



Midlands Partnership University
NHS Foundation Trust

The diagnosis of degenerative cervical myelopathy in MSK interface services

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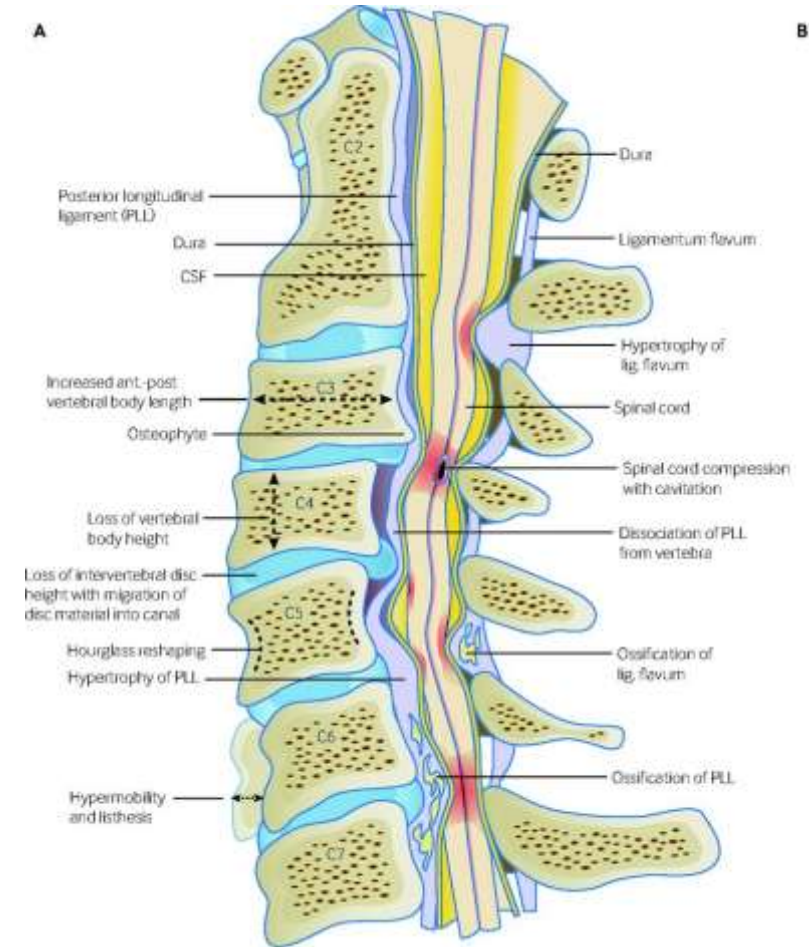


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DCM

- ‘A progressive spinal cord injury due to narrowing of the cervical spinal canal’ (Davies, *et al.*, 2022)
- Number one cause of spinal cord injury worldwide (Nouri *et al.*, 2015)
- Prevalence poorly understood – around 2% world wide
- Increases with age – usually over 50’s
- Minimal research on primary care/ MSK interface diagnosis of DCM
- Neck pain, hand symptoms, gait disturbance



BMJ 2018

What's the problem?

Highly variable
and early signs
are poorly
understood

No validated
screening
tools

Low
awareness
of DCM

Average 2 year delay (Behrbalk *et al.*,
2013; Hilton *et al.*, 2019)
Time to treatment predicts outcome

Variability
in physical
exam

Variability in
language used
by radiologists

Post COVID
delays

Davies, *et al.*, 2022,
Hilton *et al.*, 2018,
Tempest-Mitchell *et al.*,
2019, Dunstan, Dixon
and Wood, 2022

