



GG021 Intranasal Fentanyl

1. Key Recommendations for operational use

For use by: Trauma teams. **For information:** SAS. **Internet:** Yes

1	Indications	<ul style="list-style-type: none">• Any patient > 1year old.• Acute moderate or severe pain.• Where IV access is delayed or not possible.• If IV access is otherwise not required.
2	Contraindications	<ul style="list-style-type: none">• Fentanyl allergy.• Reduced level of consciousness.• Bilateral nasal occlusion.• Nasal trauma.• Epistaxis.
3	Dose	<ul style="list-style-type: none">• Children: consider: 1.5 micrograms / kilogram.<ul style="list-style-type: none">- use dosing table on next page.- for ease of administration, doses in the table have been rounded up or down.• Adult: consider: up to 100 micrograms (mcg) in two 1ml (50mcg) doses.
4	Preparation	<ul style="list-style-type: none">• Use 50mcg/ml Fentanyl (100mcg/2ml amps) preparation:<ul style="list-style-type: none">- do not dilute.• Draw up fentanyl into 1ml Luer lock syringe and attach atomiser device (MAD™).• Prime MAD™ with 0.1ml for first dose only to account for dead space.
5	Administration	<ul style="list-style-type: none">• Insert gently into nostril and rapidly deploy plunger to aid atomisation.• Some run-off may occur when administering volumes greater than 0.5ml per nostril.
6	Repeat doses	<ul style="list-style-type: none">• Consider repeating the dose once after 10 minutes.
7	Side effects	<ul style="list-style-type: none">• Generally consistent with other opioids:<ul style="list-style-type: none">- respiratory depression- sleepy / dizzy- nausea / vomiting- itching- hypotension• A bad taste occurs occasionally.



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Paediatric dosing table						
		Age	Est Weight, kg	Dose, micrograms	Volume for administration	
					Left Nostril, ml	Right Nostril, ml
8	Paediatric Dosing Table	1	10	15	0.15 (7.5mcg)	0.15 (7.5mcg)
		2	12	20	0.20 (10mcg)	0.20 (10mcg)
		3	14	20	0.20 (10mcg)	0.20 (10mcg)
		4	16	25	0.25 (12.5mcg)	0.25 (12.5mcg)
		5	18	25	0.25 (12.5mcg)	0.25 (12.5mcg)
		6	25	40	0.40 (20mcg)	0.40 (20mcg)
		7	28	40	0.40 (20mcg)	0.40 (20mcg)
		8	31	45	0.45 (22.5mcg)	0.45 (22.5mcg)
		9	34	50	0.50 (25mcg)	0.50 (25mcg)
		10	37	55	0.55 (27.5mcg)	0.55 (27.5mcg)
		11	40	60	0.60 (30mcg)	0.60 (30mcg)
		12	43	65	0.65 (32.5mcg)	0.65 (32.5mcg)
		13	46	70	0.70 (35mcg)	0.70 (35mcg)
		14	49	75	0.75 (37.5mcg)	0.75 (37.5mcg)
		15	52	80	0.80 (40mcg)	0.80 (40mcg)
		16	55	85	0.85 (42.5mcg)	0.85 (42.5mcg)



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2. Document History			
Reference Number	CG021		
Version	1		
Writing group (Chair in bold)	Julie Cathcart	Advanced Retrieval Practitioner	EMRS West
	Jon McCormack	Consultant	EMRS West
	Phil Munro	Consultant	EMRS West
	Richard Price	Consultant	EMRS West
	Alastair Ross	Consultant	EMRS North
Associate Medical Director	Andrew Inglis		
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Distribution	BASICS Scotland		X
	Referring centres via service websites		✓
	Rural GPs Association of Scotland		X
	SAS	Air Ambulance	for information
		Specialist Services Desk	X
	ScotSTAR	EMRS West	✓
		EMRS North	✓
		Paediatric	X
		Neonatal	X
	Tayside Trauma Team		✓





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3. Scope and purpose

- Overall objectives:

The aim of this guideline is to describe the dosing and administration of intranasal fentanyl for adults and children.

- Statement of intent:

This guideline is not intended to be construed or to serve as a standard of care. Adherence to guideline recommendations will not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care aimed at the same results. The ultimate judgement must be made by the appropriate healthcare professional(s) responsible for clinical decisions regarding a particular clinical procedure or treatment plan. Clinicians using this guideline should work within their skill sets and usual scope of practice.

- Feedback:

Comments on this guideline can be sent to: sas.cpg@nhs.scot

- Equality Impact Assessment:

Applied to the ScotSTAR Clinical Standards group processes.

- Guideline process endorsed by the Scottish Trauma Network Prehospital, Transfer and Retrieval group.



4. References

- Frey TM et al. Effect of intranasal ketamine vs fentanyl on pain reduction for extremity injuries in children: the PRIME randomized clinical trial. *JAMA Pediatrics* 2019; 173: 140-146.
- Reynolds SL et al. Randomized controlled feasibility trial of intranasal ketamine compared to intranasal fentanyl for analgesia in children with suspected extremity fractures. *Academic Emergency Medicine* 2017; 24: 1430-1440.
- Murphy AP et al. Intranasal fentanyl for the prehospital management of acute pain in children. *European Journal of Emergency Medicine* 2017; 24: 450-454.
- Graudins A et al. The PICHFORK (Pain in Children Fentanyl or Ketamine) trial: a randomized controlled trial comparing intranasal ketamine and fentanyl for the relief of moderate to severe pain in children with limb injuries. *Annals of Emergency Medicine* 2015; 65: 248-254.