

Solutions to supply and access issues for palliative care medications during COVID-19

INTRODUCTION

This summary document provides an awareness to all clinicians dealing with palliative care patients, of the potential problems for palliative care services in COVID-19. It proposes an approach for palliative care service providers to the supply of, and access to palliative care medications in the COVID-19 context. It recognises the need to adapt our 'best practice' models of palliative care to the delivery of 'best possible' care that is equitable and fair under the circumstances.

This is described as *COVID-Context Palliative Care*, in line with humanitarian crisis terminology and specific to COVID. It encompasses palliative care for all – patients who are COVID-19 positive and patients whose care is indirectly impacted by the COVID-19 pandemic.

SUPPLY AND ACCESS ISSUES FOR PALLIATIVE CARE MEDICATIONS IN CRISIS

- 1) During the COVID-19 pandemic, a surge in the use of conventional palliative care medications is anticipated, with a resultant shortage in the supply of these medications in pharmacies.
- 2) Standard delivery regimes of conventional first-line palliative care medications (e.g. morphine, midazolam) might not be feasible due to insufficient resources (e.g. staff and Personal Protective Equipment [PPE] shortages).
- 3) Standard delivery devices (Niki T34 syringe drivers) are anticipated to be in shortage, due to increased demand. Alternative continuous delivery options need to be explored.
- 4) Healthcare Worker shortages are also anticipated, due to pandemic workload, illness, isolation and quarantine. There is an urgent need to train and empower non-palliative care health professionals to effectively deliver palliative care. Education and resources to support appropriate prescribing and administration of palliative care medications will be critical.
- 5) In this COVID-19 context, there will likely be an increased dependence on the role of carers in the community. Education and resources for these carers is necessary to support their provision of care.
- 6) Clinicians may need guidance regarding alternative medications and routes of administration (Refer to ANZSPM's document "[Specialist Symptom Management in COVID-19](#)" (Available soon) for management options).

OVERALL STRATEGIES TO ENSURE MEDICATION SUPPLY AND ACCESS

1) The strategies to ensure medication supply and access during the COVID-19 outbreak are summarised in the acronym of “PICA” for the ease of reference (Figure 1), with each item elaborated in the sections below:

1. **Pharmacy stock/readiness:** Local palliative care services to identify and communicate with responsible pharmacies; prepare for shortage of medications by procuring stocks from relevant sources; and engage pharmacists with information of alternative treatment options.
2. **Infusion devices:** Consider alternatives to T34 Niki Pump such as other intravenous infusion devices or disposable elastomeric infusers for administration of continuous subcutaneous infusions.
3. **Carers:** Empowering non-professional / unpaid carers for medication administration through online video /materials for care of patients.
4. **Alternative medications and routes of delivery:** Consideration of alternative options when the conventional first-line treatment options are not feasible.

Solutions to supply and access issues for palliative care medications during COVID-19 – The “PICA” Approach

MAIN ISSUES OF CONCERN:

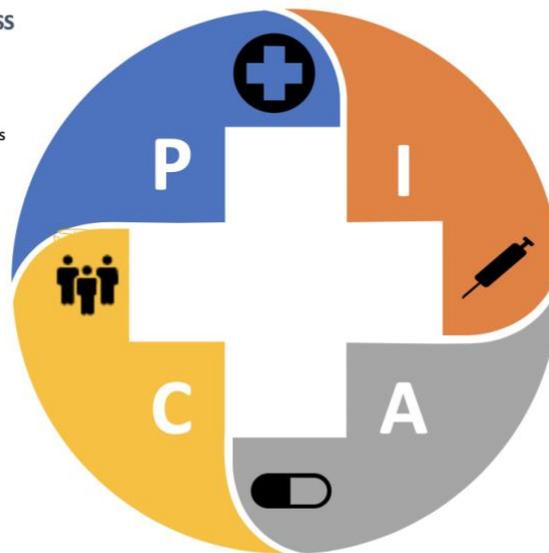
1. INCREASE IN DEMAND
2. WORKFORCE CAPABILITIES
3. SYRINGE DRIVER ISSUES
4. WORKFORCE SHORTAGES
5. SHORTAGE OF PERSONAL PROTECTIVE EQUIPMENT

P HARMACY STOCK/ READINESS

- Local palliative care services to identify and communicate with responsible pharmacies.
- Prepare for shortage of medications by procuring stock from relevant sources.
- Engage pharmacists with information of alternative treatment options.

C ARERS

- Empowering non-professional/ unpaid carers for medication administration through online video/ material for the care of patients.



I NFUSION DEVICES

- Consider alternatives to T34 Niki Pumps, e.g. other intravenous infusion devices or disposable elastomeric infusers for administration of continuous subcutaneous infusions.

