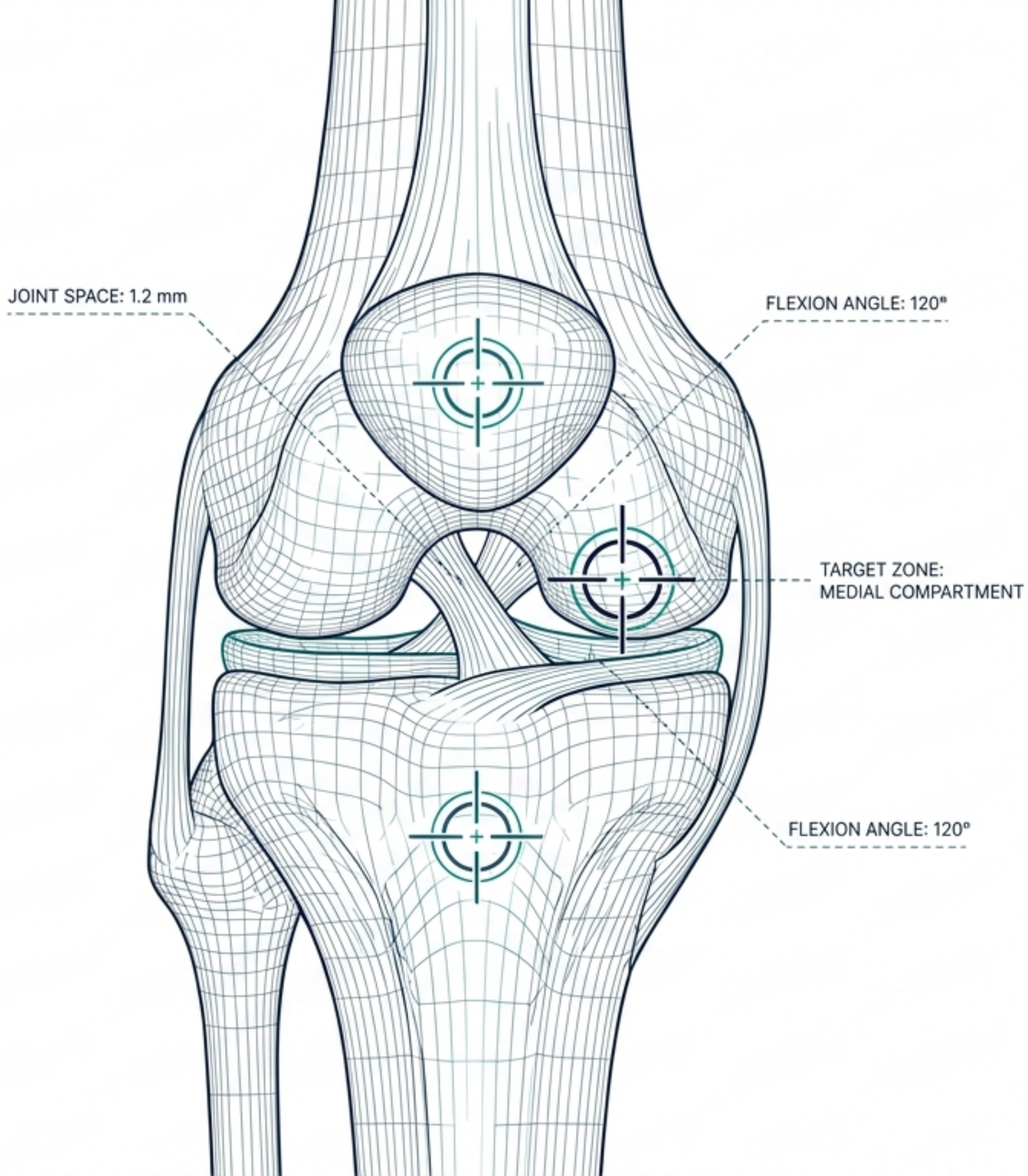
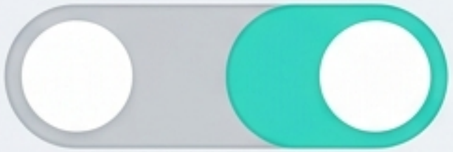
Modernizing Osteoarthritis Management

The 2026 Clinical Playbook for Primary Care

Moving beyond wear and tear to precision, movement-based therapy.



