



**THE ADELAIDE & MEATH
HOSPITAL, DUBLIN**
INCORPORATING
THE NATIONAL CHILDREN'S HOSPITAL

AMNCH Spinal Referral Pathway

The spinal referral pathway has been established to streamline services for spinal conditions and to cope with the demand for referrals by harmonising the specialties involved in spinal management (Orthopaedics, Rheumatology, Pain Management and the Back Pain Screening Clinic). The service aims to facilitate more prompt and effective responses to the management of referrals for back pain and to ensure that the individual being referred has timely access to the appropriate service.

AMNCH Spinal Referral Form

In order to streamline spinal referrals and minimise waiting times, GPs are encouraged to use the spinal referral form. The process will be helped if the GP provides sufficient information on the referral form, including the results of relevant imaging.

AMNCH Spinal Referral Guidelines

These guidelines are not intended to be comprehensive or absolute and should only be used as a guide. They have been prepared between the specialties and general practitioners. They will be reviewed and, if necessary, modified with time using the same consultation process.

These guidelines have been drawn up by a Working Group consisting of Antoinette Curley (Clinical Specialist Physiotherapist), Elaine Barker (Deputy Physiotherapy Manager), Sheila Horan (Senior Physiotherapist in Pain Management) and Fiachra MacLeid (Acting Senior Physiotherapist in BPSC) in consultation with all stakeholders.

Any queries should be sent to:

Back Pain Screening Clinic

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1.0 Departments involved in Spinal Referral Pathway

Below is a list of the departments involved in the spinal referral pathway along with the clinicians/consultants involved.

Back Pain Screening Clinic (BPSC)

The BPSC is a screening clinic for spinal pain. Its purpose is to fast-track potential surgical cases and suspected serious spinal pathology to the Spinal Orthopaedic Clinics.

The patient is triaged by a Physiotherapist and management options include advice and referral for surgical review. Information leaflets, which include the telephone numbers, are available for GPs to give to their patients.

All patients with acute back and neck pain that are not requiring immediate referral to the Emergency Department (as per page 5) should be directed through BPSC.

Physiotherapists

Antoinette Curley
Cliodhna Kelleher
Fiachra MacLeid

Department of Orthopaedics

The department of orthopaedics provides a service for patients with spinal deformity and Spina Bifida. All referrals should be directed to the BPSC and will be forwarded to the department of orthopaedics accordingly.

Consultant

Mr. Patrick Kiely
Mr. David Moore
Mr. Seamus Morris
Mr. Jacques Noel
Mr. Joseph Sparkes

Department of Rheumatology

The department of rheumatology provides a spinal service to patients with rheumatological conditions such as sacroiliitis or spondyloarthritis (e.g. Ankylosing Spondylitis). Your patient may be asked to attend for blood tests or x-rays in advance of their appointment so that these results will be available on the day of their appointment.

Consultant

Prof. David Kane

Department of Anaesthesia & Pain Medicine

The Pain Service is a multidisciplinary service for management of acute and chronic pain. The service is staffed by 3 Pain Specialist Consultants, 3 Nurses, a Senior Physiotherapist, Senior Clinical Psychologist and a Senior Occupational Therapist. There is a dedicated referral route to Liaison Psychiatry. Pain management options may include medication trials, interventional techniques, referral to psychiatry, psychology or physiotherapy treatment. This service offers a multidisciplinary Pain Management Programme – The Ulysses Programme. This is a four week cognitive behavioural programme which aims to treat the whole person by addressing the psychological, social and physical consequences of chronic pain.

Consultant

Dr Camillus Power

Dr Philip Hu

Dr. Anne Heffernan

2.0 Back Pain Diagnostic Imaging Criteria

Criteria for Lumbar Spine Radiographs

Plain films of the lumbar spine are not routinely indicated in the investigation of uncomplicated low back pain. This resolves in about 90% of patients within 2 months regardless of any treatment.

Lumbar spine series should be reserved for selected cases including:

- Significant trauma (e.g. RTA, fall from height)
- Age <20 > 50
- Associated fever/systemic symptoms (Anaemia, ^ESR)
- Known background malignancy or previous spinal infection
- Known background of osteoporosis
- Episode of back pain ongoing for 6 weeks or longer without improvement
- Chronic corticosteroid use, alcohol or drug abuse
- Associated neurological deficit
- History of Ankylosing Spondylitis

Source: US Dept. of Health, Royal College of Radiologists

Criteria for MRI

Same day investigation for suspected cord compression/cauda equina syndrome

- More than 6 week history with radiculopathy unresponsive to conservative therapy. Clinico-radiological correlation essential as asymptomatic disc herniations frequently seen on MRI
- Suspected recurrent disc in post-operative spine
- Suspected discitis, osteomyelitis, epidural abscess
- Useful for primary and secondary malignancy in the spine

3.0 Back Pain Pharmacological Management

Management of Acute Low Back Pain (without radiculopathy)

- For first-line analgesia, offer **Paracetamol**.
- If paracetamol is insufficient, offer an **NSAID**
 - Consider the risk of adverse effects, especially in older people, those at increased risk of gastrointestinal adverse effects, or those with asthma, chronic kidney disease or heart conditions.
 - Prescribe a proton-pump inhibitor for patients at increased risk of gastrointestinal bleeding.
 - Review NSAID treatment if patient develops dyspepsia.
 - In patients at risk of cardiovascular adverse effects, ibuprofen (up to 1.2g/ day) or naproxen (up to 1g/ day) are recommended as 1st-line options.