Context

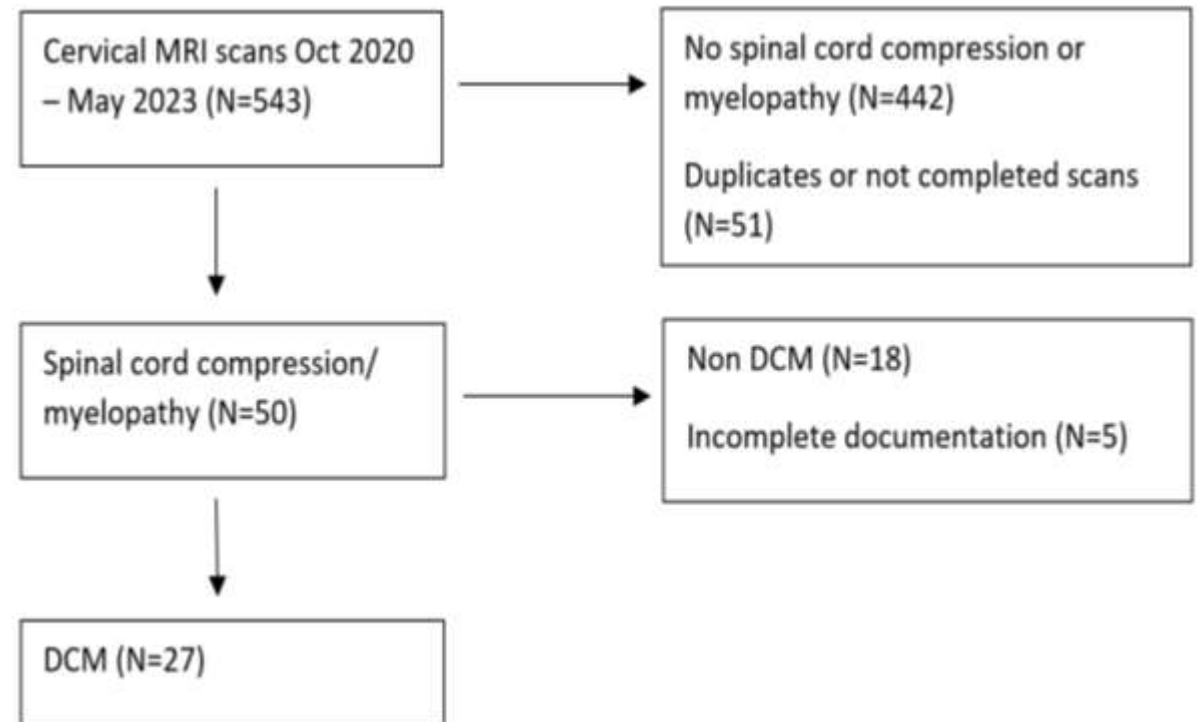
- MSK triage and physio team
- MPUFT covers large geographical area
- Tamworth located between multiple ICSs, refer to different spinal teams – most patients prefer Derby
- All ortho patients to be triaged through MSK services
- Noticed not uncommon diagnosis of DCM in MSK clinic
- Not all diagnosis were ‘typical’



