BC Centre for Palliative Care

B.C. INTER-PROFESSIONAL PALLIATIVE SYMPTOM MANAGEMENT GUIDELINES

fraserhealth

Interior Health
Every person matters

First Nations Health Authority
Health through wellness

islandhealth

Providence Health Care

Vancouver Coastal Health

northern health

REFRACTORY SYMPTOMS AND PALLIATIVE SEDATION

updated January 2024

TABLE OF CONTENTS

(Page Numbers hyperlinked)

PURPOSE:

To provide evidence-based advice (guidance informed by evidence, endorsed by practice) for non-specialist inter-professional clinicians on safe and effective clinical decision making regarding the initiation and management of Palliative Sedation Therapy (PST).

This guideline is intended for use alongside consultation with experienced palliative care physicians/specialists and inter-professional palliative care teams.[1–3] **If there are no local palliative care physicians available, one can be reached via the BC Provincial Palliative Care Consultation Line (toll-free, 24/7) at 1-877-711-5757** (accessible only for physicians and nurse practitioners).

Organizational policies about who may prescribe, administer, and monitor PST vary throughout British Columbia (BC). Before applying this guideline, ensure the appropriate personnel are involved as required by your organization.

DEFINITIONS:

Refractory symptom(s): symptoms causing unbearable suffering for the patient and, after a thorough assessment, further interventions to mitigate this suffering are determined to include one or more of the following:[3–5]

- Inaccessible or incapable of relieving suffering,
- Associated with unacceptable side effects,
- Unlikely to be effective within a reasonable time frame,
- Not in keeping with the patient's goals of care, and/or
- Unacceptable to the patient* and/or family** for other reasons.

Before determining if a symptom is refractory rather than difficult, a full assessment and advanced symptom management must be done. **Consultation with an experienced palliative care physician/specialist is recommended.**[3,4] See "Step 2: Assessment" under "Standard of Care" in the following pages for further details.

---

* "Patient" indicates the person receiving care and includes terms such as "client" or "resident."
** "Family" is defined by the patient and includes all who are identified by them as significant and involved.

Palliative Sedation Therapy (PST): The monitored use of pharmacological agent(s) to intentionally reduce consciousness to treat refractory and intractable symptoms, and intolerable suffering for a patient at end-of-life with advanced life-limiting, progressive illness.[1,4] It is considered a last resort and is only used when other treatments have failed.[5–8] The level of sedation must be in proportion to symptom severity, using the appropriate medication dose to achieve comfort goals.[5,8] The desired sedation level should be determined by the clinician in consultation with the patient or their Substitute Decision Maker (SDM).

PST almost always continues until natural death from the illness occurs. This guideline does not encompass respite, temporary intentional, procedural, or intermittent sedation.[5,6,9,10] If these types of sedation are being considered, seek guidance from an experienced palliative care physician/specialist.

Sedation as a side effect of treatment (i.e. consequential sedation) or decreased level of consciousness, as expected in the natural dying process, is not PST.[3,5]

The intent of PST is to provide symptom relief. When used appropriately, it does not hasten death.[3,5,7,10,11] While some patients with refractory symptoms may consider Medical Assistance in Dying (MAiD), PST and MAiD are distinguished by their **intent** and **patient eligibility**, and these distinctions should be made clear to the patient, family, and health care team.[1,2,5,6,12] For guidance when responding to an expressed wish for hastened death, see guidelines on *Nurturing Psychosocial and Spiritual Well-Being*.

