

Guideline for Therapy Intervention for Ulnar Nerve Lesions and Neurapraxia

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Introduction

This guideline covers the post operative care and rehabilitation of patients that had a repair of the distal ulnar nerve and attending therapy departments in Worcestershire and Herefordshire.

It also covers the care of any patients who experience neurapraxia of the ulnar nerve.

This guideline is for use by the following staff groups:

Therapists who have undertaken a period of supervised practice in this field within the previous 2 years. Supervising/senior therapists to work towards British Association of Hand Therapists (BAHT accredited training at Level II in Elective, Trauma and Hand Therapy).

Lead Clinician(s)

An Van Hyfte

Clinical specialist OT

Guideline reviewed and approved by Hand Therapy Clinical Governance meeting on:

13th March 2024

Review Date

13th March 2027

This is the most current document and is to be used until a revised version is available:

WAHT-OCT-018

It is the responsibility of every individual to check that this is the latest version/copy of this document.

Key amendments to this guideline

Date	Amendment	By:
Feb 2010	Guideline approved by Hand Therapy Clinical Governance Committee	
14.12.2011	Amendments made to guidelines Lay-out	An Van Hyfte
13.02.2014	Guideline reviewed with no amendments made to content	Hand Therapy Clinical Governance meeting
25.02.2016	Document approved with no changes	
05.12.2017	Sentence added in at the request of the Coroner	
18.12.2017	Document extended for 3 months as per TLG recommendation	TLG
March 2018	Document extended for 3 months as approved by TLG	TLG
7 th March 2018	Guideline reviewed and re-approved by the Therapy Hands Clinical Governance Group	Alison Hinton
May 19	Documents reviewed. Minor amendments to specify conservative and post-operative management and to make lay-out more uniform with other guidelines.	An Van Hyfte
April 2021	Document reviewed. Minor amendments made to 'competencies required' in order to include junior rotating therapists. Content of the guideline remains up to date.	An Van Hyfte
March 24	Document reviewed. Content of the guideline remains up to date and in line with latest research.	An Van Hyfte

Guideline for Therapy Intervention for Ulnar Nerve Repair and Neurapraxia

Introduction

This guideline covers the post operative care and rehabilitation of patients that had a repair of the distal ulnar nerve and attending therapy departments in Worcestershire and Herefordshire.

It also covers the care of any patients who experience neurapraxia of the ulnar nerve. The ulnar nerve is often damaged in association with flexor tendons. When associated with flexor tendon repairs, the guideline for flexor tendon repairs should be followed.

Competencies required

- Therapists who have undertaken a period of supervised practice in this field within the previous 2 years.
- Junior therapists who have undertaken basic training in hand therapy should be supervised by an experienced therapist who has held a caseload in this area within the previous 2 years.
- Adherence to the Trust Guidelines on wound management and infection control aseptic technique for therapist.

Patients covered

- Patients with damage to the ulnar that will be managed conservatively.
- The acute stage of this guideline covers patients with an ulnar nerve lesion not associated with flexor tendon repair.
- Any patient able to comply with the therapy regime following a repair to the ulnar nerve.

Details of Guideline

i) For patients with a neuropraxia:

Carry out a functional and sensory assessment of the hand. The following deficits can be expected:

- Clawing of little and ring
- Loss of arches of the hand and wastage of hypothenar eminence
- Loss of thumb adductor
- Wastage of the web spaces
- At forearm level there will also be a weak wrist flexion and loss of ulnar deviation of the wrist. The clawing may be less if the laceration is at elbow level.
- *Functional loss:*
Decreased power in all grips
Loss of writing grip due to loss of thumb adduction
Inability to adduct and abduct the digits
- *Sensory loss:* hypothenar eminence, volar ring and little. At elbow level the dorsal ulnar surface of the hand will be affected.

Refer to week 6 onwards in this document for splinting suggestions and treatment considerations.

Guideline for Therapy intervention for Ulnar nerve lesions and Neurapraxia		
WAHT-OCT-018	Page 3 of 11	Version 4

ii) Post-surgery intervention:

