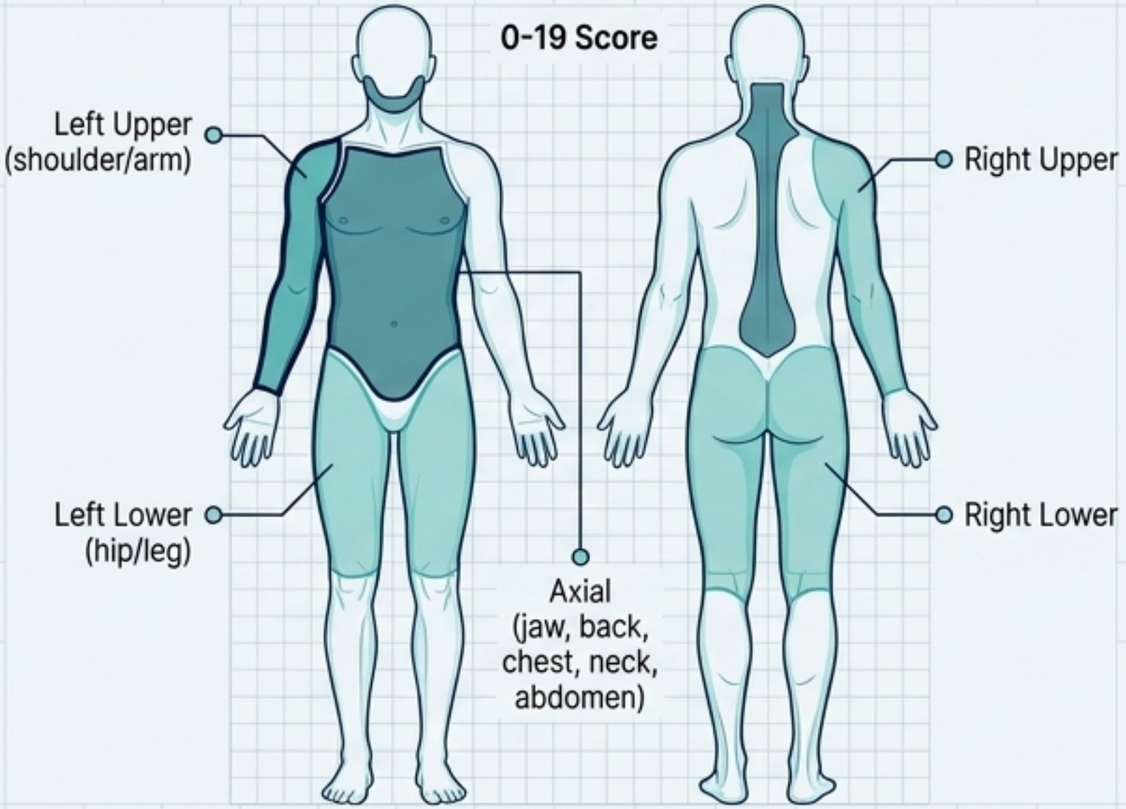
The cardinal symptom triad dictates the clinical presentation.



The 2016 ACR Preliminary Diagnostic Criteria scorecard.

Diagnostic Thresholds: Requires generalised pain (≥4 of 5 regions) AND symptoms present at similar levels for ≥3 months. Requires Widespread Pain Index (WPI) ≥7 + Symptom Severity Scale (SSS) ≥5 OR WPI 4–6 + SSS ≥9. Valid irrespective of other diagnoses.

The WPI Map (0-19 Score)



The SSS Sliders (0-12 Score)

Fatigue

0 1 2 3

Waking unrefreshed

0 1 2 3

Cognitive symptoms

0 1 2 3

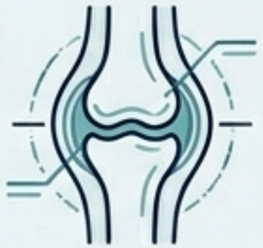
General somatic symptoms

0 1 2 3

Rate each domain from 0 (no problem) to 3 (severe, continuous, life-disturbing).

Targeted exclusion of mimics and comorbid drivers.

Avoid excessive investigation once red flags are excluded.