Outdated Dogma  Current Paradigm

Outdated Dogma	Current Paradigm
Wear and tear of cartilage	Whole-organ disease with inflammation
Routine X-rays to confirm	Clinical diagnosis via heuristics
Analgesics and rest	Structured load-bearing exercise
Inevitable surgical replacement	Modifiable trajectory

Burden of Disease Dashboard

Gender Divide

1.5:1 Female-to-Male (Knees), **2:1** (Hands)

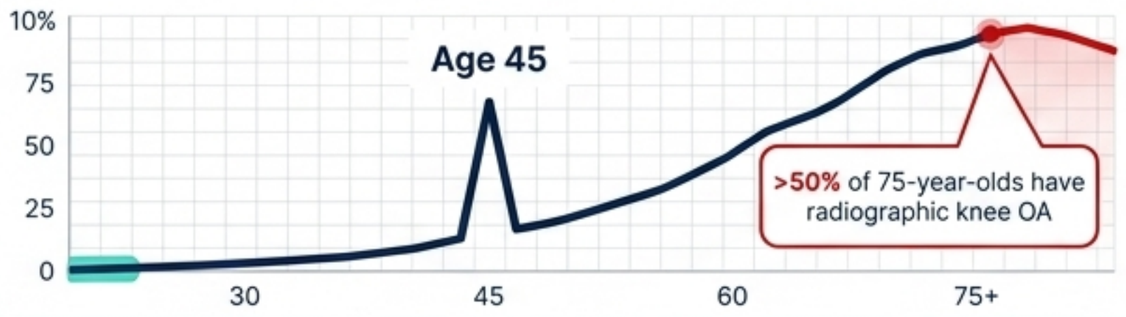
2,100,000

Australians affected

(8.3% of population)

