Worcestershire Acute Hospitals NHS Trust

GUIDELINE FOR THE USE OF INTRANASAL DIAMORPHINE

Trust wide Emergency Departments

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

The use of Intranasal Diamorphine, as analgesia in the Emergency Department, has been found to be effective, fast acting and well tolerated by patients.

Patient selection: Children weighing from **10kg – 50kg** who are in severe pain from conditions such as limb fractures or burns.

Sites: For use at Worcestershire Royal Hospital & Alexandra Hospital

Equipment:

MAD 300 - Intavent Orthofix Ltd/Products Wolfe-Tory Medical

Delivers - Spray - 30 microns particle size
Dead space – 0.09ml
Tip diameter – 4.3mm
Length – 4.5cm
Delivered in any head position

Lead Clinician(s)

Sikander Majid	Consultant In Emergency Medicine

Approved by Urgent Care Divisional Governance Meeting:	4th June 2025
Medicines Safety Committee:	11th June 2025
Review Date:	
This is the most current document and is to be used until a revised version is available	4th June 2028

Date	Key Amendments	By:
30/12/2010	No amendment made to guideline	Ian Levett
1/3/2013	Lowered weight limit to 10Kg	Richard Morrell
5/3/2013	Approved by Medicines Safety Committee	
22/5/2013	Approved by Clinical Management Committee	
18/10/13	Changed volume and diluent to be drawn up to take into account the dead-space of MAD device, as stated in CEM guideline July 2013	Richard Morrell
19/5/15	Reviewed by ED senior teams ALEX & WRH	Richard Morrell
04/12/2017	Sentence added in at the request of the Coroner	
June 2018	Document extended for 3 months as per TLG recommendation	TLG
14/02/2018	Delivery of Diamorphine does not require use of atomiser device but is recommended where possible Monitored observations for 20 minutes post administration Patient discharge after a minimum of 1 hours post administration	Ross Hodson
15/01/2021	Discharge after administration changed from 2 hours to 1 hour, and at least 2 sets of observations.	Ross Hodson
12/02/2025	Changed weight limit to 15kg to correlate with BNFc and Birmingham Children's Hospital guideline	Sikander Majid

Introduction

Many departments now use Intranasal Diamorphine instead of Oramorph.

The treatment has been found to be effective, probably more so than Oramorph, faster acting and well tolerated by patients ([3,4])

The following guideline for its use should be followed and the drug should be administered to the children with them sitting at about 45º, if possible.

Any patient given Intranasal Diamorphine needs the same care as post Oramorph administration with observations and no discharge until at least 1 hour post administration.

Details of Guideline

Patient Selection: **For children weighing between 10kg and 50kg and in any case of severe pain such as fractures or burns.**

Check:
No allergy to opiates
No other drug interactions
No indication for immediate IV access
No evidence of liver disease
No evidence of respiration depression present
No evidence of head injury (seek senior medical advice)

Carry out Base Line Observations of Pulse/BP/SpO_2/Cap Refill/Respiratory Rate

1. Establish patients' weight to the nearest 5kg (BNFc lower weight limit 12kg for diamorphine however some departments allow to 10kg at consultant discretion. **Do not administer in patients under 10kg weight).**

2. Add the appropriate volume of water to a 5mg Diamorphine ampoule.

3. Draw **0.3ml** of the resulting solution into a 1ml syringe (this accounts for the 0.09ml dead space of the atomiser)

4. Attach the mucosal atomisation device (MAD 300) to the 1ml syringe. If MAD 300 device unavailable 0.2ml of the medication should be dripped slowly into one or both nares.

5. Administer the **0.3ml** to the nostril (you may administer 0.2ml to one nostril and the rest to the other)

Weight/Kg	Vol of water for injection(ml) added to 5mg Diamorphine ampoule	Dose (mg) contained in 0.2ml of solution
10	**1.0**	**1.0**
15	**0.65**	**1.54**
20	**0.5**	**2.00**
25	**0.4**	**2.50**
30	**0.35**	**2.86**
35	**0.3**	**3.33**
40	**0.25**	**4.00**
50	**0.2**	**5.00**

- No patient should be discharged home for least 1 hour post administration.
- Monitored observations for 20 minutes post administration BP/Spo2/Pulse/RR and repeated at 1 hour post administration.
- Consider application of Ametop, Emla or LMX4 if clinically indicated for on-going patient care.

Side effect:
The effects of intranasal Diamorphine can be reversed by Naloxone 10 micrograms/kg (max dose 400micrograms) IV/IM every 2-3 minutes (Children's BNF) either prescribed or administered via Emergency and Discretionary Medicines Policy.