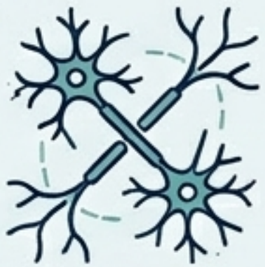


Inflammatory Rheumatic Diseases

Rheumatoid arthritis, systemic lupus erythematosus, polymyalgia rheumatica, spondyloarthropathy. (Check CRP/ESR, ANA/RF if clinically suspected).

Endocrine Disorders

Hypothyroidism (check TFTs), hyperparathyroidism, acromegaly, Cushing syndrome.



Neurological Conditions

Multiple sclerosis, myasthenia gravis, small fibre neuropathy.

Medications & Deficiencies

Rule out statin-induced myopathy, aromatase inhibitors, proton pump inhibitors. Assess for Vitamin D deficiency, iron deficiency (ferritin), and obstructive sleep apnoea (especially if BMI ≥30 or snoring).

Non-pharmacological therapies form the non-negotiable foundation of care.

Graded Exercise Therapy (GET)

The most effective intervention.

Target: 150 mins/week of moderate aerobic activity.

Start low (10-15 mins, 3x/week) and progress slowly to avoid boom-bust cycles.

Aquatic exercise/hydrotherapy is particularly well-tolerated.

Cognitive Behavioural Therapy (CBT)

Strongest psychological evidence base.

Targets maladaptive pain cognitions, catastrophising, and fear-avoidance.

Telehealth delivery is highly effective.

Alternative: Acceptance and Commitment Therapy (ACT).

Australian Medicare Enablers

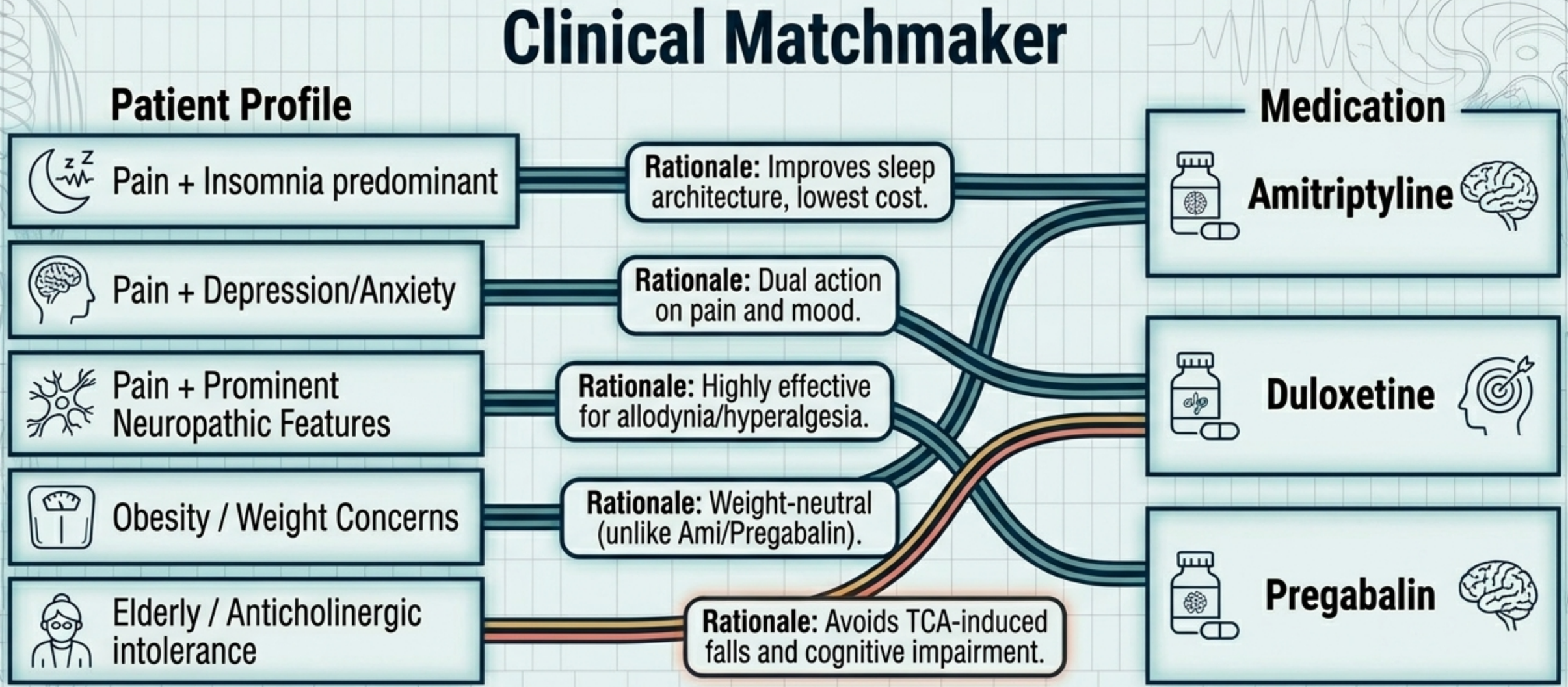
GPMP (Item 721) / TCA (Item 723) for physiotherapy/exercise physiology.