$3.5B

Annual Australian health system costs

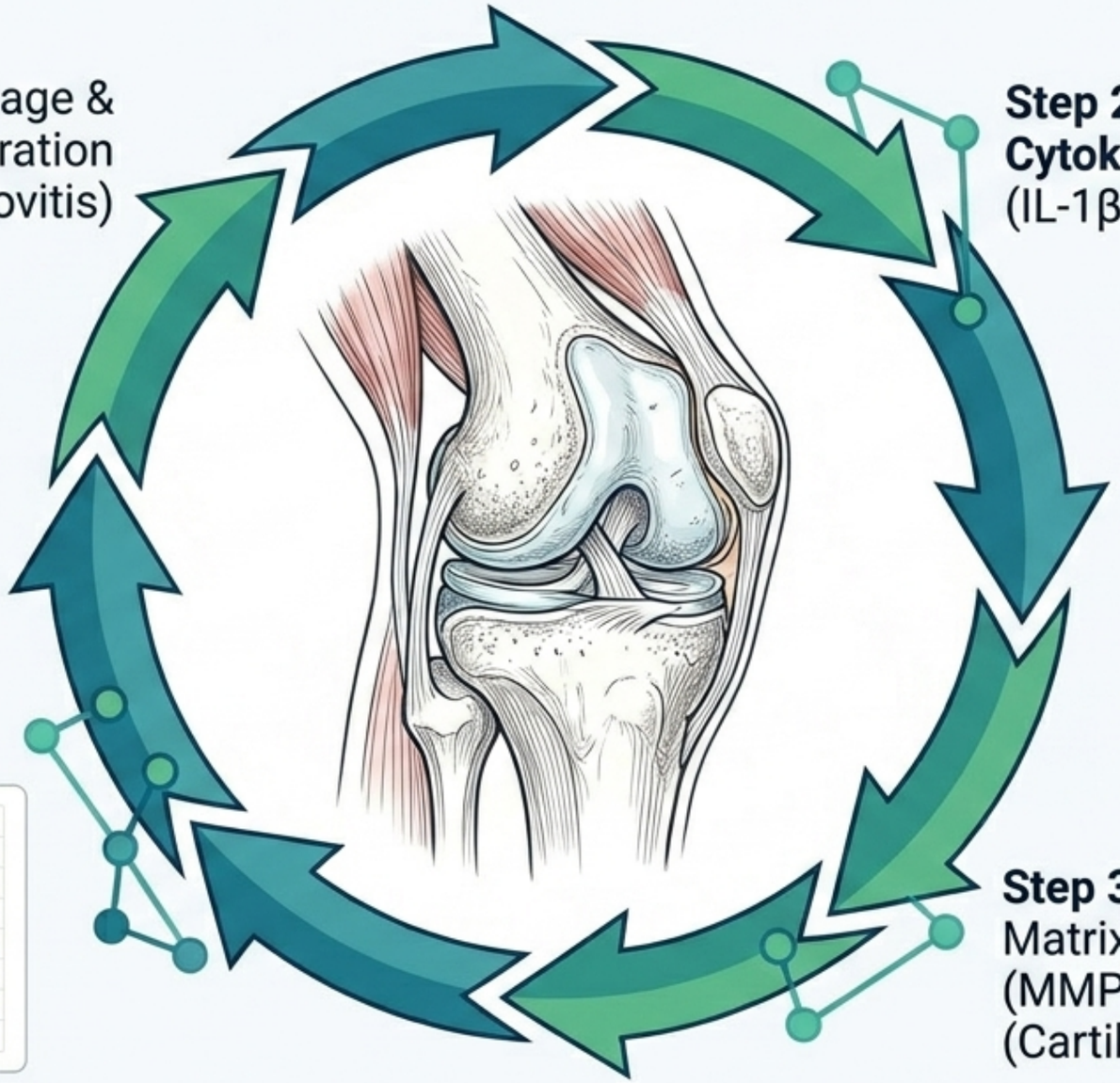


80,000+ total joint arthroplasties annually

Whole-Organ Pathophysiology

Step 1: Macrophage & Lymphocyte infiltration (Synovitis)

Step 2: Inflammatory **Cytokine** release (IL-1β, TNF-α, IL-6)



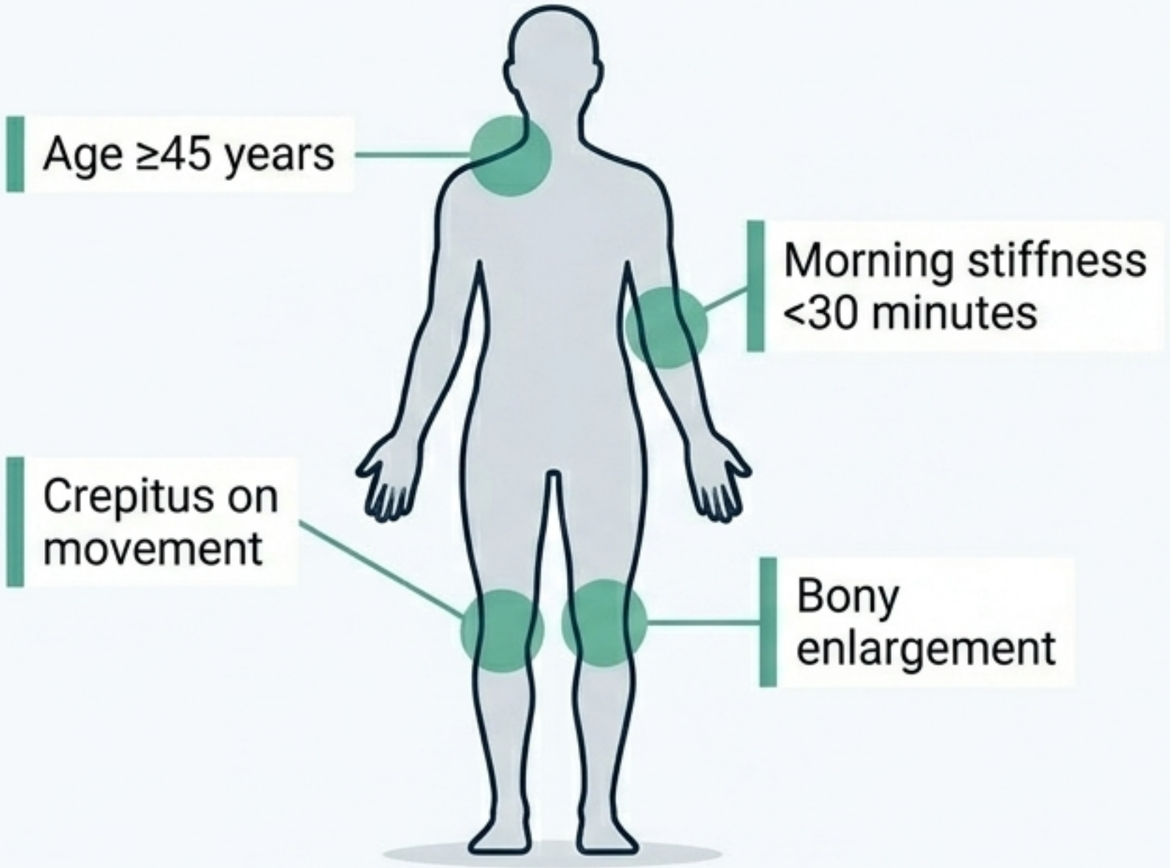
Central Sensitization: Present in **20-30%** of chronic knee OA patients. Explains the disconnect between radiographic severity and pain.