The senior shop floor doctor should also be contacted urgently if you are considering administering naloxone.

Monitoring Tool

This should include realistic goals, timeframes and measurable outcomes.

How will monitoring be carried out?

Who will monitor compliance with the guideline?

Page/ Section of Key Document	Key control:	Checks to be carried out to confirm compliance with the policy:	How often the check will be carried out:	Responsible for carrying out the check:	Results of check reported to: *(Responsible for also ensuring actions are developed to address any areas of non-compliance)*	Frequency of reporting:
	WHAT?	**HOW?**	**WHEN?**	**WHO?**	**WHERE?**	**WHEN?**
	Appropriate use and following dose indication and patient group treated	Audited in ED cycle both sites	Once in 3 years	Audit leads EM	EM directorate/group	Once after audit

References

1. Diamorphine intranasal protocol - Birmingham Children's Hospital

2. Joint Formulary Committee (2024) Diamorphine, in *British National Formulary for Children*. Available at: Diamorphine hydrochloride | Drugs | BNFC | NICE (Accessed: 04/03/2025).

3. Mark Davies Best BET`s - Manchester Royal Infirmary

4. Kendal J et al (2001) Multicentre Randomised Controlled Trial of Nasal Diamorphine for Children and Teenagers with Clinical Fractures - BMJ 2001 322 261-265

5. Management of Pain in Children- Best Practice Guideline: College of Emergency Medicine, Revised July 2017

CONTRIBUTION LIST

Key individuals involved in developing the document

Name	Designation
Dr Ross Hodson	Consultant in EM

Circulated to the following individuals for comments

Name	Designation
Dr J Walton	DMD Urgent care
Dr J Risley	Consultant in EM
Dr A Jalil	CD for EM
Mr M Tarrant	Matron for EM
Dr J France	CD for EM
Dr I Levett	Consultant in EM
Dr B Williams	Consultant in EM
Dr F Fasih	Consultant in EM
Dr T Naqvi	Consultant in EM
Mrs C Bush	Matron for EM
Dr N Turley	Consultant EM

Circulated to the following CD's/Heads of dept for comments from their directorates / departments (2025)

Name	Directorate / Department
Alison Smith	Pharmacist Medicines Safety Committee
Ed Mitchell	Chair Medicines Safety Committee

Supporting Document 1 - Equality Impact Assessment Tool

To be completed by the key document author and included as an appendix 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	x	Worcestershire County Council		Worcestershire CCGs	
Worcestershire Health and Care NHS Trust		Wye Valley NHS Trust		Other (please state)	

Name of Lead for Activity	**Ross Hodson**

Details of individuals completing this assessment	**Name**	**Job title**	**e-mail contact**
Date assessment completed			

Section 2

Activity being assessed (e.g. policy/procedure, document, service redesign, policy, strategy etc.)	**Title:** Guideline for the use of Intranasal Diamorphine			
What is the aim, purpose and/or intended outcomes of this Activity?	See body of document			
Who will be affected by the development & implementation of this activity?	❑ ❑x ❑ ❑	Service User Patient Carers Visitors	❑ ❑ ❑ ❑	Staff Communities Other _____
Is this:	❑ x Review of an existing activity ❑ New activity			

	❑ 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.	See body of document
Summary of engagement or consultation undertaken (e.g. who and how have you engaged with, or why do you believe this is not required)	See body of document
Summary of relevant findings	See body of document

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		x		Its designed for a young lower weight group specifically but can be used for lower weight adults who can't tolerate iv therapy
Disability		x		
Gender Reassignment		x		
Marriage & Civil Partnerships		x		
Pregnancy & Maternity		x		
Race including Traveling Communities		x		
Religion & Belief		x		
Sex		x		
Sexual Orientation		x		
Other Vulnerable and Disadvantaged Groups (e.g. carers; care leavers; homeless; Social/Economic deprivation, travelling communities etc.)		x		
Health Inequalities (any preventable, unfair & unjust differences in health status between groups, populations or		x		

Equality Group	Potential positive impact	Potential neutral impact	Potential negative impact	Please explain your reasons for any potential positive, neutral or negative impact identified
individuals that arise from the unequal distribution of social, environmental & economic conditions within societies)				

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?				
When will you review this EIA? (e.g in a service redesign, this EIA should be revisited regularly throughout the design & implementation)				

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

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	Completed on behalf of document owner
Date signed	
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