Table 1: Distinguishing between PST and MAiD

Palliative Sedation Therapy (PST) [3,5,7,10,11]	**Medical Assistance in Dying (MAiD)**[13]
1. Suffering is unbearable for the patient.	1. Suffering is unbearable for the patient.
2. Intent is to provide symptom management and relief of suffering.	2. Intent is to end life to relieve suffering.
3. Does not hasten death.	3. Hastens death.
4. Natural death from illness is imminent.[4,5,6,7]	4. Natural death from illness may or may not be reasonably foreseeable.[13]
5. All other palliative interventions have been considered and are not possible or acceptable.	5. The patient has been made aware of means that are available to potentially relieve their suffering, including palliative care.[13]
6. Consent is required from the patient or Substitute Decision Maker (SDM).	6. Initial consent for MAiD is required from the patient. Final consent at the time of MAiD is required from the patient or, if incapable at that time, by their SDM if a Waiver of Final Consent was signed in advance. **Refer to Waiver of Final Consent*[14]
7. Does not require that the patient have capacity to provide consent.	7. Requires that the patient is capable of providing consent both to the request for and the provision of MAiD, if they wish to proceed. **Refer to Waiver of Final Consent*[14]
8. The Substitute Decision Maker (SDM) may request PST on the patient's behalf.	8. Only available to eligible patients who make an explicit initial request for MAiD themselves.
9. Patient may or may not have capacity to initiate PST.	9. Patient must have capacity to initiate the request and proceed to provision. **Refer to Waiver of Final Consent*[14]
10. Legal in Canada, provided by Designated Medical Professionals (physicians and nurse practitioners).	10. Legal in Canada, provided by Designated Medical Professionals (physicians and nurse practitioners).
11. From initiation of PST, death can occur within hours to days.	11. From initiation of MAiD, death occurs between minutes (IV route) to up to several hours (oral route).[15,16]
12. Date of death happens naturally and cannot be pre-planned.	12. Patient chooses date of death with MAiD Provider.
13. PST is a medical procedure determined to be appropriate or not by the clinician and consented to by the patient or their SDM.	13. MAID is a medical procedure requested by the patient, whose eligibility is determined by physicians and nurse practitioners who adhere to federal and provincial guidelines and requirements.

* Waiver of Final Consent allows a patient to waive the requirement to give their express consent at the time they receive MAiD. It is an optional and written agreement between the patient and the MAiD Prescriber. See Health 1645 Form[13,14]

PREVALENCE:

It is difficult to determine the prevalence of refractory symptoms or the frequency of PST provision, both of which vary widely between care settings and jurisdictions. The reported percentages may be influenced by the availability of palliative experts and other resources, as well as local practice patterns and definitions.[3,7]

IMPACT:

Unrelieved symptoms cause suffering and distress to patients, family members, and health care professionals.[9,17] If the patient is agreeable, include patient-determined key supports in decision-making to ensure patients' understanding and health care providers ability to clarify treatment goals and rationale.[7,9,18,19] PST is offered in response to a **patient's** suffering, not to others' discomfort or perceptions.[3,8]

PRINCIPLES OF MANAGEMENT:

- The decision to use palliative sedation is informed through discussions with the patient, family members, and the inter-professional team.
- Consult with an experienced palliative care physician/specialist to ensure all other symptom management options have been explored.
- Consult with inter-professional specialists such as palliative social workers, counsellors, and spiritual health practitioners when the patient has existential or emotional distress.
- Provide ongoing patient, family, and staff emotional support.
- Titrate medication(s) to provide the minimum level of sedation required for symptom relief goals.
- Provide ongoing monitoring of sedation level and symptom relief.
- Ensure adequate resources are available in the chosen care setting.
- Document assessments, decisions, care plan, and **informed consent**.

STANDARD OF CARE:

It is recommended to consult a palliative care physician throughout the decision-making process for PST and for ongoing support and guidance for the duration of sedation. However, there are situations when palliative consultation should be sought as highlighted in specific areas of the PST guideline:

- if prognosis is anticipated to be two weeks or longer .

- to manage refractory psychological or spiritual distress without accompanying physical symptoms.
- during PST when the patient does not respond as expected to the usual dosing regimens, requires a combination of sedating medications, and/or appears to react paradoxically to increased dosing.