Mental Health Treatment Plan (Items 2700/2701) for up to 10 psychology sessions.

The first-line pharmacotherapy comparison matrix.

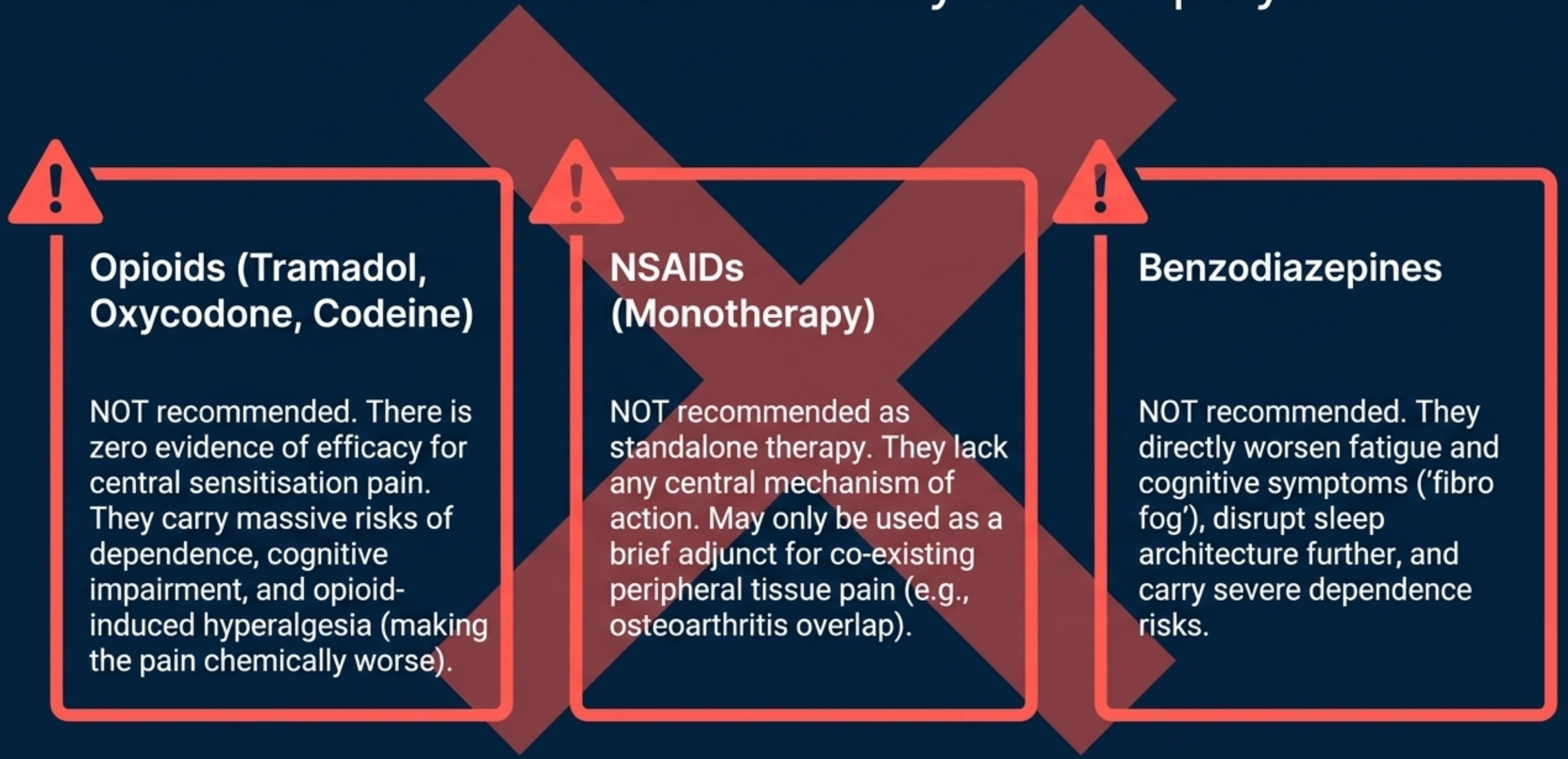
	Amitriptyline (Endep)	Duloxetine (Cymbalta)	Pregabalin (Lyrica)
Class/Mech	TCA. Enhances descending inhibition; improves sleep.	SNRI. Enhances descending inhibition; targets comorbid mood.	α2δ ligand. Reduces excitatory neurotransmitter release.
Dose	Start 5-10mg nocte, titrate to 25-50mg. (Max 75mg for pain).	Start 30mg daily (1-2 weeks), then 60mg daily. (Range 60-120mg).	Start 75mg BD, titrate to 150-225mg BD. (Max 450mg/day).
Risks	Anticholinergic effects (dry mouth, urinary retention), weight gain, ECG changes >50mg.	Transient nausea, hyperhidrosis, elevated BP. Avoid if CrCl <30 or hepatic impairment.	Somnolence, weight gain, peripheral oedema, dependence risk. Mandatory renal dose reduction.
PBS Status	General Benefit.	Authority Required.	Authority Required.

