

Palliative Care in Paediatric Setting

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Paediatric Palliative Care

- Paediatric Palliative Care is defined as **active** total care of the child's body, mind and spirit; and giving support to family. (*World Health Organization*)
- Effective palliative care requires:
 - Broad multidisciplinary approach (including families and community resources);
 - Implementation even if resources are limited;
 - Access at all levels of care and patient's homes.



Key Principles in Palliative Care

Relieving suffering through the management of distressing symptoms that include both pain and non pain symptoms

Key principles

- Determine and treat underlying causes of symptom
- Relieve symptoms without creating new symptoms or unwanted side effects
- Consider different types of interventions (drug and non-drug)
- Consider whether the treatment is of benefit to the individual patient.







Prescribing in Paediatric Palliative Care Setting

Consideration of the following is needed:

- Children with advanced illness may have organ dysfunction and/or be malnourished (altering drug handling capabilities).
- Children may be on several medications – consider drug interactions and dangers of polypharmacy.
- Children in terminal stages of illness may lose ability to swallow and getting intravenous access may become difficult – important to utilize alternative routes of administration.
- Evidence base for paediatric palliative care often limited, commonly need to prescribe off-license.

Always weigh up alleviated suffering against potential harms

Symptoms commonly encountered in paediatric palliative care

Pain		Covered in pain chapter
Gastrointestinal symptoms		Odynophagia Nausea and vomiting Intractable diarrhea Constipation
Respiratory Symptoms		Dyspnoea Chronic cough
Neuropsychiatric Symptoms		Anxiety Depression Dystonia/muscle spasms/spasticity Intractable seizures
Dermatological Symptoms		Pruritus Malodorous fungating wounds/tumours
Paediatric Palliative Care Emergencies		Mucosal bleeds Spinal cord compression Respiratory panic

Additions to the Palliative Care Paediatric STG and EML Chapter

- Guidelines were included for all symptoms highlighted in previous slide.
- Treatment additions focused on symptom management, with underlying cause of the symptoms being covered in other sections of EDL.
- General and supportive treatment was expanded.
- For the majority of symptoms, the treatment recommendations aligned with recommendation in other areas of the STGs and EML.
- Some off-label recommendations with lower evidence base added, e.g.:
 - Use of topical metronidazole for malodours fungating wounds.

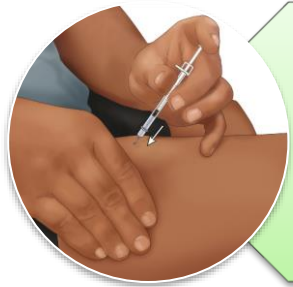


Routes of administration (1)

- In palliative care setting there is often a need for numerous medications with frequent administrations.
- Route of administration should be reliable and effective, but not be burdensome to patients.
- Oral route can be problematic:
 - Tolerability issues due to underlying symptoms such as nausea, vomiting and dysphagia- esp as end of life approaches and LOC decreases.
- Peripheral and central venous catheters are prone to complications and infections (should only be used for a few days, not long term, and not in outpatient setting)
- Limited number of medications that can be administered transdermally.
- Thus 3 new routes of administration added to the Paediatric STGs and EML:

Routes of administration (2)

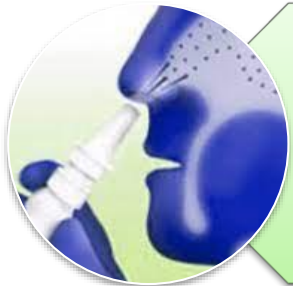
Three new routes are administration for specific agents added to the Paediatric STGs & EML:



subcutaneous



Added for morphine and midazolam administration



intranasal



Added for midazolam, ketamine and fentanyl administration



buccal/sublingual



Added for midazolam and fentanyl administration

Subcutaneous administration

- Ideal medications for subcutaneous (SC) administration are those that are hydro-soluble with neutral pH, low viscosity and low molecular weight.
- Both SC administration of morphine and midazolam are well supported in the literature.
 - Morphine SC has been shown to be comparable to morphine IV in terms of efficacy, however SC route showed less side effects.¹
 - Midazolam considered to be safest benzodiazepine for SC administration (water soluble). SC administration shown to have a fast onset of action, good tolerance, short half-life, and reversible with flumazenil.²

1. Fonzo-Christe C, et.al. Subcutaneous administration of drugs in the elderly: survey of practice and systematic literature review. *Palliative Medicine*. 2005; 19 (3):208–19.
2. Duems-Noriega O, Ariño-Blasco S. Subcutaneous fluid and drug delivery: Safe, efficient and inexpensive. *Reviews in Clinical Gerontology*. 2015; 25(2):117–46.