For additional analgesia, consider the following options:

- **Paracetamol combined with NSAID**
- Adding **Weak Opioid** such as tramadol, or codeine (included in paracetamol-codeine combination products such as Tylex[®])
 - Give due consideration to risk of opioid dependence and adverse effects
 - Consider the need for a laxative to counteracting constipating effects
- **Strong Opioid**- this is rarely necessary. If a strong opioid (such as standard-release morphine) is to be used:
 - Prescribe it for a short period, and step down to a weak opioid when appropriate
 - Co-prescribe a laxative and anti-emetic
 - If the use of a strong opioid is becoming chronic, or if doses are escalating, refer to, or seek advice from the clinic.
- Consider offering short course of **benzodiazepine**, such as diazepam for 2-5 days, if the paraspinal muscles are in spasm.
- If symptoms continue for more than 4-6 weeks, manage as for chronic low back pain.

Management of Chronic Low Back Pain (without radiculopathy)

For chronic back pain not responding to the first-line analgesia and additional analgesics recommended above for acute low back pain:

- Consider offering a trial of a **tricyclic antidepressant** such as amitriptylline, nortriptylline, or imipramine
 - Start at a low dosage, particularly in the elderly or frail, and increase up to the maximum antidepressant dosage until either pain is adequately relieved or adverse effects are unacceptable
- **Strong opioid**- this is rarely necessary; see above re prescribing recommendations

Management of Sciatica (lumbar radiculopathy)

For sciatica not responding to first-line analgesia and additional analgesics recommended for acute low back pain:

- Consider offering **pregabalin** or **gabapentin** or **amitriptyline** for initial treatment
 - Titrate dosage according to response and tolerability

- Consider **imipramine** or **nortriptyline** if amitriptyline is effective but the person cannot tolerate the adverse effects
- Continue the treatment if there is satisfactory pain improvement or refer if appropriate
- Consider gradually reducing the dose over time if improvement is sustained.

Management of Neuropathic Pain (other than diabetic or trigeminal neuropathy)

- Offer **amitriptyline** or **pregabalin** or **gabapentin**
 - Titrate dosage according to response and tolerability
 - Consider **imipramine** or **nortriptyline** if amitriptyline is effective but the person cannot tolerate the adverse effects
 - Continue the treatment if there is satisfactory pain improvement or refer if appropriate
 - Consider gradually reducing the dose over time if improvement is sustained.
- For patients who do not achieve satisfactory pain reduction at the maximum tolerated dose:
 - If on amitriptyline or another tricyclic antidepressant, **switch** to pregabalin or gabapentin, or **combine** the tricyclic antidepressant with either pregabalin or gabapentin
 - If on pregabalin or gabapentin, **switch** to amitriptyline (or another tricyclic antidepressant, see above) or **combine** pregabalin or gabapentin with the tricyclic antidepressant
- If the person still fails to achieve satisfactory pain reduction with drug treatment at the maximum tolerated dose:
 - Refer to the clinic, stating the medications, doses and time-periods that have been tried.
 - While awaiting referral:
 - Consider a trial of **tramadol**, alone or in combination with **amitriptyline** and/ or **pregabalin/ gabapentin**. When used in combination therapy, tramadol should be prescribed as a rescue analgesic for breakthrough pain.
 - Consider **topical lidocaine** for treatment of localized pain for people unable to take oral medication because of medical conditions or disability.

	Drug	Dose	Notes
Tricyclic antidepressant	Amitriptyline	Start with 10mg at night. Increase gradually to 75mg if tolerated (higher doses under specialist supervision)	Amitriptyline 10mg tablets unlicensed* in Ireland; 25mg tablets licensed but not for this indication and not suitable for halving. Imipramine and nortriptyline tablets unlicensed* in Ireland 6-8 week trial (if tolerated) with at least 2 weeks
	Imipramine		
	Nortriptyline		
	Gabapentin	300mg at night increased by 300mg every 2-3 days based on response, to a usual total maximum dose of 1800mg daily in 3 divided doses	Most patients respond at 1.2g daily or more. Gabapentin can be very sedating initially. Response often seen within a few days but peak effect after a few weeks. Dose reduction in renal impairment
	Pregabalin	Initially 75mg twice daily. Dose may be increased to 150mg twice daily after an interval of 3-7 days and further increased to 300mg twice daily after an additional 7 days if required	Dose reduction in renal impairment. Some consultants suggest using lower initial doses, particularly in older patients e.g., 25mg twice daily
	Topical lidocaine 5% patch	One patch daily for a maximum of 12 hours; can use up to three patches at a time	If no response after 2-4 weeks, discontinue treatment. Unlicensed in Ireland*
Opioid analgesia	Tramadol	50mg once or twice daily; increase by 50-100mg/ day in divided doses every 3-7 days as tolerated to a maximum dose of 400mg/day (as 100mg QDS), or a maximum of 300mg/ day in patients over 65 years	

*Note: unlicensed medicines must be sourced by community pharmacy and are not reimbursed under the Government Drug Payment Schemes; therefore patients may have to pay for these medicines themselves.