Time	Intervention	
Acute stage (week 1-3)	<p>Post surgery: Immobilisation of the wrist in neutral and MCP joints of ring and little in 70° flexion.</p> <p>Splinting: In order to allow flexion of digits, the surgical backslab should be replaced by a thermoplastic forearm based dorsal blocking splint positioned as per theatre instructions. Continuous splinting is required for 3 weeks unless the consultant states otherwise.</p> <p>Exercise: Active assisted ROM of digits only, wrist immobilised</p> <p>Oedema management: Patient is advised to position the forearm in elevation when sitting/sleeping using pillows.</p> <p>Advice: Patient is advised not to use the affected hand for any activity i.e. work/driving/lifting/housework Patient is advised to maintain range of movement on elbow/shoulder regularly.</p>	
Week 3-6	<p>Splinting: Continue splinting at night time and in 'at risk situations'</p> <p>Exercises: Active ROM of wrist can be introduced. Introduce nerve gliding exercises, avoid tension on the ulnar nerve. Make sure that the repaired nerve is not put in end position.</p> <p>Scar management: To commence once the wound is closed (with no signs of infection). Scar massage is introduced using a non perfumed moisturiser (E45 or aqueous cream) Patients are taught to use circular motions along the scar working distal to proximal to help the reduction of oedema.</p>	
Week 6-8	<p>Carry out a functional and sensory assessment of the hand. Deficits that can be expected: refer to 'patients with neurapraxia' above.</p> <p>Splinting suggestions: <i>Night:</i> splint in POSI to decrease the likelihood of fixed claw deformity. <i>Day:</i> an anti-claw splint to little and ring; dorsal hand based blocking splint to prevent hyperextension of the MCP joints but allow full flexion.</p>	
Guideline for Therapy intervention for Ulnar nerve lesions and Neurapraxia		
WAHT-OCT-018	Page 4 of 11	Version 4

	<p>Exercises Gentle passive ROM of wrist and digits can be introduced. (If flexor tendons are associated passive extension should be delayed until 12 weeks post surgery!)</p>
Considerations	<p>Desensitisation/ sensory re-education Begin with localisation of moving touch using light and deep pressures over the involved area. When moving touch is perceived upgrade to recognizing of shapes (starting with large objects and moving on to smaller objects) and discriminative sensation of different textures.</p> <p>Advise Reinforce importance of protection of the ulnar side of the hand from harm by sharp or hot objects</p>

Monitoring Tool

STANDARDS	%	Clinical Exceptions
All patients who have had an ulnar nerve lesion/ neurapraxia	100	Patients who are unable to safely follow the regime instructions e.g. those with cognitive impairment. Their treatment will be discussed on an individual basis with their consultant.

How will monitoring be carried out?	Continuous
When will monitoring be carried out?	As treatment occurs
Who will monitor compliance with the guideline?	Clinical Specialist physio/OT in Rheumatology/Hand trauma

References

- **Occupational Therapy splinting and hand therapy procedure.** WAHNHST (2000); Elliott J.
- **Occupational Therapy Risk Assessment COSSH;** WAHNHST (1999). Elliott J.
- Selly Oak Hospital Birmingham: Hand Protocols
- Queen Victoria Hospital NHS Trust, Hand Therapy Protocols
- Derby Royal Infirmary, Hand Therapy guidelines
- Frenchay Hand Centre, Bristol, Hand Therapy Guidelines
- Hereford NHS Trust, Hand Therapy Guidelines.
- Brigham and Women's hospital, hand therapy guidelines.

WAHT-OCT-018

It is the responsibility of every individual to check that this is the latest version/copy of this document.

- **Hand Therapy Protocols Alexandra Hospital/Worcester Royal Hospitals;** WAHNSHT (2002) Worcestershire Hand Therapies Group
- **Hand Therapy Principles and Practice** Butterworth Heinemann – Salter M, Cheshire L Chapter 12 Splinting the Hand (2000)
- **Rehabilitation of the Hand: Surgery and Therapy Forth Edition** Mosby (1995) Hunter James, MD; Mackin Evelyn, PT; and Callahan Anne, MS-OTR/LCHT

Contribution List

Key individuals involved in developing the document

Name	Designation
An Van Hyfte	Clinical specialist OT
Mandy Rawlings	Senior physio
Alison Hinton	Clinical specialist OT

Circulated to the following individuals for comments

Name	Designation
Mr Simon	Orthopaedic Consultant
Miss Henning	Orthopaedic Consultant
Physiotherapy Departments (outpatients)	WRH, Alex, Kidderminster
OT Departments (outpatients)	WRH, Alex, Kidderminster

Supporting Document 1 - Equality Impact Assessment Tool

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.



Herefordshire & Worcestershire STP - Equality Impact Assessment (EIA) Form
Please read EIA guidelines when completing this form

Section 1 - Name of Organisation (please tick)

Herefordshire & Worcestershire STP		Herefordshire Council		Herefordshire CCG	
Worcestershire Acute Hospitals NHS Trust	<input checked="" type="checkbox"/>	Worcestershire County Council		Worcestershire CCGs	
Worcestershire Health and Care NHS Trust		Wye Valley NHS Trust		Other (please state)	

Name of Lead for Activity	An Van Hyfte
----------------------------------	---------------------

Details of individuals completing this assessment	Name	Job title	e-mail contact
	An Van Hyfte	Clinical specialist OT	a.vanhyfte@nhs.net
Date assessment completed	24/04/2024		