A LTERNATIVE MEDICATIONS & ROUTES OF DELIVERY

- Consideration of alternative options when the conventional first-line treatment options are not feasible.

ANZSPM COVID-19 GUIDANCE DOCUMENT. Created: Apr 2020

Figure 1. Overall strategies to ensure medication supply and access in the COVID-19 context.

1. PHARMACY STOCK/READINESS

- 1) Government bodies have been alerted to the potential high demand of medications, equipment, spaces, and workforce required during the COVID-19 pandemic, so that appropriate measures can be undertaken to ensure supplies.
- 2) Identification of Responsible Pharmacies
 - a) Local palliative care teams are recommended to identify the pharmacies responsible for maintaining the supply of essential palliative care medications for the relevant area. This will vary in different contexts. Advice from a palliative care pharmacist is recommended. A combination of hospital and community pharmacies is suggested as inpatients, inpatient discharges and community patients must be considered.
 - b) Suggested liaison points include: Local Health Networks; Local Pharmacy Guilds; Primary Health Networks; and Palliative Care Pharmacists.
- 3) Communication
 - a) Regular liaison and communication between palliative care services and community & hospital pharmacies regarding anticipated requirements is vital to ensure timely access to essential palliative care medications. This establishes the pathway of procuring medications for patients with palliative care needs, especially for those in the community, e.g. community patients are directed to a particular community pharmacy first, but if stock is limited, they are advised to visit the local hospital pharmacy for assistance.
- 4) Preparation
 - a) Pharmacies should anticipate shortage of standard medications which will need increased stock, as well as the alternative routes of delivery of these medications.
 - b) Hospital and community pharmacies should consider procuring a more-than-usual period of supply (e.g. one-month supply or as deemed appropriate for the local service) of regularly used conventional palliative care medications through their usual suppliers.
 - c) For the community pharmacies, the document "[Core palliative medicines: Meeting the needs of non-complex community patients](#)¹" lists some of the conventional essential palliative care medications in the community setting as a guide.
 - d) Hospital pharmacies should be prepared for the possibility of needing to supply medications that are unavailable from community pharmacies, e.g. cyclizine, glycopyrrolate, or levomepromazine, and involve the relevant State Health Department (e.g. NSW Health) if there is commercial supply shortage.
 - e) Responsible pharmacies are recommended to prepare for a supply of alternative medications and medication delivery devices (See ANZSPM Document "Specialist Symptom Management in COVID-19"), and facilitate the access of restricted medications e.g. cyclizine, glycopyrrolate, or levomepromazine via Special Access Scheme.
- 5) Engagement & Education of Pharmacists
 - a) Engaging and educating pharmacies of these alternative medications and routes of administration are vital to ensure ready access of these medication, as responsible pharmacies might be unaware of alternative administration routes for certain medications.
 - b) Pharmacists should be alerted to trusted palliative care resources. Some resources are listed below:
 - i) Palliative Care Formulary 6th Edition²
 - ii) ANZSPM: "[Specialist Symptom Management in COVID-19](#)" (Available soon)³
 - iii) [Pharmaceutical Society of Australia: Palliative Care - Essential CPE](#)⁴

- iv) [NHS Scotland: Alternatives to Regular Medication Normally Given via a Syringe Pump When this is Not Available⁵](#)

References for Pharmacy Stock/Readiness

1. Tait, P., B. Morris, and T. To. *Core palliative medicines: Meeting the needs of non-complex community patients*. 2014 [cited 2020 24th of Apr]; Available from: <https://www.racgp.org.au/afp/2014/januaryfebruary/core-palliative-medicines/>.
2. Twycross, R., A. Wilcock, and P. Howard, *Palliative Care Formulary (PCF6)*. 2017, Nottingham: Palliativedrugs.com Ltd.
3. ANZSPM document "[Specialist Symptom Management in COVID-19](#)" (Available soon)
4. Pharmaceutical Society of Australia. *Palliative Care: Essential CPE*. 2019 [cited 2020 24th of Apr]; Available from: https://my.psa.org.au/servlet/fileField?entityId=ka10o00000Do5OAAS&field=PDF_File_Member_Content_Body_s
5. NHS Scotland. *Alternatives to Regular Medication Normally Given via a Syringe Pump When this is Not Available*. 2020 [cited 2020 24th of Apr]; Available from: <https://www.palliativecareguidelines.scot.nhs.uk/guidelines/symptom-control/alternatives-to-regular-medication-normally-given-via-a-syringe-pump-when-this-is-not-available.aspx>