Tailoring pharmacotherapy to the predominant clinical phenotype.



Note: Combination therapy (e.g., Ami + Pregabalin) may be considered if monotherapy fails. Avoid Ami + Dulo (serotonin syndrome risk).

Medications that lack efficacy and amplify harm.



Opioids (Tramadol, Oxycodone, Codeine)

NOT recommended. There is zero evidence of efficacy for central sensitisation pain. They carry massive risks of dependence, cognitive impairment, and opioid-induced hyperalgesia (making the pain chemically worse).

NSAIDs (Monotherapy)

NOT recommended as standalone therapy. They lack any central mechanism of action. May only be used as a brief adjunct for co-existing peripheral tissue pain (e.g., osteoarthritis overlap).

Benzodiazepines

NOT recommended. They directly worsen fatigue and cognitive symptoms (‘fibro fog’), disrupt sleep architecture further, and carry severe dependence risks.

Navigating complex presentations and special populations.

Pregnancy (Category C/B3)

Non-pharmacological strategies are first-line.

Avoid Duloxetine in 3rd trimester (neonatal withdrawal).

Amitriptyline has limited data but low risk at low doses.

Paracetamol for acute flares.

Paediatrics & Adolescents

Juvenile Primary Fibromyalgia Syndrome (13-18yo females).

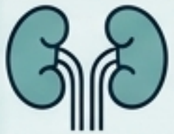
Strict preference for physiotherapy, CBT, and school accommodations.

Pregabalin/Duloxetine not established.
Specialist supervision required.

Elderly (≥65 years)

Avoid Amitriptyline (high anticholinergic burden, falls, urinary retention). Duloxetine preferred but monitor BP.

Pregabalin requires low starting dose (25mg BD) due to age-related eGFR decline.