Use of subcutaneous route

Management principles:

- Infusion device should be used for the delivery over a 24-hour period.
- Bolus dose often recommended at start of infusion
- A 20mL syringe is the recommended minimum size to reduce risk of adverse site reactions and incompatibility
- Use of a syringe driver (provides continuous delivery of medication, and allows several medications to be administered simultaneously, and allows for patient comfort)

Site selection

- Use an area with good depth of subcutaneous fat;
- Use a site that is not near a joint;
- Selection of site should be easily accessible, e.g. chest, abdomen.

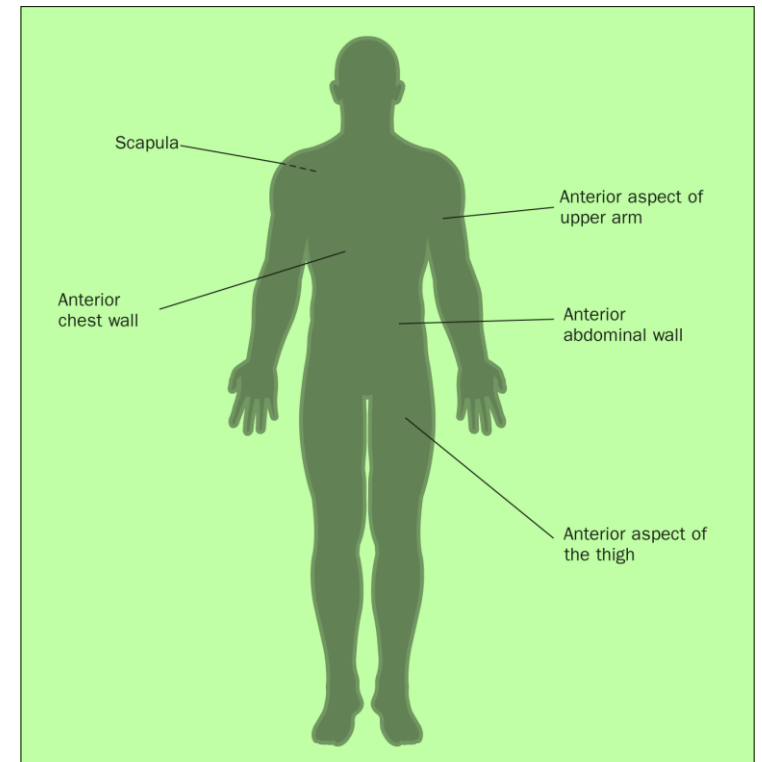


Figure 1. Subcutaneous infusion sites

Use of subcutaneous route

- **Site irritation may occur.**
- Consider following technique to minimize site irritation:
- Dilute morphine using a larger syringe size;
- Change to a 12-hour regimen
- Dilute with sodium chloride 0.9% instead of water for injection

- **Syringe drivers:**
- In hospitals, most standard IV infusion pumps can also be used subcutaneously
- In home setting in Western Cape the battery operated T34 can be procured
- This however requires a nurse to set up and maintain at home (scheduled drugs)

Demonstration

<https://www.youtube.com/watch?v=Safi7imeEdQ>

Intranasal Route



- Intranasal medication delivery:
 - often as fast in onset as intravenous medication,
 - usually painless,
 - inexpensive, easy to deliver, and effective in a variety of acute paediatric medical conditions.
- Intranasal delivery offers unique advantages:
 - more efficient use of resources,
 - more rapid patient care,
 - higher patient and provider satisfaction,
 - Avoid first-pass drug metabolism (thus higher bioavailability)

Intranasal administration

- Techniques include:
 - Minimising drug volumes while maximising drug concentration.
 - Ensuring adequate dose.
 - Use of both nostrils to double the absorptive mucosal surface.
 - Use of atomized particles (where possible) to enhance medicine absorption.
- Important to note that large amounts of mucous or blood will inhibit medication absorption (thus check nostrils before administration).
- Adverse events are rare, with most common adverse effect being nasal burning and irritation (seen with midazolam).