Step 4: Subchondral bone stiffening & Osteophyte formation (TGF-β signalling)

Step 3: Matrix Metalloproteinase (MMP) activity (Cartilage breakdown)

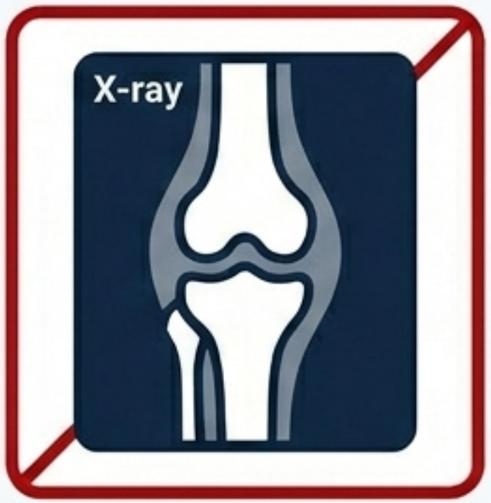
Risk Factor: Every 5 kg/m² increase in BMI = 35% higher knee OA risk.

Visual Diagnostic Checklist



Diagnosis requires joint pain + ≥2 of these features. Sensitivity: 92%.

When to Image



DO NOT ORDER IMAGING ROUTINELY.

- Atypical features (night pain, rapid progression)
- Diagnostic uncertainty
- Surgical planning

Severity Stratification

Severity Status Bar

Stage 1: Early/Intermittent	Stage 2: Established	Stage 3: End-Stage
Intermittent pain, high-load activities only, full ROM.	Daily pain, morning stiffness, ROM limitation, needs analgesics.	Rest/night pain, instability, walking <500m.
Setting: GP (Education, Exercise).	**Setting:** GP + Physio.	**Setting:** Orthopaedic Referral.

Floating UI Panel

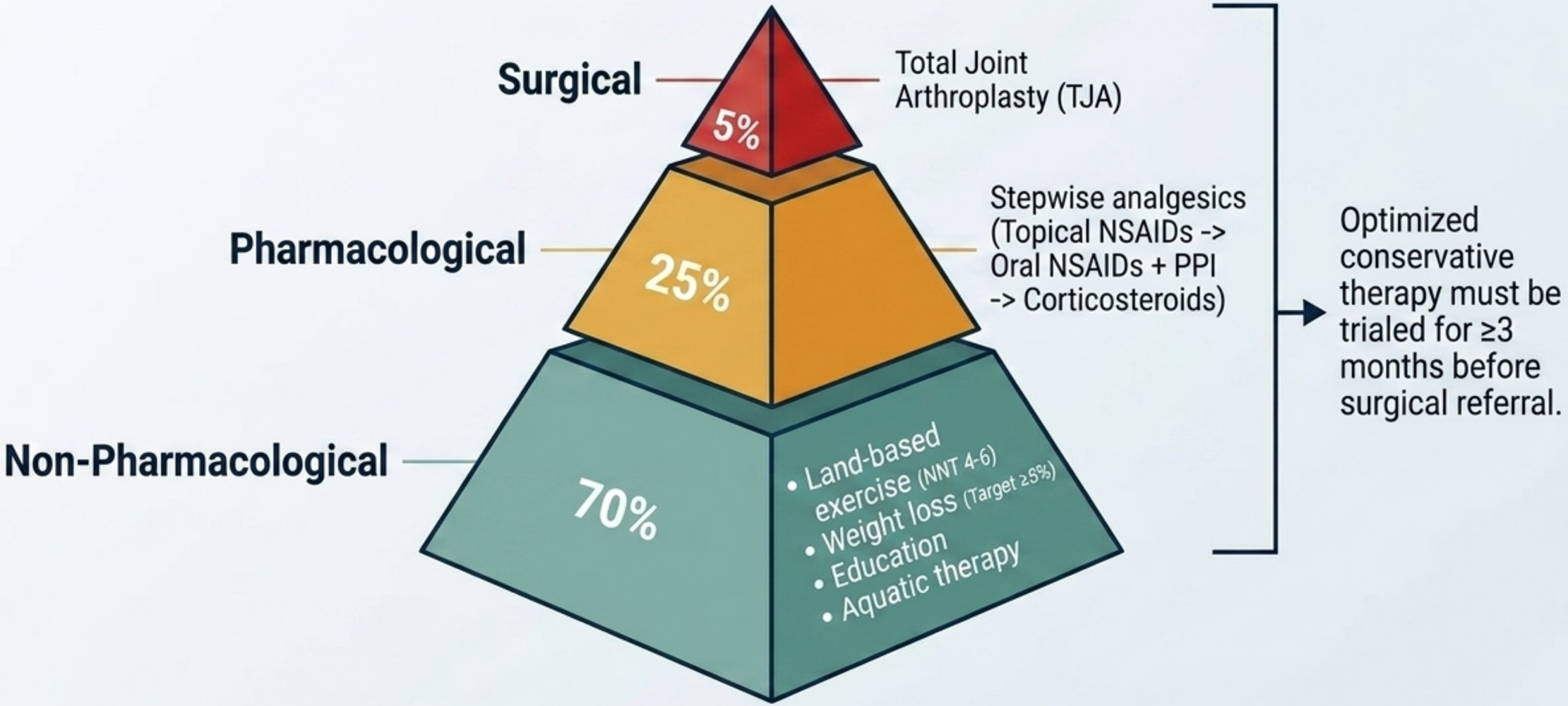
Functional Tools

WOMAC (24-item)

KOOS/HOOS

30-second sit-to-stand
(<12 stands = fall risk)

The Interventional Pyramid



The “Do Not Do” Graveyard

Opioids

Red RACGP warning.