The inter-professional team should be involved throughout the process of PST .[1-3]

Step 1 | Goals of care conversations

When considering PST, goals of care conversations must have already taken place and be well-documented. The patient's goals of care must be to allow natural dying with a focus on comfort and symptom management. The patient and/or SDM must have an understanding and acceptance of the patient's limited life expectancy,[4–7,20] as further life-prolonging treatments, such as antibiotics and disease modifying agents, are typically stopped with the initiation of PST (unless they contribute to symptom relief).

Decisions about additional interventions should be made in light of the limited prognosis and considered separately from the decision to proceed with PST. These interventions may include artificial hydration or nutrition, vital sign measurement, and bowel and bladder interventions.[4] Hydration is not usually offered but may be appropriate in some circumstances.[3,5–7] Bowel interventions can likely be stopped, and urinary catheterization is only indicated with palpable bladder distention and signs of patient discomfort.[5,7]

For many patients, receiving information on the availability of PST can be beneficial well before considering its initiation, for example during advanced care planning conversations.[21,22] It may be useful to discuss PST with patients when they express fear of intractable suffering at end-of-life, or when clinicians determine that complex symptoms are likely as the patient's illness progresses.

Step 2 | Assessment

Determining that the criteria for PST are met requires knowledge of the patient and diagnosis, prognosis, and symptom management expertise. Before deciding that a symptom is refractory, consultation with an experienced palliative care physician/specialist is **recommended.** [1-3]

Assessment components include:

1. A thorough assessment of physical, mental, spiritual, and emotional health to determine the nature of suffering.[4]
2. Ensuring all available supportive and symptom management interventions have been explored in consultation with experienced palliative care physicians/specialists and inter-professional team members.[3,5,8,12]

3. Asking about and attending to the patient's individual, family, community, and cultural values or beliefs. Some areas to ask about are the meaning of suffering to them, beliefs about dying, importance of consciousness to the dying process (what they are willing to trade for comfort), and cultural death rituals, ceremonies, or spiritual practices.[4]

Indications for PST:

Indications for PST **are intractable physical symptoms**. For example, these may include dyspnea, pain, nausea, delirium, and/or seizures.[3,6,9,11]

The use of PST to manage refractory **psychological or spiritual distress without accompanying physical symptoms should be determined in consultation** with an experienced palliative care physician/specialist and inter-professional team members such as social workers, spiritual health practitioners, nurses, traditional healers, elders, and/or counsellors, as appropriate and desired by the patient.[1–8,23–30] Comply with your organization's policies if considering PST in this situation.

Criteria for PST eligibility (see Appendix A for a printable checklist):[1–6,9]

- The patient has an advanced, life-limiting, and progressive illness where death is considered imminent, and prognosis is limited from days to a short number of weeks. If prognosis is anticipated to be **two weeks or longer, consultation with a palliative care physician/specialist should be sought.**[31]
- The patient is experiencing intolerable physical and/or emotional and/or spiritual suffering.
- The symptom(s) is/are determined to be refractory/intractable rather than difficult.
- A Do Not Resuscitate (DNR) order is in place. This may be contained within a Medical Order for Scope of Treatment (MOST) or another document.

These criteria should be documented in the medical record and be accessible to the inter-professional care team.

STEP 3 | Decision-making

Once it is determined that the above criteria have been met, a decision is then made about whether to proceed with PST. The decision must be made in consultation with the patient (when capable), family and/or SDM, and inter-professional team members.[3,4,6,32–34] Whenever possible, these discussions should happen in anticipation of refractory symptoms before a crisis begins or escalates.

If a patient is sedated due to intermittent, as-needed (PRN) medication(s), being given for symptom management and the symptom is determined to be refractory, have discussions about PST with the patient and/or their SDM, before initiating ongoing intentional sedation. This is a transition from consequential to ongoing intentional sedation, or PST.