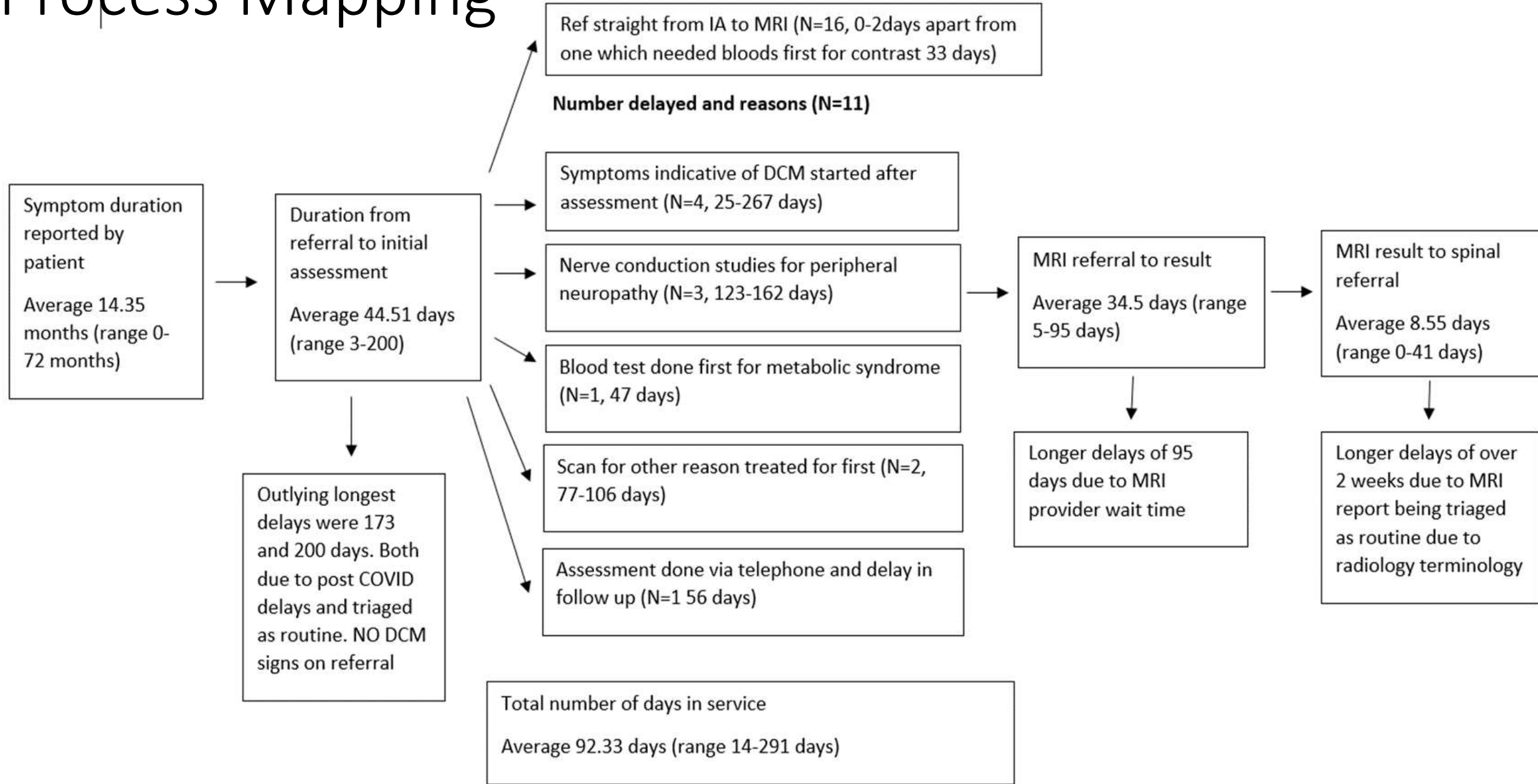
Methodology

AIM

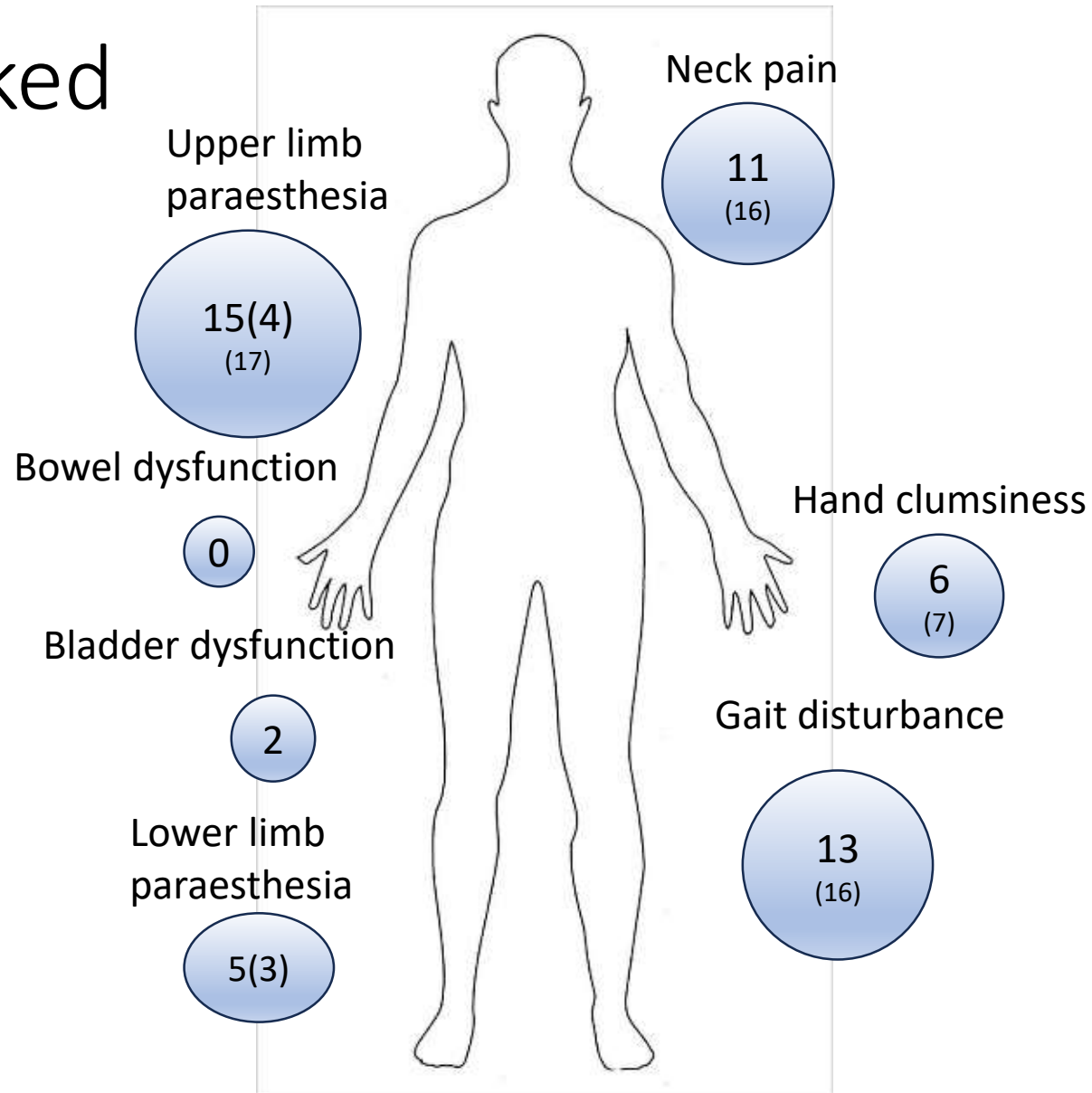
- To explore the patient journey through MSK services to onward referral and what are the signs and symptoms that lead to diagnosis?
- Retrospective review of clinical notes including referral, assessment, follow ups and referral on and time frames
- Cx MRI screened for mention of spinal cord compression
- Content analysis and process mapping