Harms (falls, fractures, dependence) **outweigh modest benefits.**

NO role in chronic OA.

Arthroscopic Debridement

Multiple RCTs show **zero benefit over sham surgery.**

Glucosamine / Chondroitin

No consistent structural or pain benefit.

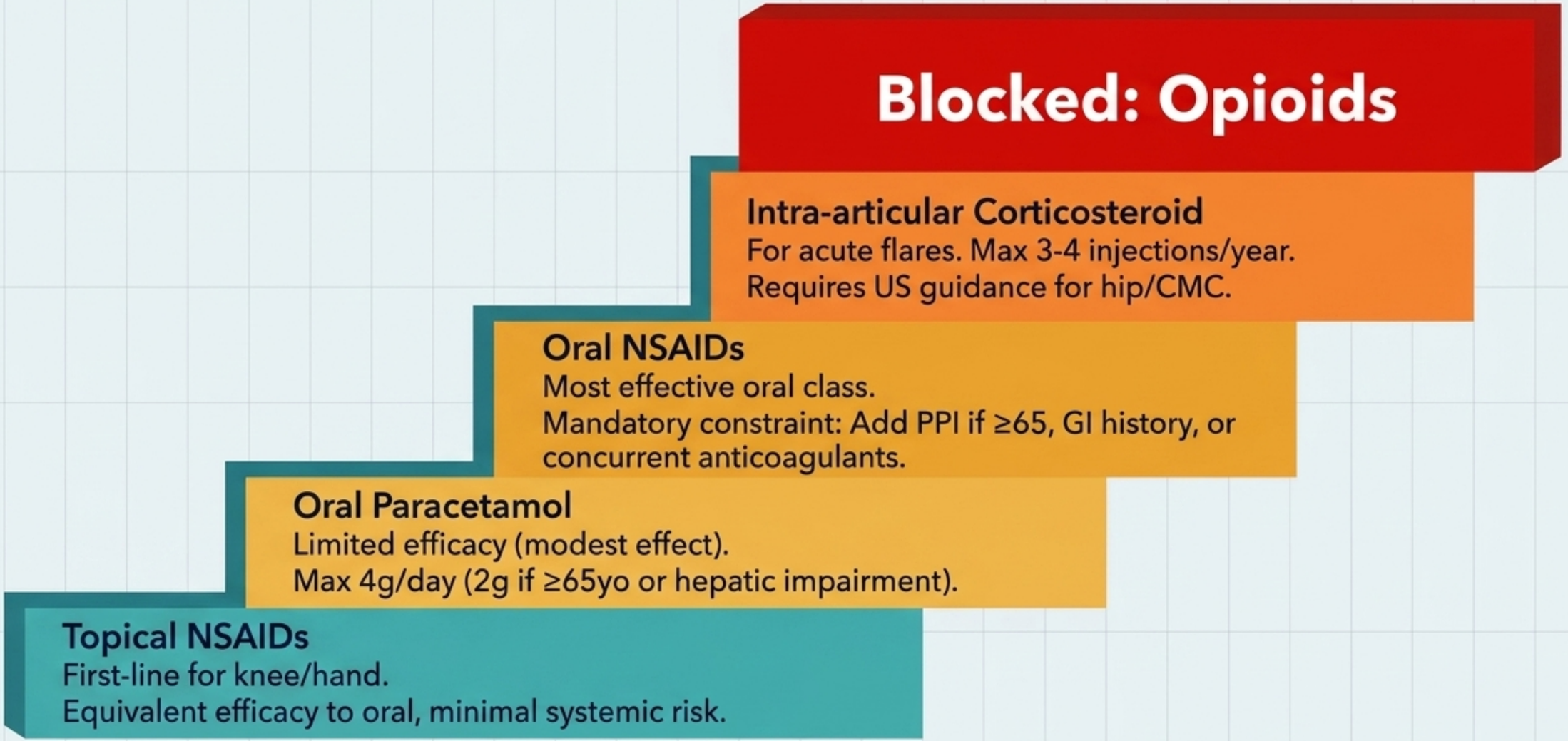
Discontinue if no change in 12 weeks.

