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Core palliative medicines: meeting the needs of non-complex community patients

Background

There are a number of challenges facing people in the last days of life who wish to receive care in their home environment. This includes timely access to medicines for symptom control.

Objective

This article outlines the development of a concise list of core medicines that can provide symptom control in non-complex patients in the last days of life. The list is based on practical criteria including evidence of efficacy, affordability, the option for parenteral administration, availability on the Pharmaceutical Benefits Scheme and the doctors' emergency drug supply list.

Discussion

A list of core medicines can facilitate timely prescribing and supply of essential medicines for end-of-life symptom management. However, the development of this list should not replace planning and routine involvement of community resources. Multidisciplinary education strategies are needed to ensure that the core medicines list is utilised effectively by doctors, pharmacists and community nurses.

Keywords

general practitioner; palliative care; pharmacies; medication systems; terminal care

Across Australia, there are approximately 64 000 palliative care patients annually and a significant proportion are cared for in the community.[1] The general practitioner, with the support of palliative care organisations and community services, is well placed to lead their care.

For patients in palliative care who wish to spend their last days at home, good symptom control and advanced care planning are essential.[2] The literature describes many challenges to providing good symptom control for people at home, including timely access to medicines,[3,4] which is especially important in the last few days of life (terminal phase) when symptoms can appear or worsen quickly without warning.[5]

Commonly encountered symptoms at the end of life have been well described and include fatigue, pain, nausea, dyspnoea, noisy breathing and delirium.[6] Australian guidelines are available for symptom management in palliative care and they offer a broad range of pharmacological choices to manage these symptoms.[7] However, this range may be unnecessary for uncomplicated community-based palliative care patients.

A Western Australian group developed a list of almost 50 medicines considered essential for symptom control in palliative care patients to guide aged care facilities and their pharmacies in the range of medicines required.[8] However, most community pharmacies find it difficult to hold all of the listed medicines and maintain a minimum stock turnover to make it sustainable to stock this range of medicines.[9]

Shorter lists of medicines for palliative care have been published in the literature.[10–12] Each of these lists has been developed as a result of prescriber surveys, focusing on familiarity of use. This methodological approach fails to acknowledge practical aspects of accessing medicines, such as national medication regulations (eg. licensing and subsidy), expense (to the patient or health care system) and sustainability for pharmacies.

In this article, we describe the development of a core medicines list, which is aimed at guiding prescribers, community nurses and pharmacists in supporting the care of patients in their homes, during the terminal phase of life.

Core medicines list development

An expert working group was convened. The group consisted of clinicians from three tertiary palliative care services in South Australia, a palliative care consultant, three palliative care

Table 1. Representative group of stakeholders
South Australian (SA) Health palliative care nurses
All SA Health palliative care physicians
All SA Health palliative care pharmacists
All SA Health directors of pharmacy departments
Representatives of Country Health SA
Representatives of SA Ambulance Service
SA Pharmacy representatives
Representatives of all SA Medicare Locals and Divisions of General Practice

Table 2. Core medicines for the terminal phase
Clonazepam 1 mg injection
Morphine 10 mg/mL injection
Haloperidol 5 mg/mL injection
Metoclopramide 10 mg/2mL injection
Hyoscine butylbromide 20 mg/mL injection

pharmacists, two nurse practitioner candidates and a tertiary palliative care service manager who chaired the group.

The expert working group commenced with a gap analysis of the Western Australian document[8] designed to guide aged care facilities.The 49 separate formulations listed in this document were reviewed against the Palliative Care Therapeutic Guidelines. This was achieved by applying the following practical criteria, based on work by Rowett et al:[13]

- evaluating the evidence for management of five symptoms commonly seen in the terminal phase of life (pain, dyspnoea, nausea, noisy breathing and delirium)
- comparing costs of each medicine (including the availability of government subsidies)
- assessing the route(s) of administration, acknowledging the frequency of dysphagia at the end of life
- considering medicines available on the Pharmaceutical Benefits Scheme (PBS) emergency drug supply (doctor's bag) list.

A draft list of medicines was distributed to a representative group of stakeholders (*Table 1*), who were invited to review the medicines and to provide literature to support any recommendations to change. This group provided feedback but no literature was presented to challenge any of the decisions made by the expert working group. *Table 2* lists the final five medicines selected.

Discussion

Given the high prevalence of dysphagia at the end of life, all of the core medicines for this project were selected for subcutaneous administration.[7]

Pain

Pain is a frequent complication of cancer and many other life-limiting illnesses. Poorly controlled pain causes significant distress and disability. Morphine is efficacious and equivalent to other opioids in the treatment of moderate-to-severe pain.[14–16] It is affordable for patients and the healthcare system. The 10 mg/mL strength was selected for the core medicines list, for safety and ease of calculation, despite the availability of 15 mg/mL and 30 mg/mL in the PBS emergency drug supply list.