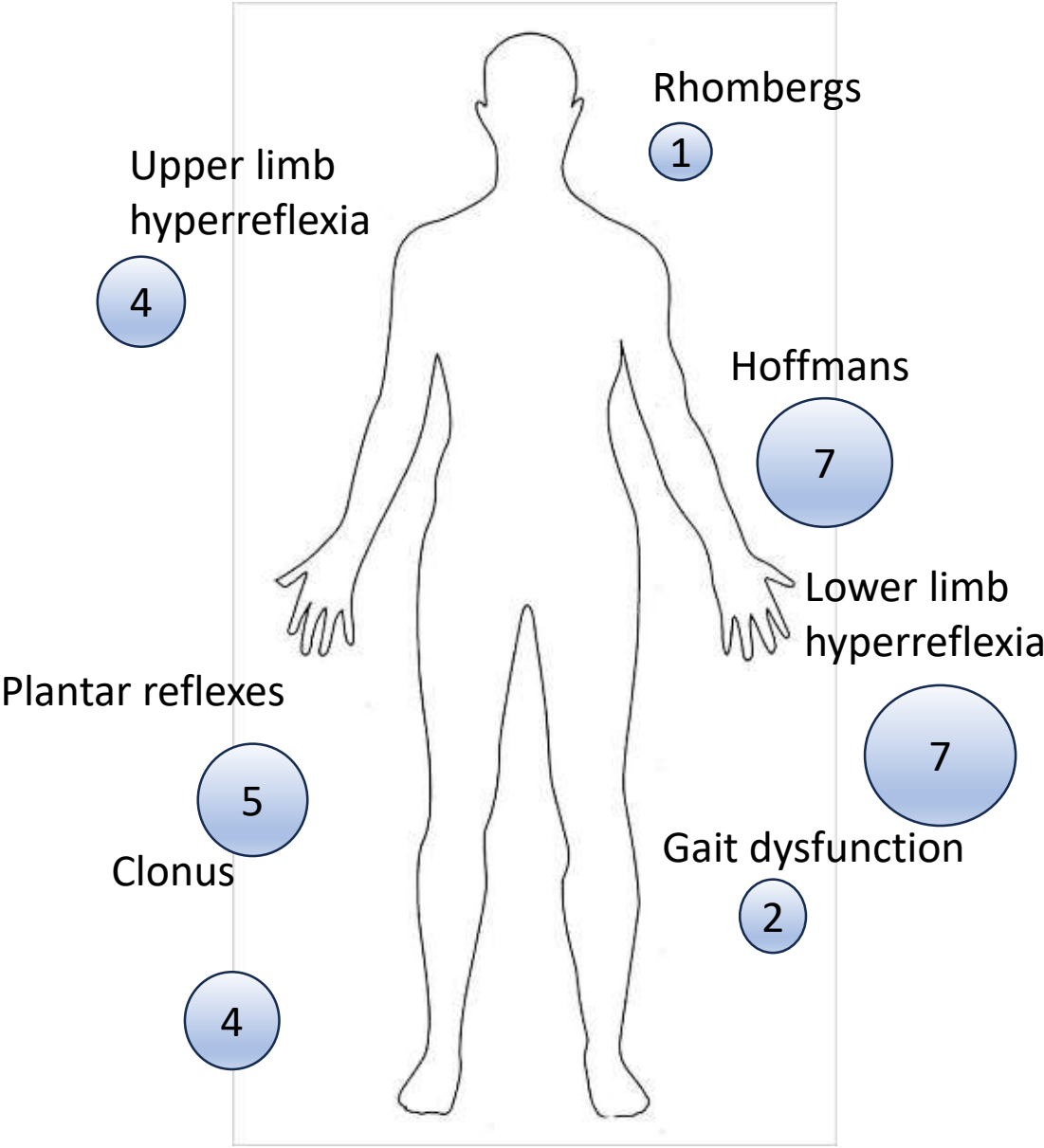
Process Mapping



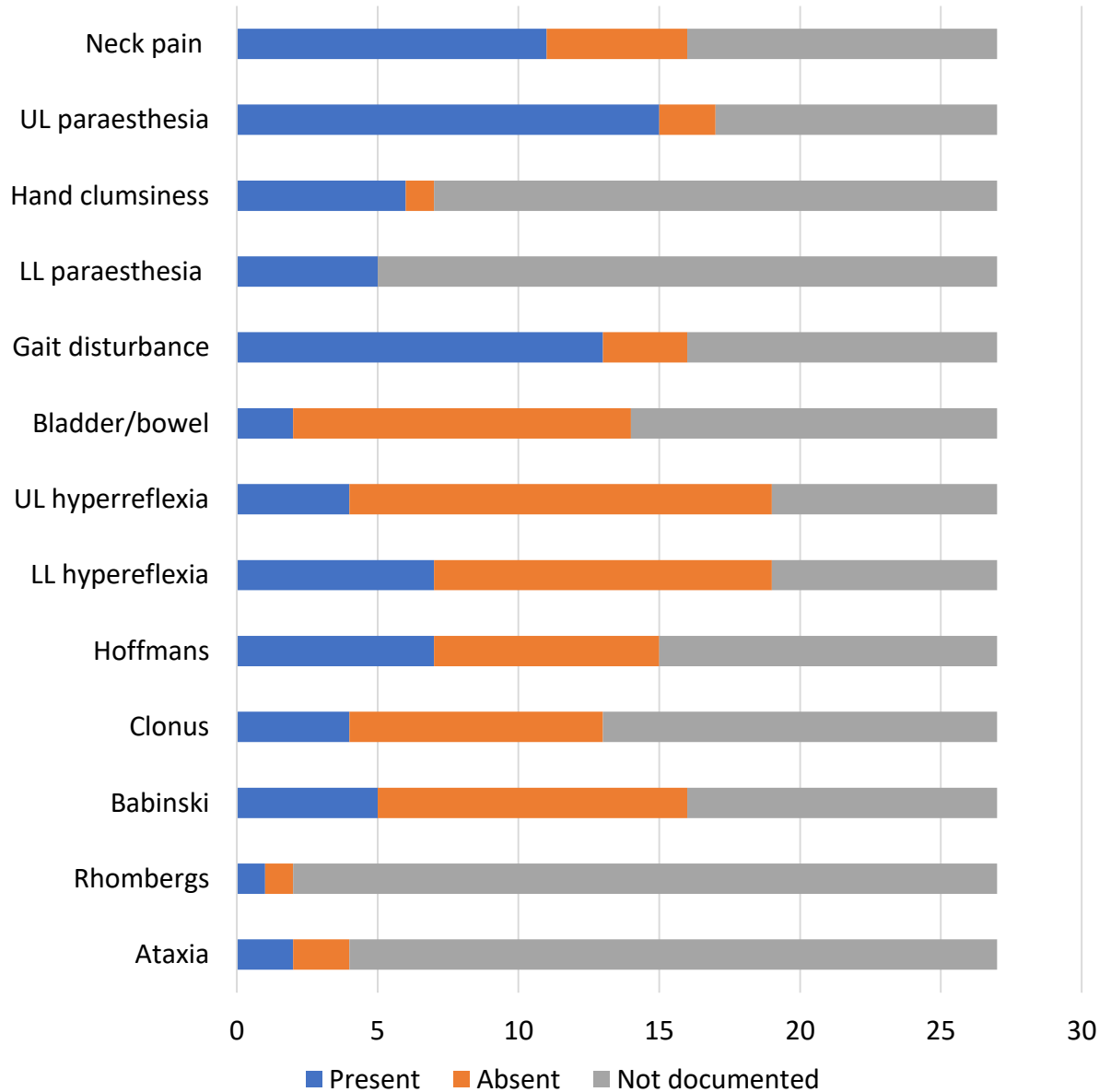
Symptoms present / asked



Signs present/asked



Signs and symptoms



- Longest delays occurred when patients received nerve conduction studies for differential diagnosis of peripheral neuropathies.
- Patients were more likely to be suspected of having DCM if they had upper limb symptoms and gait disturbance or if they had pathological reflexes.
- Those that had a delay to diagnosis generally had no gait disturbance or a normal or incomplete neurological assessment.

MRI terminology

Scan terms	
Myelopathy/ myelomalacia	15
Spinal cord compression	2
Spinal cord deformity	4
Spinal cord flattening	1
Spinal cord indentation	4
Other (changes to contour)	2



Patient case 1

62 yo F

I would be grateful for your urgent assessment of this lady with a 5-6 month history of tingling in her hands and feet, she describes feeling unsteady at times walking and clumsy when using her hands. She has some joint pain and stiffness that it was suggested might be causing some of her symptoms.

MRI brain was NAD.

Baseline bloods at onset showed Vit D insufficiency and she given replacement.

I wonder if she would benefit from nerve conduction studies and further assessment.

She is extremely distressed by her symptoms and we would be grateful for your further input.