Section 2

Activity being assessed (e.g. policy/procedure, document, service redesign, policy, strategy etc.)	<p style="text-align: right;"><u>Title:</u></p> <p style="text-align: center;">Guideline for Therapy Intervention for Ulnar Nerve Lesions and Neurapraxia</p> <p style="text-align: center;">(WAHT-OCT-018)</p>
What is the aim, purpose and/or intended outcomes of	This is an evidence based guideline for the rehabilitation of patients

this Activity?	who have had a Ulnar Nerve Lesion and/ or Neurapraxia
Who will be affected by the development & implementation of this activity?	<input type="checkbox"/> Service User <input type="checkbox"/> Staff <input type="checkbox"/> Patient <input type="checkbox"/> Communities <input type="checkbox"/> Carers <input type="checkbox"/> Other _____ <input type="checkbox"/> Visitors <input checked="" type="checkbox"/> N/A
Is this:	<input checked="" type="checkbox"/> Review of an existing activity <input type="checkbox"/> New activity <input type="checkbox"/> Planning to withdraw or reduce a service, activity or presence?
What information and evidence have you reviewed to help inform this assessment? (Please name sources, eg demographic information for patients / services / staff groups affected, complaints etc.	We have compared our guideline with the practice of specialist hand therapy units in Queen Elisabeth Birmingham, UHCW, Pulvertaft centre Derbyshire and have revisited the existing literature available on the British Association of Hand Therapists (BAHT) website.
Summary of engagement or consultation undertaken (e.g. who and how have you engaged with, or why do you believe this is not required)	Discussed with the main consultant and reviewed in the therapy clinical governance meeting held on 13/03/2024
Summary of relevant findings	Guideline is up to date

Section 3

Please consider the potential impact of this activity (during development & implementation) on each of the equality groups outlined below. **Please tick one or more impact box below for each Equality Group and explain your rationale.** Please note it is possible for the potential impact to be both positive and negative within the same equality group and this should be recorded. Remember to consider the impact on e.g. staff, public, patients, carers etc. in these equality groups.

Equality Group	Potential positive impact	Potential neutral impact	Potential negative impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Age	✓			
Disability	✓			
Gender Reassignment	✓			
Marriage & Civil Partnerships	✓			
Pregnancy & Maternity	✓			
Race including Traveling Communities	✓			
Religion & Belief	✓			

Equality Group	Potential <u>positive</u> impact	Potential <u>neutral</u> impact	Potential <u>negative</u> impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Sex	V			
Sexual Orientation	V			
Other Vulnerable and Disadvantaged Groups (e.g. carers; care leavers; homeless; Social/Economic deprivation, travelling communities etc.)	V			
Health Inequalities (any preventable, unfair & unjust differences in health status between groups, populations or individuals that arise from the unequal distribution of social, environmental & economic conditions within societies)	V			

Section 4

What actions will you take to mitigate any potential negative impacts?	Risk identified	Actions required to reduce / eliminate negative impact	Who will lead on the action?	Timeframe
	N/A			
How will you monitor these actions?	By regular audit of notes, observed practice (please see monitoring section of the document)			
When will you review this EIA? (e.g in a service redesign, this EIA should be revisited regularly throughout the design & implementation)	June 2027			

Section 5 - Please read and agree to the following Equality Statement


1. Equality Statement

1.1. All public bodies have a statutory duty under the Equality Act 2010 to set out arrangements to assess and consult on how their policies and functions impact on the 9 protected characteristics: Age; Disability; Gender Reassignment; Marriage & Civil Partnership; Pregnancy & Maternity; Race; Religion & Belief; Sex; Sexual Orientation

It is the responsibility of every individual to check that this is the latest version/copy of this document.

1.2. Our Organisations will challenge discrimination, promote equality, respect human rights, and aims to design and implement services, policies and measures that meet the diverse needs of our service, and population, ensuring that none are placed at a disadvantage over others.

1.3. All staff are expected to deliver services and provide services and care in a manner which respects the individuality of service users, patients, carer's etc, and as such treat them and members of the workforce respectfully, paying due regard to the 9 protected characteristics.

Signature of person completing EIA	 An Van Hyfte
Date signed	24/04/2024
Comments:	
Signature of person the Leader Person for this activity	
Date signed	
Comments:	



Supporting Document 2 – Financial Impact Assessment

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

	Title of document:	Yes/No
1.	Does the implementation of this document require any additional Capital resources	No
2.	Does the implementation of this document require additional revenue	No
3.	Does the implementation of this document require additional manpower	No
4.	Does the implementation of this document release any manpower costs through a change in practice	No
5.	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff	No
	Other comments:	

If the response to any of the above is yes, please complete a business case and which is signed by your Finance Manager and Directorate Manager for consideration by the Accountable Director before progressing to the relevant committee for approval