



STANDARDIZATION OF ANALGESIA AND SEDATION INFUSION SOLUTIONS IN A PEDIATRIC PALLIATIVE CARE UNIT

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BACKGROUND

PORTABLE INFUSION PUMPS

- Operator errors
- Physicochemical incompatibilities
- Bacterial contamination

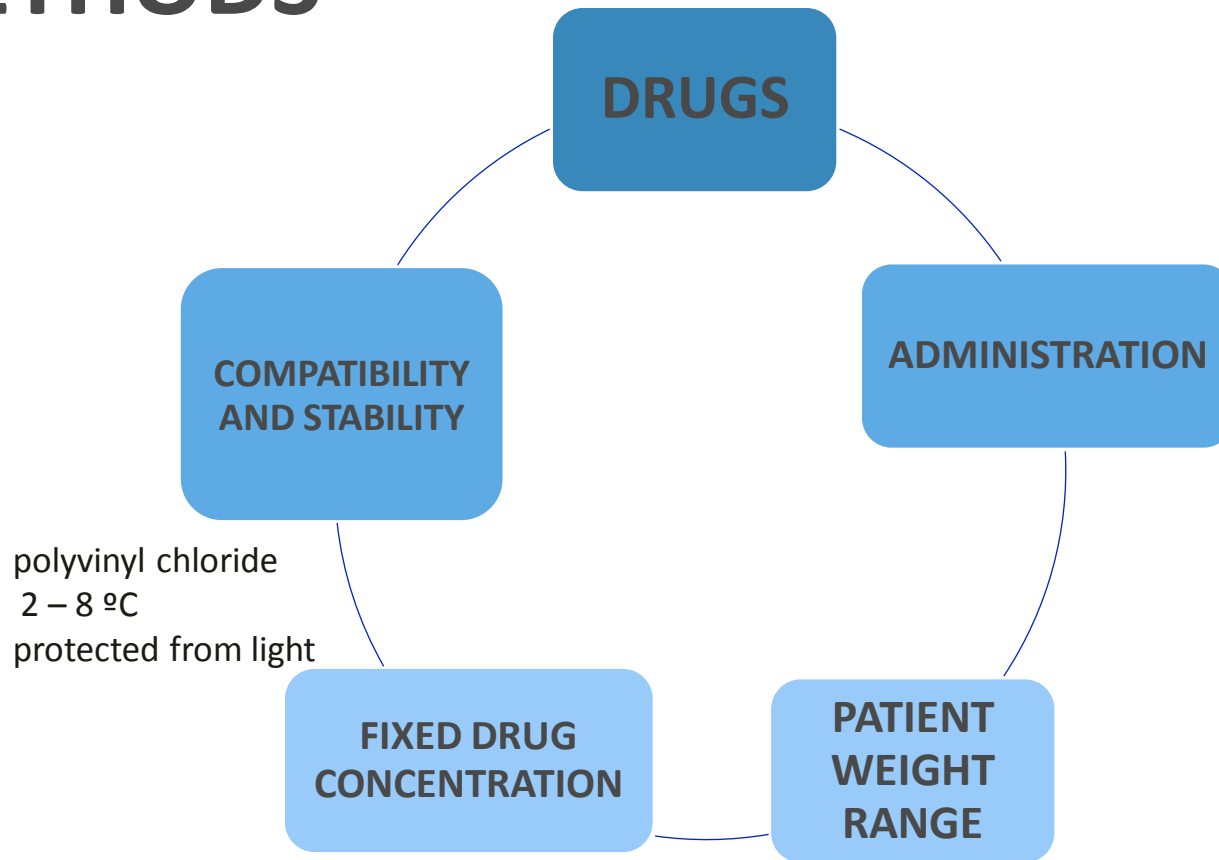


AIMS

To ensure the **effectiveness** and **safety** of analgesia and sedation therapy in pediatric patients nearing end of life in the community setting, by establishing a **standard operating procedure** based on elaboration by dose banding.