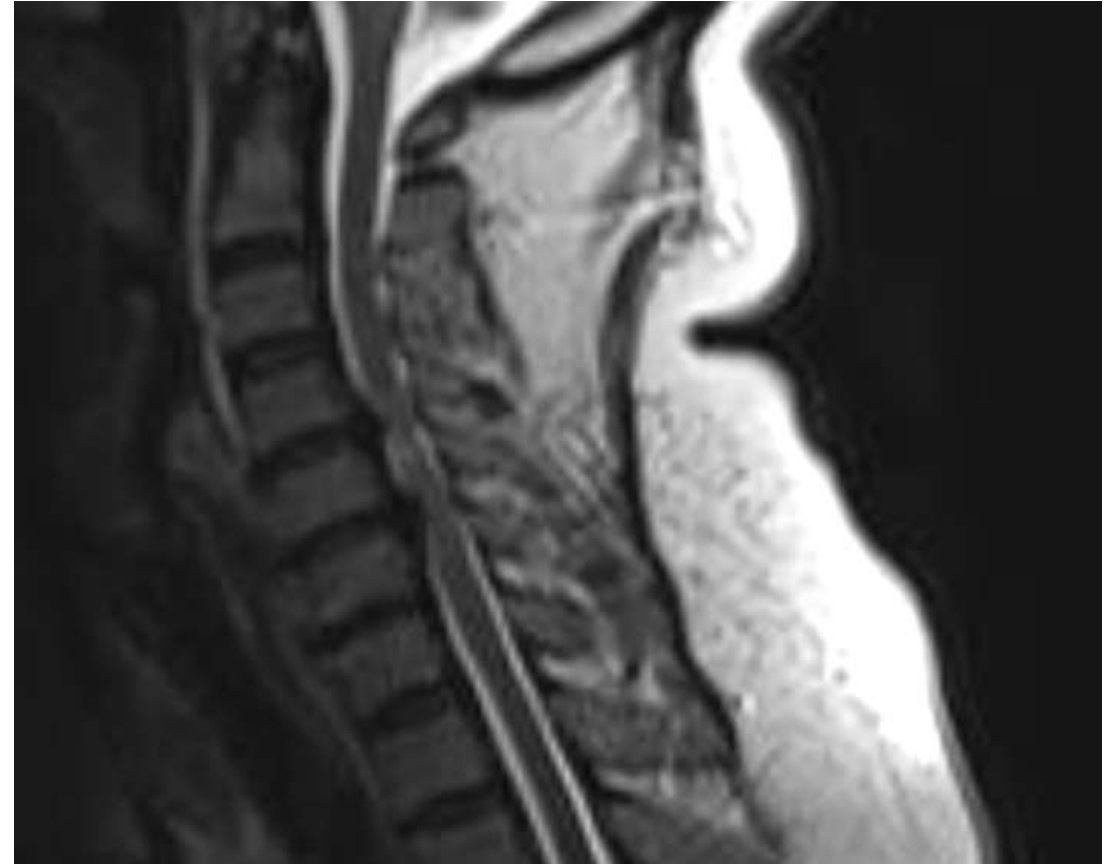
Patient case 1

- No neck pain
- Quadralateral P+N/numb
- Stumbling
- Cx ROM full pain free
- LL hyperreflexia, UL normal
- Full power
- Decrease sensation - patchy
- +ve clonus + hoffmans, downgoing plantars
- MRI report – stenosis + myelopathy
- Triage Urgent APP – ref to IA 20 days (covid), MRI <4/52 urgent referral



Patient case 2

- 56 year old lady with left radicular leg pain and giving way
- Normal neurological assessment UL + LL
- MRI lumbar NAD
- FUP – Bilateral hand paraesthesia – hyperreflexia, hoffmans and upgoing plantar reflex



Learning points

DCM can present as a 'typical' MSK condition early on ie. Radiculopathy, OA hands, carpal tunnel

Unilateral symptoms are not uncommon particularly early on (Munro, 2023)

Gait disturbance may be an early sign but can also be caused by lots of other conditions as well as normal aging process (Kadanka et al., 2017)

Neurological assessment important BUT can be normal

DCM	Early symptoms	Middle-stage symptoms	Late symptoms
Hand numbness	[Green bar]		
Symptom variability day to day	[Green bar]		
Neck pain	[Green bar]		
Arm numbness		[Yellow bar]	
Clumsiness		[Yellow bar]	
Reduced dexterity		[Yellow bar]	
Heavy legs		[Yellow bar]	
Muscle spasms in the arms		[Yellow bar]	
Reducing mobility			[Red bar]
Loss of control of the legs			[Red bar]
Dragging legs			[Red bar]
Paralysis			[Red bar]
Muscle spasms in the legs			[Red bar]
Constipation			[Red bar]
Urinary incontinence			[Red bar]