Parenteral oxycodone and fentanyl were excluded as their non-PBS status made these medications expensive. Hydromorphone is subsidised through the PBS and can be used in renal failure (with dose reduction) as the kidneys account for only a small amount of the elimination of the parent drug and its metabolites.[17] These points make hydromorphone a suitable second-line agent when morphine is contraindicated. However, with a potency of about five times that of morphine, hydromorphone presents significant safety concerns for prescribers unfamiliar with its potency.

Dyspnoea

Dyspnoea, or breathlessness, is the uncomfortable sensation or awareness of breathing or needing to breathe. For some patients, anxiety may be a contributing factor that may also need to be addressed.

Opioids have a clear role in the relief of dyspnoea and morphine has the best evidence supporting its use as first-line therapy.[18] Benzodiazepines, including clonazepam and midazolam, have an important role in supporting patients with dyspnoea and its significant associated anxiety. The long half-life of clonazepam allows administration as a subcutaneous bolus once or twice a day, to deliver a sustained effect. By contrast, midazolam, which has a short half-life, requires a syringe driver or frequent subcutaneous administration to provide the equivalent outcome. Both sublingual and subcutaneous clonazepam have a quick onset of action, making clonazepam suitable for breakthrough symptoms. Dry mouth is a frequent problem at the end of life and can affect sublingual absorption; thus subcutaneous injection is the more pragmatic choice for patients in the last days of life.

Delirium

Delirium is the acute or recent development of confusion and altered consciousness occurring in a fluctuating manner. Despite no medication being registered through the Australian Therapeutics Goods Administration for the management of delirium, antipsychotics are first-line pharmacotherapy, with a few exceptions such as the use of benzodiazepines in alcohol withdrawal.[19] With no demonstrated difference in efficacy, compared with atypical antipsychotics, the typical antipsychotic haloperidol is recommended on the basis of scientific evidence, cost, availability, familiarity and option for parenteral administration.[20] Haloperidol injection, 5 mg/mL, is also available through the PBS emergency drug supply list.

If sedation is required, particularly in instances of terminal restlessness, clonazepam has a favourable pharmacokinetic profile (as outlined above) and may avoid the need for a syringe driver, which may be problematic in an agitated patient.

Nausea

Nausea, with or without vomiting, can be intermittent or persistent. Previously published data indicate that metoclopramide 10 mg/2 mL injection is already widely available through community pharmacies.[9] Thus, it is included in addition to haloperidol, which also has anti-emetic properties. Parenteral metoclopramide 10 mg/2 mL is also available through the PBS emergency drug supply list.

Noisy breathing

Noisy breathing can be present in over 40% of dying people.[21] This symptom may be more distressing for the family and treating staff than for the patients themselves. There is no evidence to show that any of the commonly used anticholinergic agents are superior to each other, or against placebo or octreotide, in the management of noisy breathing.[22] Atropine and hyoscine hydrobromide cross the blood–brain barrier and may contribute to delirium and sedation. By contrast, hyoscine butylbromide does not cross the blood–brain barrier and is available through the PBS emergency drug supply list.

For these two reasons, hyoscine butylbromide 20 mg/mL injection was selected as the preferred anticholinergic agent.

General considerations

The introduction of a core medicines list must involve multidisciplinary education programs targeted to prescribers, community nurses and pharmacists. Engagement with prescribers and pharmacists ensures that the particular medicines that are prescribed are also the ones that are stocked by community pharmacies.[23] Without these multidisciplinary discussions, there is a risk that prescribers, through personal preferences, will prescribe a range of medications that are unsustainable for community pharmacies to hold.[9] This will compromise the timely control of symptoms simply because the pharmacist is unable to anticipate which medicines to stock.

The core medicines list is a safety net for patients who deteriorate suddenly at the end of life. It is not a substitute for good advanced planning. Advanced preparation for deterioration in palliative care patients provides opportunities for establishment of the required ancillary supports from services such as palliative care, community nursing, domiciliary services, as well as engagement with the community pharmacy. It also allows for tailored prescribing, adapting to the patient's needs, taking into account established medicines for symptom control and significant comorbidities. Non-pharmacological strategies for symptom management also remain a key component of quality end-of-life care.

Recommendations

General practitioners should engage with the patient's usual community pharmacy when prescribing for symptom control at the end of life, to ensure the suitability and availability of medications. Palliative care organisations should collaborate with community-based medical, nursing and pharmacy organisations to implement a core medicines list. Policy makers need to put in place incentives for community pharmacies to hold these five core medicines to support end-of-life care in the community, in a similar model to the PBS emergency drug supply list.

Future considerations

Plans are underway in South Australia to assess the sustainability of community pharmacies stocking these medicines and to determine the factors that support this. The aim is to use the patient's usual pharmacy, where possible, to provide prompt access to symptom control. This pilot program involves training for clinicians, as prescription guidance is a key element of providing sustainable access to these medicines.

Conclusion

This list is intended to support timely access to medicines for palliative patients where their preferred place to die is in the community. It is paramount that the development of core medicines lists takes into account the practical needs of carers and patients, and is supported by a multidisciplinary education campaign to ensure prescribing mirrors medicine availability.

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