2. INFUSION DEVICES

- 1) The use of the conventional syringe driver (The Niki T34 Pump) for the delivery of subcutaneous infusions might not be feasible as:
 - a) These pumps can only be cleaned with isopropyl alcohol (70%) as there is a risk of fluid ingress that can damage the devices if other cleaning solutions are used ("[Niki T34 Appendix 1 – Addendum to Instructions for Use Oct 2019](#)")¹. This sanitisation issues poses a potential risk after being used with COVID-19 positive patients.
 - b) In many jurisdictions & services, a locked box is required when these are placed in the community. There is presently a shortage of locked boxes.
- 2) There are many alternative infusion devices that are available in Australia and New Zealand to deliver subcutaneous (and intravenous) infusions:
 - a) Battery Driven, Electronic Devices:
 - i) Often used as intravenous delivery devices, but can be utilised for subcutaneous delivery by administering the desired medication(s) mixed in 100-250ml of appropriate diluent (e.g. water or normal saline) over 24 hours subcutaneously
 - ii) Some have programmable Patient (or Nurse) Controlled Analgesia capability
 - iii) Varying requirements for medications to be packed by manufacturer (via a cassette/pre-packed bag) or ability for healthcare staff on site to draw up delivery doses
 - iv) Examples include: CADD Solis, GemStar, Alaris (Imed), Gemini, Sapphire
 - b) Elastomeric Devices:
 - i) Disposable, non electronic medication infusion pump delivered as an elastomeric 'balloon' consistently deflates
 - ii) Various brands available, with differing permutations allowing medications to be packed by manufacturer or healthcare staff on site; device size/volume differences exist (ranging from

10mL [Springfuser] to 500mL [Baxter]), allowing medication to be delivered over a range of 5 minutes to 7 days.

iii) Available brands include:

(1) Baxter Elastomeric Pump: https://www.baxterprofessional.com.au/system/files/2018-03/ElastomericProducts_ProfessionalGuide.pdf

(2) Surefuser (Nepro): <http://www.niproaustralia.com.au/products/infusion-care#gallery-details-infusion-care-surefuser>

(3) Springfuser (GoMedica) <https://www.ltrmedical.com/springfuser-and-fct-range/>

iv) Surefuser of 50 or 100mL for subcutaneous infusion over 24 or 48 hours respectively have been used by various local health services in Australia and has been studied, with some resources as listed:

(1) Huppatz, C., D. Parker, and I. Maddocks, [*Testing the Surefuser: A Disposable Subcutaneous Infusion Pump*](#). *The Australian Journal of Hospital Pharmacy*, 1998. **28**(4): p. 241-245.²

(2) Nepean Blue Mountains LHD Supportive and Palliative Care Nursing Team, [*A nurse's guide to using the Surefuser in the palliative care setting*](#). 2020³

(3) Surefuser Protocol: NSW Health - Nepean Blue Mountains Local Health District, *Management of Subcutaneous Medications: Intermittent Injections and Continuous Subcutaneous Infusion via BD Saf-T Intima, NIKI T34 TM and NIPRO SurefuserTM+ Devices*. 2013. p. 17-20.⁴

References for Medical Infusion Devices:

1. BioClinical Services. *NIKI T34 Appendix 1 -Addendum to Instructions for Use Oct 2019*. 2019 [cited 2020 18th of Apr]; Available from: <https://www.bioclinicalservices.com.au/cme/ambulatory-syringe-pumps/niki-t34-appendix-1-addendum-to-instructions-for-use-oct-2019>.
2. Huppatz, C., D. Parker, and I. Maddocks, *Testing the Surefuser: A Disposable Subcutaneous Infusion Pump*. *The Australian Journal of Hospital Pharmacy*, 1998. **28**(4): p. 241-245.
3. Nepean Blue Mountains LHD Supportive and Palliative Care Nursing Team, *A nurse's guide to using the Surefuser in the palliative care setting*. 2020.
4. NSW Health - Nepean Blue Mountains Local Health District, *Management of Subcutaneous Medications: Intermittent Injections and Continuous Subcutaneous Infusion via BD Saf-T Intima, NIKI T34 TM and NIPRO SurefuserTM+ Devices*. 2013. p. 17-20.

3. EDUCATING AND SUPPORTING CARERS TO ADMINISTER MEDICATIONS

- 1) An anticipated healthcare worker shortage may result in an increased responsibility of care placed on unpaid carers, including the administration of medications.
- 2) If face-to-face education of carers by health professionals is not possible (e.g. teaching how to administer subcutaneous or sublingual medications), the usage of telehealth technology or online recorded educational materials is suggested. The following resources are recommended:
 - a) [Caring@Home Project \(AU\)](#)¹: An Australian resource to support health professionals and carers for patients in the community. Online education modules and downloadable education brochures are available. Pre-prepared education and caring at home packages are available to be ordered.
 - b) [Mary Potter Hospice \(NZ\)](#)²: Video resources for administration of medications (e.g. giving sublingual medications; preparing for subcutaneous lines) as well as other palliative care resources specific to the New Zealand population.
 - c) [Canadian Virtual Hospice \(Canadian\)](#)³: Video resources for a range of caregiving demonstrations, including the administration of sublingual, topical, and rectal medications, as well as transferring of patients.