Expert consensus project: Tabrah et al, 2023

Decreasing delay

Improved primary
care clinician
awareness

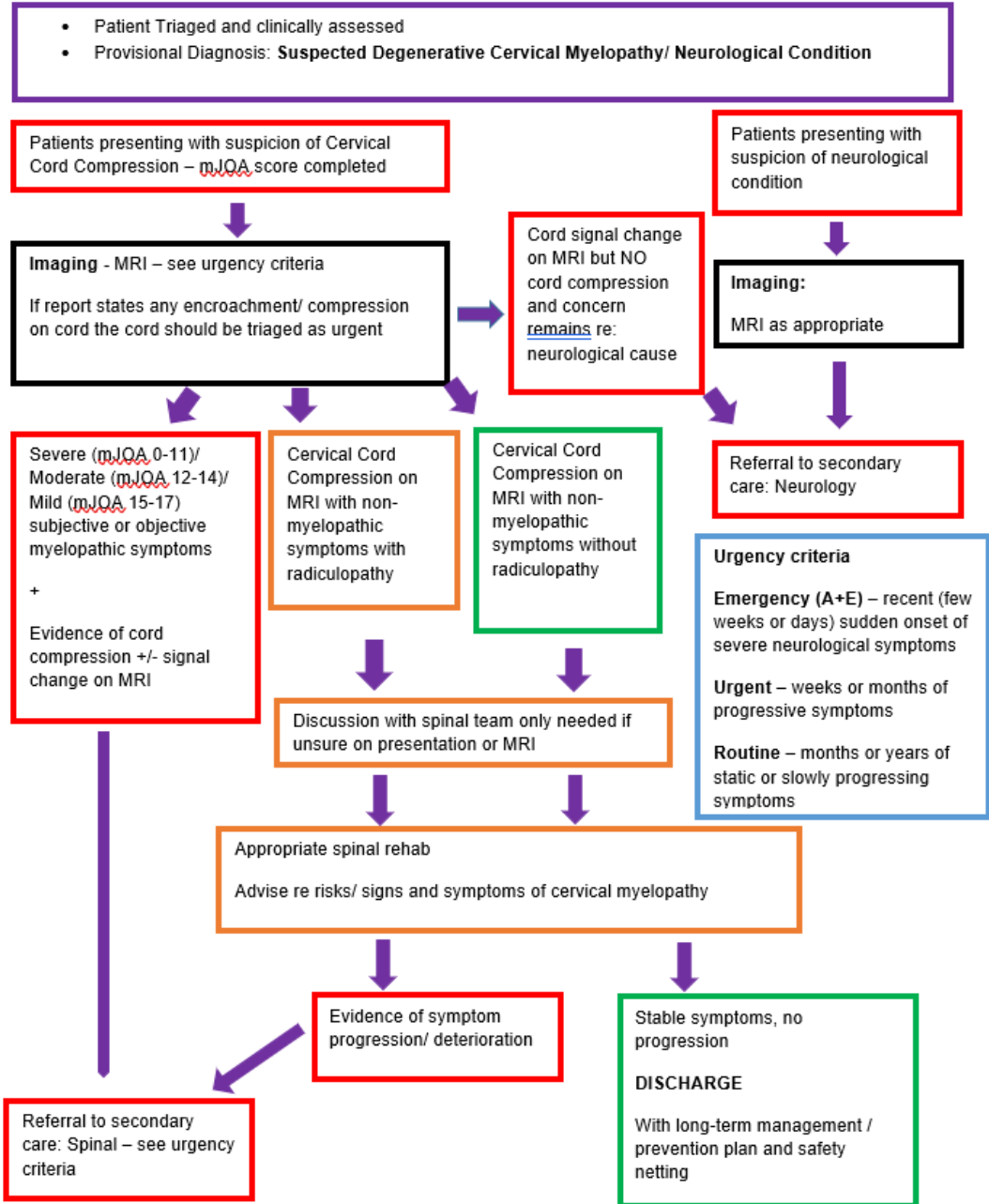
- FCP training
- GP training

Improved clinician
awareness and
assessment

- MSK services training
- Competencies
- Proforma changes

Pathways
changes

- Triage priority
- MRI priority
- Referral priority
- Safety netting card



If acute or acutely progressive symptoms (up to 2 weeks) – ED

If recent onset or progression (weeks or months) – urgent referral to MSK and safety net

If longstanding and stable symptoms – Routine referral to MSK service and safety net

MSK will arrange MRI/ spinal or neurosurgery if needed

Referral to include all symptoms and timeframe. I.e. Bilateral hand pins and needles and balance problems reported over the past 3 months. Symptoms are stable.

Future

Current conversion rate service evaluation

Liaise with secondary spinal teams

Whether tools such as mJOA are useful

Larger numbers study

DCM diagnostic criteria

Thank you

- Stephanie.foulds@mpft.nhs.uk
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