Hyaluronic Acid Injections

Minimal clinical benefit despite **high out-of-pocket costs** ($300-$800).

Not recommended by ARA.

The Stepwise Analgesia Staircase

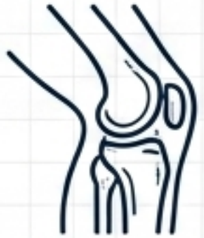
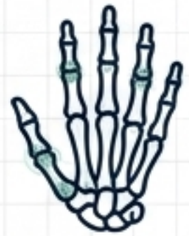


The Pharmacological Safety Matrix

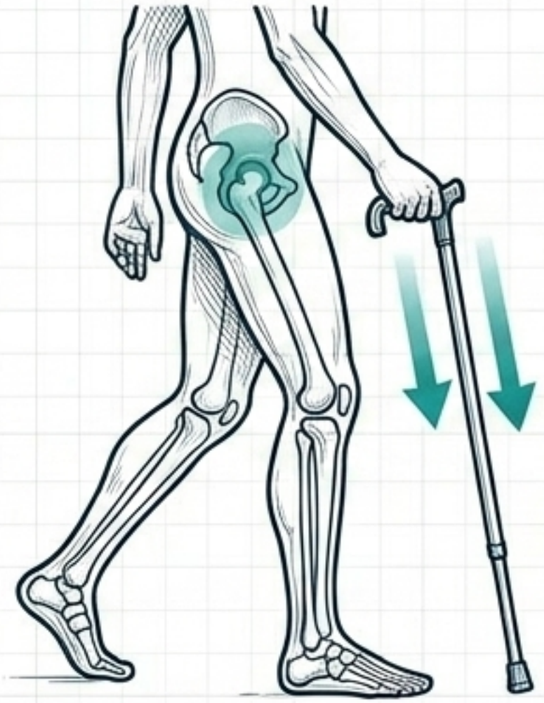
Agent Class	Key Caveats	Renal Rules (eGFR)	GI Risk
Diclofenac Gel 1%	Topical / Minimal systemic absorption	>30 Safe if eGFR >30	Negligible GI risk
Naproxen	Non-selective NSAID / Shortest duration only	<30 Avoid if eGFR <30	High GI risk (Requires PPI)
Celecoxib	COX-2 Inhibitor / Equivalent CV risk to non-selective	<30 Avoid if eGFR <30	Lower GI risk (PPI still needed if risk factors)

The Triple Whammy Risk:
Strictly avoid concurrent **ACEi/ARB** + **NSAID** + **Diuretic**.

The Joint-by-Joint Matrix

		
Knee	**Hip**	**Hand** (1st CMC / DIP / PIP)
Clues: Medial tibiofemoral most common, Varus malalignment.	**Clues:** Groin/anterior thigh pain (Not lateral). C-sign.	**Clues:** Heberden's (DIP), Bouchard's (PIP), Squaring of thumb base.
Test: 30-sec sit-to-stand.	**Test:** Loss of internal rotation (earliest sign), FADIR test.	**Test:** Positive Grind Test (1st CMC).
First-Line Therapy: ✓ Quads strengthening ✓ Weight loss ≥5%.	**First-Line Therapy:** ✓ Gluteal/abductor strengthening ✓ Aquatic exercise. ✓ Surgical threshold is lower than knee.	**First-Line Therapy:** ✓ Topical NSAIDs ✓ Rigid thumb spica splint. ⚠ Check serum ferritin/transferrin if MCP joints involved (Haemochromatosis).