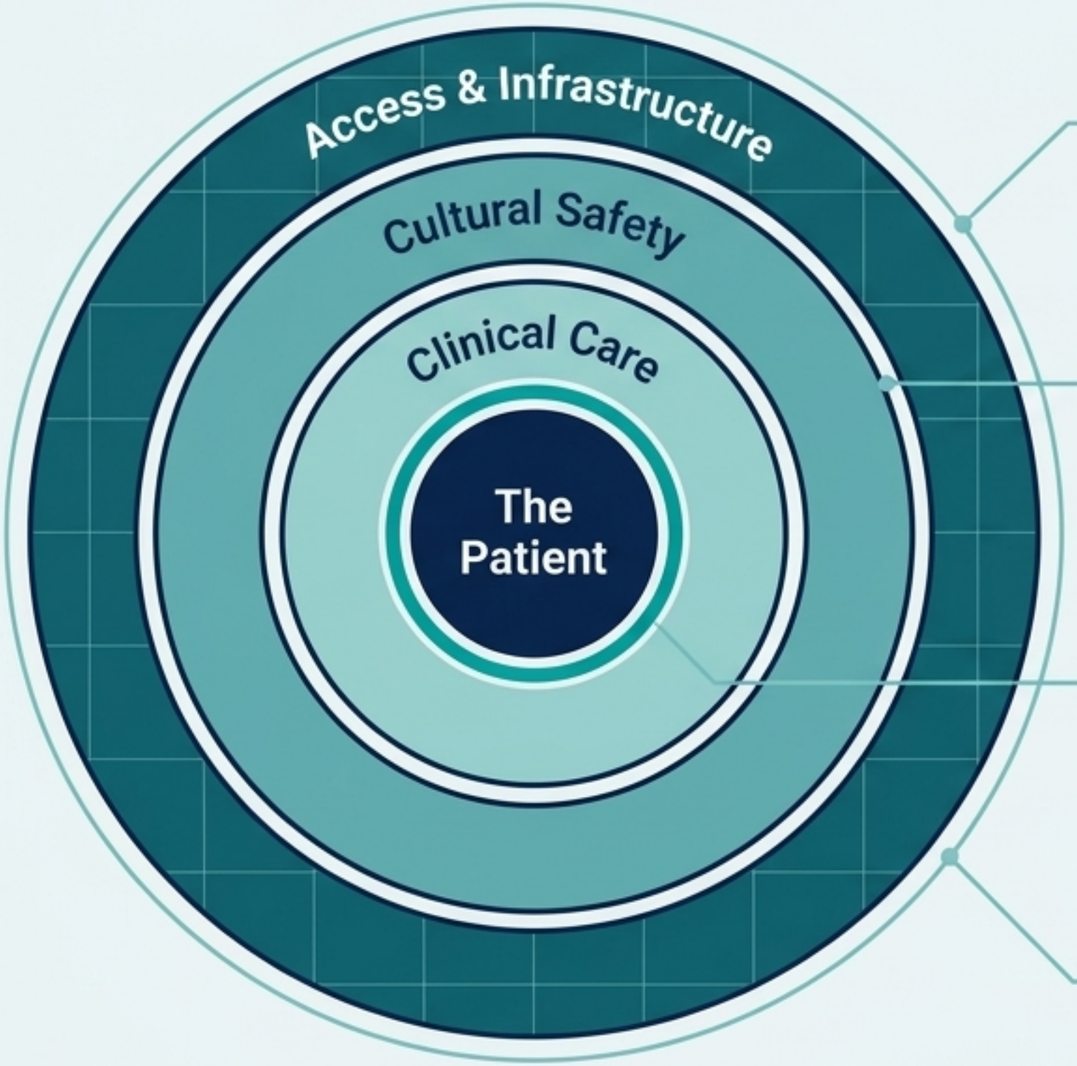


Renal & Hepatic Impairment

Renal: Pregabalin requires mandatory dose reduction (e.g., max 300mg if CrCl 30-60). Avoid Duloxetine if CrCl <30.

Hepatic: Pregabalin preferred (minimal hepatic metabolism). Avoid Duloxetine and Amitriptyline in severe liver disease.

Culturally safe, integrated care for Aboriginal and Torres Strait Islander Australians.



The Burden

Chronic pain affects ATSI populations at 1.5–2 times the rate of non-Indigenous Australians, compounded by intergenerational trauma and socioeconomic determinants.

Cultural Safety

Utilize yarning-based consultations. Acknowledge social and emotional wellbeing (connection to land, culture, and community). Never dismiss pain reporting.