References for Education and Supporting Carers to Administer Medications:

1. Brisbane South Palliative Care Collaborative. *Caring@home: Symptom management for palliative patients*. 2018 [cited 2020 18th Apr]; Available from: <https://www.caringathomeproject.com.au/>
2. Mary Potter Hospice. *Guidelines for self-administration of medications*. 2020 [cited 2020 18th of Apr]; Available from: <https://marypotter.org.nz/covid-19/guidelines-self-administration-medication/>
3. Canadian Virtual Hospice. *The gallery: Caregiving demonstrations*. 2017 [cited 2020 22nd of Apr]; Available from: http://virtualhospice.ca/en_US/Main+Site+Navigation/Home/Support/Support/The+Gallery/Caregiving+Demonstrations/Personal+hygiene+ +Giving+a+bed+bath.aspx#video_content_details

4. ALTERNATIVE MEDICATIONS & ROUTES OF DELIVERY

1. When managing symptoms of patients with COVID-19, the conventional / first-line treatment options should be attempted.
2. The initial management is recommended using the ANZSPM guide "[Essential palliative & end-of-life care in the COVID-19 pandemic](#)"
3. In the event of shortage of conventional palliative care medications, clinicians may consider alternative treatment options and routes of administration.
4. The ANZSPM's document "[Specialist Symptom Management in COVID-19](#)" (*Available soon*) provides a wide range of management options for COVID-19 related symptoms, including alternative approaches, classified by the most clinically relevant symptoms.
5. As clinicians less commonly prescribe medications via the sublingual and rectal routes, some brief notes regarding these routes of administration are listed below:

Sublingual route¹

1. Ensure mouth is clean and moist to enhance delivery of medications
2. If administering a liquid, higher concentration formulations are preferred to aid absorption
3. If administering a tablet, administer 1ml of water via syringe to mix with crushed oral tablet
4. The patient will need to retain the sublingual medication for around 5 minutes for good effect
5. The generally acceptable maximal volume for sublingual medication administration is 1ml. If a higher dose of medication is required, it is recommended to either repeat the administration in 10 minutes or use another medication formulation with higher potency.
6. Video for learning how to administer medication under the tongue:
 - a. Hospice NZ: "[How to Prepare Medication for Sublingual or Buccal Administration](#)"²
 - b. Canadian Virtual Hospice: "[Administering medications: Giving medications under the tongue](#)"³

References for sublingual routes:

1. Hospice New Zealand. *Symptom control for people with COVID-19*. 2020 [cited 2020 8th of Apr]; Available from: <https://www.hospice.org.nz/wp-content/uploads/2020/04/Symptom-control-for-COVID-19-patients-V2-3-April-2020.pdf>.
2. Hospice NZ. *How to prepare medications for sublingual or buccal administration*. 2020 [cited 2020 18th of Apr]; Available from: <https://www.youtube.com/watch?v=l1v5F6ep5RM>
3. Canadian Virtual Hospice. *Administering medications: Giving medications under the tongue*. 2012 [cited 2020 8th of Apr]; Available from: <https://www.youtube.com/watch?v=6m18xD6Hqs0>

Rectal Route¹⁻²

1. A number of medications in tablet forms can be administered via rectal route.
2. A special formulated suppository is not required for efficacy – it merely assists in the retention of the medication.
3. Ensuring an empty rectum prior to insertion of rectal medications against the rectal wall would enhance drug absorption.
4. The rectal route is contraindicated for neutropenic patients. Other relative contraindications include patients with thrombocytopenia, diarrhea, anorectal disease, and prior abdominoperineal resection.

References for rectal route:

1. Samala, R.V. and M. Davis. *Palliative Care Per Rectum*. 2020 [cited 2020 8th of Apr 2020]; Available from: <https://www.mypcnow.org/fast-fact/palliative-care-per-rectum/>
2. Warren, D.E., *Practical use of rectal medications in palliative care*. Journal of pain and symptom management, 1996. **11**(6): p. 378-387.

THIS INFORMATION IS OF A GENERAL NATURE AND SHOULD BE ADAPTED DEPENDING ON LOCAL PROTOCOLS. For further assistance, please contact THE PALLIATIVE CARE TEAM on