Targeted Biomechanics



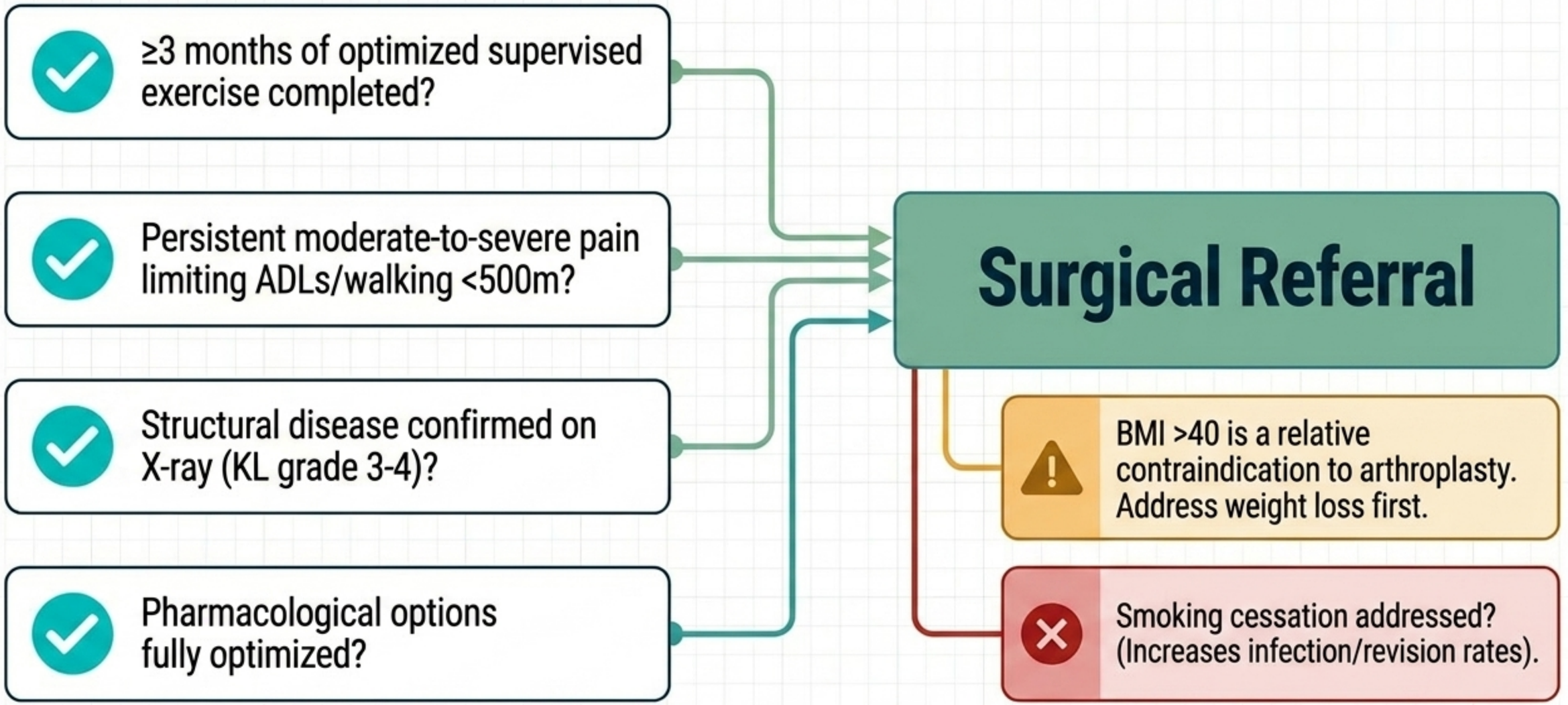
Hip: Contralateral cane reduces hip joint reaction force by 30%.

Knee: Dual hiking poles yield 10-15% reduction in knee loading.

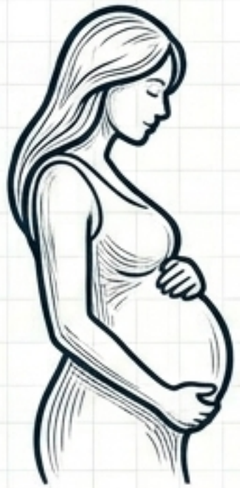
✕ Lateral wedge insoles not recommended.

Hand: Thumb spica splint provides strong evidence for pain relief during aggravating activities (jar opening, wringing).

Arthroplasty Referral Node Map



Special Populations Dashboard

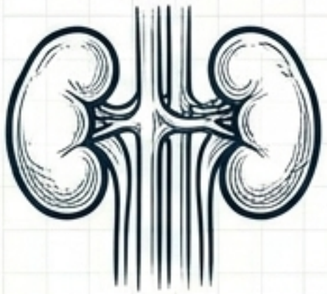


Pregnancy

- Avoid NSAIDs in 3rd trimester (premature ductus arteriosus closure).
- Paracetamol safe.
- Aquatic exercise recommended.

Elderly (≥75)

- Use extreme caution with NSAIDs.
- Rely on topical NSAIDs and paracetamol (max 2g/day).
- Assess fall risk.
- strictly avoid opioids.



Renal Impairment

- If eGFR <30, strictly AVOID all NSAIDs (even large-area topical).
- Paracetamol max 2g/day.
- Aquatic exercise ideal.

Paediatrics (<40)

Primary OA is exceedingly rare.

- Red flag for secondary causes: DDH, SCFE, Legg-Calvé-Perthes.

Refer to paediatric orthopaedics.

Aboriginal and Torres Strait Islander Health

Key Statistics UI Panel

higher age-standardised prevalence.

10 years earlier

Disease onset is on average **10 years earlier.**

Barriers & Solutions Mapping

Access:

Overcome remote limitations via **Telehealth** and **AHW-led community programs** (e.g., Deadly Choices, Yarning circles).

Financial:

Utilize the Closing the Gap (CTG) **PBS Co-payment Programme** to remove medication costs.