Buccal/Sublingual route

- **Buccal administration:** placing a drug between the gums and cheek
- **Sublingual administration:** placing a drug under the tongue

Advantages:

- Fast absorption
- Bypass first-pass metabolism (higher bioavailability)
- No need for swallowing (benefit in child)

Note:

- *Route should not be used if mucous membranes have open sores or areas of irritation.*
- *Patient should not eat, drink, chew or swallow until medication has been absorbed.*

Palliative Care Resources

For further information:

www.patchsa.org **PATCH ACADEMY**

**PG Diploma in Palliative Medicine
(Paediatrics) – UCT**













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APPM 2020 Pharmacopaedia

<https://www.appm.org.uk/formulary/>



The image shows the top section of the Patch Academy website. It features a red navigation bar with links for Home, About Us, About our Courses, Our Courses, My Account, and Contact. A search icon is also present. Below the navigation bar is a large banner with a close-up photo of a smiling child. The text on the banner reads "Welcome to Patch Academy" and "Online training for health care providers on palliative care for babies, children and young people". There is a "View our Courses" button and a "Register for a course today!" call to action at the bottom of the banner.

FREE  <p>Introducing Children's Palliative Care A comprehensive overview of the key elements of children's palliative care provision. Accreditation: CPD points awarded: Level 1 2 (General) 3 (Ethics)</p>	FREE  <p>Supporting Grieving Children A course on how to support children grieving due to the death of someone significant in their life. Accreditation: CPD points awarded: Level 1 2 (General) 2 (Ethics)</p>	R250  <p>Teamwork, Managing Conflict and Self-Care Learn how to work well in a team, manage conflict in difficult situations and how to practice self-care. Accreditation: CPD points awarded: Level 1 2 (General) 1 (Ethics)</p>	R350  <p>Communication in Children's Palliative Care Improve your communication skills with children, their parents, caregivers and colleagues. Accreditation: CPD points awarded: Level 1 2 (General) 3 (Ethics)</p>
R350  <p>Holistic Assessment and Palliative Care Planning Historically assess and plan ahead for emergency situations and for the terminal phase of a child's illness. Accreditation: CPD points awarded: Level 1 2 (General) 3 (Ethics)</p>	R350  <p>Psychosocial Support in Children's Palliative Care Assess and provide psychosocial care and support to children and families. Accreditation: CPD points awarded: Level 1 2 (General) 4 (Ethics)</p>	R350  <p>Cultural Competency & Spiritual Care Learn to assess and provide cultural and spiritual care to children with serious illnesses and their families. Accreditation: CPD points awarded: Level 1 5 (Ethics)</p>	R350  <p>Loss, Grief & Bereavement in Children's Palliative Care Learn how to assess the needs and provide support to grieving parents, children and family members. Accreditation: CPD points awarded: Level 1 3 (General) 3 (Ethics)</p>
R350  <p>Ethics & Decision Making in Children's Palliative Care Learn about children's rights, the law and how to make ethical decisions in children's palliative care. Accreditation: CPD points awarded: Level 1 6 (Ethics)</p>	R450  <p>Assessing and Managing Children's Pain Learn how to recognise, assess and successfully manage pain in babies, children and young adults. Accreditation: CPD points awarded: Level 1 5 (General) 1 (Ethics)</p>	R450  <p>Symptom Management in Children's Palliative Care Manage common symptoms in CPC using non-pharmacological and pharmacological interventions. Accreditation: CPD points awarded: Level 1 5 (General) 1 (Ethics)</p>	R450  <p>End-of-Life Care for Children Learn how to manage end-of-life care for children and adolescents and support their families. Accreditation: CPD points awarded: Level 1 5 (General) 1 (Ethics)</p>

Thank you