Please refer to the BNF and/ or SPC for full prescribing information on individual products.

References

- AMNCH Adult Medicines Guide 2011/2012
- British National Formulary 62nd edition. September 2011
- Clinical Knowledge Summaries (CKS). CKS topic review: Low back pain. November 2009. Available online at http://www.cks.nhs.uk/back_pain_low_without_radiculopathy
- Clinical Knowledge Summaries (CKS). CKS topic review: Sciatica (lumbar radiculopathy). November 2009. Available online at http://www.cks.nhs.uk/sciatica_lumbar_radiculopathy
- CKS topic review: Neuropathic pain Source: Clinical Knowledge Summaries (CKS), Last revised September 2010. Available online at http://www.cks.nhs.uk/neuropathic_pain_drug_treatment

4.0 Referral and Priority Guidelines

These guidelines are for GPs referring patients with spinal disorders for a specialist opinion. They are not expected to cover all eventualities and clinical judgement should apply. They are provided for information purposes and indicate which conditions will be referred on to each speciality. It is requested that sufficient clinical information is provided by GPs to facilitate the process.

The guidelines indicate which patients should be referred to the Emergency Department for 'immediate' review. All other patients with acute back and neck pain that do not require immediate referral should be directed through BPSC. These 'urgent' and 'routine' patients will then be reviewed by the most appropriate service.

IMMEDIATE REFERRAL

Referral direct to Emergency Department (ED).

Condition	ED
Cauda Equina Syndrome: Sphincter disturbance, Gait disturbance or saddle anaesthesia	√
Suspected traumatic fracture	√
Spinal infection	√

URGENT REFERRAL

Referral via Spinal Referral Form faxed to 01-4145866.

Patient should be seen within 4 weeks.

Condition	BPSC	Ortho	Rheum	Pain
Past history of carcinoma, steroid use or HIV	√			
Unwell or weight loss	√			
Widespread neurology	√			
Thoracic pain	√			
Non mechanical back pain	√			
Spinal deformity		√		
Back pain with neurological symptoms	√			
Back pain/stiffness with raised ESR/CRP where acute infection is out ruled/not a concern (i.e. longstanding)			√	
Osteoporotic vertebral collapse		√		
Patient with established RA or CTD with acute swollen joint/rashes/eye/respiratory/neurological/gastrointestinal symptoms			√	
Congenital spinal deformity/Spina Bifida/Cerebral Palsy		√		
Solid musculoskeletal-related lumps		√		
Back pain secondary to cancer		√		

ROUTINE REFERRAL

Referral via Spinal Referral Form faxed to 01-4145866.

Condition	BPSC	Ortho	Rheum	Pain
Mechanical Back/Neck Pain lasting > 6-8 weeks & with no improvement in symptoms following a course of appropriate physiotherapy (*see below)	√			
Nerve Root Pain without neurological weakness with no improvement after 4-6 weeks (**see below)	√			
Disc Prolapse	√			
Sacro-Iliac Joint (SIJ) Pain	√			
Spinal Stenosis (Lateral/Central)	√			
Lumbar/Cervical Facet joint pain	√			
Paget's disease or other bone disease			√	
Metabolic arthropathy			√	
Sacroilitis/Inflammatory Spinal Pathology			√	
Post surgery failed back syndrome				√
Chronic back pain with no neurological abnormalities/ structural damage or systemic illness & having failed a course of appropriate physiotherapy				√

***Mechanical Back/Neck Pain lasting > 6- 8 weeks & with no improvement in symptoms following a course of appropriate physiotherapy**

- Presentation:
 - 18-55 years
 - Mechanical type pain (varies with posture and activity usually better when lies down flat)
 - Pain in lower back, buttock or posterior thigh
 - Patient otherwise well
- These patients can be initially managed in primary care and referral to primary care physiotherapy (where available) is recommended.
- These patients should be referred to BPSC after 6-8 weeks in instances of
 - Problems with pain control or
 - No improvement in symptoms despite a course of appropriate physiotherapy.

****Nerve root pain without neurological weakness with no improvement after 4-6 weeks**

- Presentation:
 - Unilateral leg/arm pain that is worse than back/neck pain
 - Radiates below knee/elbow
 - Numbness or paraesthesia in same distribution
 - Straight Leg Raise increases leg pain
- These patients should be referred to BPSC if no improvement after 4-6 weeks