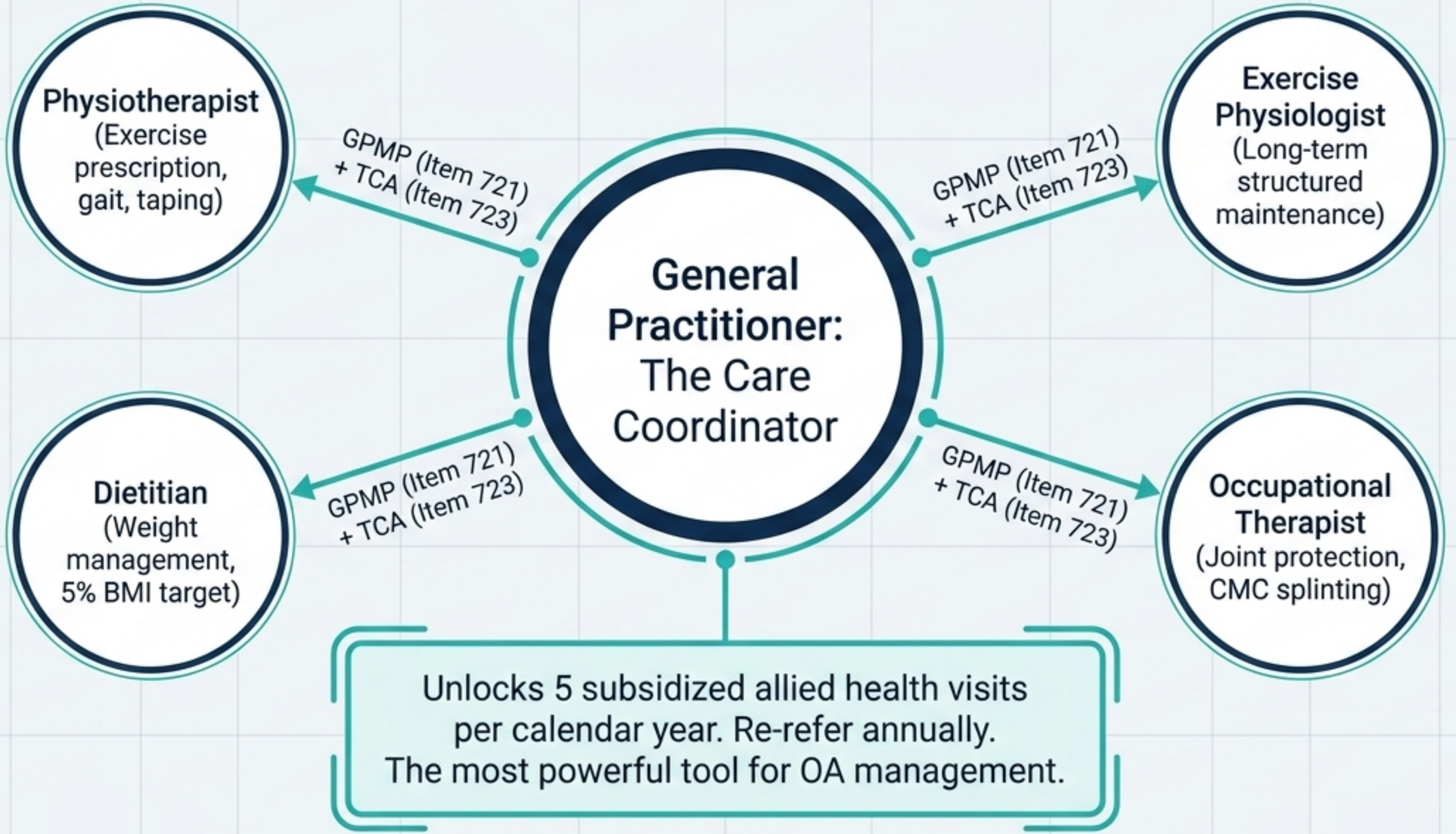
Comorbidities:

High rates of concurrent diabetes/CVD require **holistic chronic disease management** (renal dosing awareness).

Surgery:

Address lower arthroplasty rates by **coordinating travel, family support**, and ACCHS involvement.

The MBS Care Ecosystem



The Holistic Care Architecture

Assess:
Precision clinical diagnosis (No unnecessary imaging).

Protect:
Targeted, safe pharmacotherapy (Topical first, no opioids).

Empower:
GPMP/TCA funding unlocking the multi-disciplinary team.

Load:
Supervised biomechanical and weight interventions (The Foundation).

Osteoarthritis is not a solo battle against a deteriorating joint. It is a modifiable trajectory managed by a culturally safe, multidisciplinary ecosystem designed to keep patients moving and off the operating table.