METHODS



RESULTS: STANDARDIZATION

DRUG	< 6 Kg	≥ 6 to < 11 Kg	≥ 11 to < 20 Kg	≥ 20 to < 30 Kg	≥ 30 Kg
Morphine* (dilution) NS	100 µg/ml 30 days ^{1,2}	200 µg/ml 30 days ^{1,2}	400 µg/ml 30 days ^{1,2}	800 µg/ml 30 days ^{1,2}	1200 µg/ml 30 days ^{1,2}
Morphine* NS	400 µg/ml 30 days ^{1,2}	800 µg/ml 30 days ^{1,2}	1600 µg/ml 30 days ^{1,2}	2400 µg/ml 30 days ^{1,2}	4000 µg/ml 30 days ^{2,3}
Fentanyl NS	20 µg/ml 30 days ^{4,5}	40 µg/ml 30 days ^{4,5}	50 µg/ml 30 days ^{5,6}	50 µg/ml 30 days ^{5,6}	50 µg/ml 30 days ^{5,6}
Midazolam NS	1000 µg/ml 30 days ^{7,8,9}	2500 µg/ml 30 days ^{7,10,11}	5000 µg/ml 30 days ^{5,7,11}	5000 µg/ml 30 days ^{5,7,11}	5000 µg/ml 30 days ^{5,7,11}
MORphine*- HALoperidol D	MO 400 µg/ml HA 20 µg/ml 21 days ^{12,13}	MO 800 µg/ml HA 40 µg/ml 21 days ^{12,13}	MO 1600 µg/ml HA 80 µg/ml 21 days ^{12,13}	MO 2400 µg/ml HA 120 µg/ml 21 days ^{12,13}	MO 4000 µg/ml HA 200 µg/ml 21 days ^{12,13}

* Morphine hydrochloride, NS Normal saline, D 5% dextrose

RESULTS: ADMINISTRATION

	Subcutaneous route	Intravenous Route				
		Peripheral Access			Central Access	
		Short Peripheral catheter	Midline catheter	Peripherally Inserted (PICC)	Tunneled Devices	Implantable Ports
Min. rate	0,1 ml/h*	0,1 ml/h*	0,1 ml/h*	0,1 ml/h*	0,1 ml/h*	0,5 ml/h
Max. rate	5 ml/h	500 ml/h*	500 ml/h*	500 ml/h*	500 ml/h*	500 ml/h*
Max. duration	5 days	—	—	—	—	—
Max. volume	3000 ml/day	—	—	—	—	—

* Portable infusion pump specifications



CONCLUSIONS

Morphine, fentanyl, haloperidol and midazolam are frequently administered (alone or in combination) by continuous infusion in palliative home care setting.

Standardization of drug solutions and long-term stability data permits the establishment of a **rational program** to ensure the effectiveness and safety of these treatments.



CONCLUSIONS

DRUG STABILITY



ANTICIPATION

INFUSION
DURATION



PLANIFICATION



CONCLUSIONS



Pauta de sedoanalgèsia domiciliària: full de preparació

1. Dades del pacient

Nom:

Pes: **25 Kg**

2. Fàrmac

Fàrmac principal		Fàrmac adjuvant	
MORFINA		/	
80	mg	0	mg
100	ml	100	ml
800	µg/ml	0	µg/ml

3. Instruccions de preparació

8 ml de MORFINA 10 mg/ml
0 ml de fàrmac adjuvant
92 ml de SF
SF Fleboflex® 100 ml: extreure 16 ml
100 ml CASSETTE CADD®

4. Estabilitat de la solució preparada

Solució sense utilitzar: 30 dies
Durada màxima perfusió: 5 dies

5. Programació de la bomba

0,3 ml/h

Data:



Pauta de sedoanalgèsia domiciliària: full de prescripció

1. Dades del pacient

Nom:

Pes: **25 Kg**

2. Fàrmac i dosi

	Fàrmac principal		Fàrmac adjuvant	
	MORFINA		/	
Fàrmac	80	mg	0	mg
	100	ml	100	ml
	800	µg/ml	0	µg/ml
Dosi	10,00	µg/Kg/h	0,00	/
Velocitat	0,3	ml/h		
Volum	7,50	ml/dia		
Duració	13,33	dies		

* Qualsevol tipus d'administració (endovenosa o subcutània):
DURADA MÀXIMA DE LA PERFUSIÓ 5 DIES.

Data:

Cognoms i noms i
signatura del metge:

Número de col·legiat:

CONCLUSIONS

Standardization of drug solutions and **long-term stability data** permit the establishment of a **rational program** to ensure the effectiveness and safety of these treatments.



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THANK YOU!!

**ANY
QUESTION??**