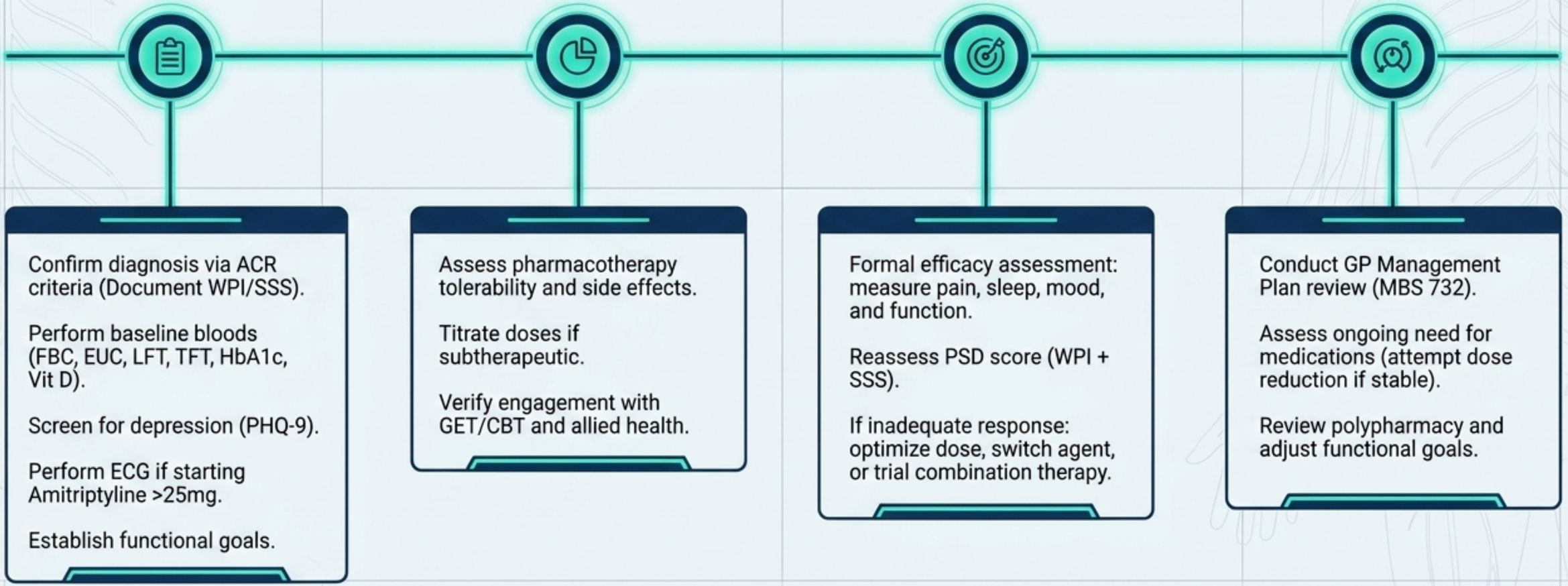
Access & Infrastructure

Leverage Aboriginal Community Controlled Health Organisations (ACCHOs) as primary care hubs. Utilize specific telehealth MBS items to bypass remote specialist shortages. Ensure Closing the Gap (CTG) PBS co-payment registration to remove medication cost barriers.

Clinical Integration

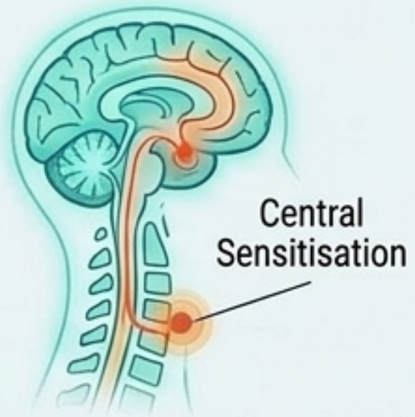
Integrate within chronic disease management due to high rates of comorbid diabetes, renal disease (**watch Pregabalin dosing**), and cardiovascular disease.

The longitudinal monitoring framework



Synthesis: Aligning the clinical model with the biological reality.

The Neurological Blueprint



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Biopsychosocial Care Plan

Multimodal Neuroplasticity Interventions

The Reality

Fibromyalgia is a measurable, centralized pain syndrome, not a psychological manifestation or peripheral injury.

The Solution

Because the nervous system is the target, management must rely on neuroplasticity.

Graded exercise and cognitive therapy physically rewire pain pathways, supported by medications that alter neurochemical signaling.

The Clinical Mandate

Validate the patient's pain.

Avoid opioids.

Build a foundation of movement and psychological support.

Treat the entire nervous system, not just the localized pain.