

## CHEST WALL INJURY PATHWAY



<b>TARGET AUDIENCE</b>	Secondary Care only
<b>PATIENT GROUP</b>	Patients in University Hospital Wishaw (West of Scotland Trauma Unit) with chest wall injuries (rib fractures and sternal fractures)

### Clinical Guidelines Summary

- Effective analgesia in chest wall trauma is essential in allowing effective breathing and mobilisation to prevent hypostatic pneumonia, respiratory failure and other complications related to prolonged immobility
- Accurate pain assessment is essential
- Analgesia as per WHO analgesia ladder
- Consider oxycodone as an alternative to morphine in frail elderly patients
- Maintain baseline opiates according to ECS
- Other considerations include humidified oxygen, regular saline nebulas, regular laxatives and regular chest physiotherapy
- Consider associated injuries and bleeding risk (e.g. intracerebral haemorrhage, haemothorax, visceral organ injury) prior to prescribing VTE prophylaxis
- Identify high risk patients early and refer to Anaesthetics / ICU for consideration of regional anaesthesia
- Refer to ICU if ongoing concerns or clinical deterioration

## Chest Wall Injury Analgesia Pathway

### NHS Lanarkshire – Chest Wall Injury Pathway

This flowchart is intended as a treatment guide to support clinical decision making

#### Key Management Points

- **Accurate pain assessment** - score on coughing and deep inspiration
- Check ECS to maintain any baseline opiates
- Consider humidified oxygen therapy

#### Analgesia - See WG Chest Wall Injury HEPMA bundle

- Regular paracetamol 1 gram 4 times a day (adjust if weight < 50 kgs)
- Morphine sulphate 10mg/5ml oral solution 5mg 4 times a day + 5mg as required
- Consider ibuprofen 400mg 3 times a day unless contraindicated (elderly, AKI, bleeding risk, associated injuries) + PPI cover
- Consider oxycodone liquid 2mg 4 times a day + 2mg as required instead of oral morphine solution in frail elderly patients
- Consider lidocaine patch for local application in high risk patients for opioid-sparing effect (review after 3 days)

#### Additional Medications – See WG Chest Wall Injury HEPMA bundle

- Regular 0.9% saline nebulules
- Regular laxatives
- As required anti-emetic
- VTE prophylaxis (consider withholding if associated injuries) +/- TED stockings

Please follow Medicines Formulary Recommendations

#### Recognition of high risk patient

Flail or  
> than 3 ribs

Respiratory  
morbidity risk\*

Increasing oxygen  
requirement

Uncontrolled  
pain

Refer high risk patients to Anaesthetics / ICU (DECT 8657) for consideration for regional anaesthesia e.g. Erector Spinae, Serratus Anterior or Thoracic Epidural

#### Respiratory morbidity risk

- Smoker
- Obese
- Chronic respiratory disease
- Age > 65
- Obstructive Sleep Apnoea
- Pneumothorax / chest drain

#### Treatment targets

- Improving SpO<sub>2</sub> / PaO<sub>2</sub>
- Reducing FiO<sub>2</sub>
- Improved analgesia
- Cooperative with chest physio
- Effective cough
- Early mobilisation

If ongoing concerns or clinical deterioration – refer to ICU (DECT 8657)

#### Available support

Acute pain guidelines available via Right Decisions app • Acute pain team - DECT 6224 • Major Trauma Coordinator - DECT 5889

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## ***Chest Wall Injury Analgesia Pathway***

### **References/Evidence**

1. [Rib-fracture-guideline.pdf \(smh-gas.org.uk\)](https://www.smh-gas.org.uk/Rib-fracture-guideline.pdf)
2. Johnson M et al. Do Lidocaine patches reduce opioid use in acute rib fractures? Am Surg. 2020; 86(9):1153-1158
3. Lewis A et al. The Randomised Evaluation of early topical Lidocaine patches in Elderly patients admitted to hospital with rib Fractures (RELIEF).

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### Appendices

#### 1. Governance information for Guidance document

<b>Lead Author(s):</b>	Dr Dominic Strachan
<b>Endorsing Body:</b>	ADTC
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<b>Responsible Person (if different from lead author)</b>	Dr Kat Bennett

CONSULTATION AND DISTRIBUTION RECORD	
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<b>Consultation Process / Stakeholders:</b>	As above
<b>Distribution</b>	

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## Chest Wall Injury Analgesia Pathway

CHANGE RECORD			
Date	Lead Author	Change	Version No.
04/10/2025	K Bennett	Title change to Chest Wall Injury Pathway Addition of Key Management Points box Change ibuprofen to consider Addition of consider oxycodone for frail elderly patients Prompt to withhold enoxaparin if associated injuries with bleeding risk Addition of recommendation to follow Medicine Formulary for additional medications	2

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