Patient, family, and team meeting(s):

1. Empathically address the impact of unrelieved suffering on the patient and family.[3,33]
2. Confirm the patient and/or family's understanding of the limited prognosis.[3,33]
3. Discuss all options, including risks and benefits, of PST.[3] Ensure the patient and family have their questions answered.[19]
4. Confirm current goals of care. If the patient is unable to communicate, ask the SDM if the patient shared their values, beliefs, and wishes beforehand.[1,5,6]
5. PST may be provided in any care location, including home, hospice, and acute care, as long as sufficient support and adequate safety measures are available to meet patient and family needs.[35] If PST is not possible in the patient's current location, explore the benefits and drawbacks of transferring elsewhere to determine if this is an acceptable option. In rural communities and complex care environments, prior to initiating PST, it is recommended to consult with an experienced palliative care physician/specialist. Also, clinicians who are familiar with the location should be included in discussions to ensure available medications, resources, and staffing.
6. Ensure the patient and family understand the distinctions between PST and MAiD.[5,18,19]
7. Consult with ethics or conflict resolution services if needed, striving for consensus with the patient, family, and health care team.[1,6]

Criteria for initiation of PST **(see Appendix A for a printable checklist):**

The following criteria should be documented in the legal medical record and be accessible to the inter-professional care team:[2,3,5,6]

- The patient or SDM (if the patient is no longer capable of making decisions for themselves) have determined that the symptoms are intolerable to the patient.
- Discussions with the patient, family, and inter-professional team, in consultation with a palliative care physician/specialist (if indicated), have resulted in the patient or SDM providing informed consent for PST.
- A Medical Order for Scope of Treatment (MOST) or other order is in place and reflects a focus on patient comfort, not life-prolonging medical management.
- A desired level of sedation has been determined in consultation with the patient or SDM (see Appendix B: RASS-PAL Scale).
- A care setting with appropriate support has been determined (see Appendix A). If the current care setting is not able to support PST, transfer to another setting is required; this may be a factor to consider during decision-making.

STEP 4 | Initiating Palliative Sedation Therapy (PST)

It is recommended to seek consultation from an experienced palliative care physician/specialist and inter-professional team prior to initiating PST,[1–3] as well as for ongoing support and guidance for the duration of sedation.

Non-pharmacological considerations:

- Ongoing assessment of patient comfort through facial expression or body language is required.[4,34] Behavioral assessment tools to support observations and documentation are recommended. Consider using a scale for assessment of the refractory symptom:
  - Pain Assessment in Advanced Dementia (PAINAD) Scale[36,37]
  - Critical Care Pain Observation Tool (CPOT)[38,39]
  - Respiratory Distress Observation Scale (RDOS) for patients sedated for refractory respiratory symptoms[40–42]
  - Richmond Agitation Sedation Scale (RASS-PAL)[43]
- Use the RASS-PAL Scale[43] (**Appendix B**) to monitor sedation level and titrate medication(s) to maintain goal level of sedation. Monitor frequency as per medication table (**Appendix C**).
- Provide the same care as for an unresponsive patient (e.g. mouth care, position changes such as side-lying to maintain patent airway, and interventions for urinary retention and bowel function).[5,7,9]

Pharmacological considerations: **(see Appendix C – detailed medication table)**

1. Review current medications.[5,6]
2. Discontinue unnecessary medications in keeping with goals of care.[6]
3. Opioids are not appropriate to induce PST.[3,5,9]
4. **DO NOT** stop current medications for symptom relief as they will still be needed for optimal comfort (e.g. opioids for pain or dyspnea, neuroleptics for delirium).[2,5–7,44,45]
5. As consciousness is lowered, change all necessary medications to non-oral routes (may possibly use sublingual or buccal).[2,5,6]
6. Select appropriate medication(s) taking into consideration contraindications.[5] Most common medication classes used for PST are benzodiazepines, neuroleptics, barbiturates, or general anesthetics. Choices also depend on the expertise of the prescribing physician, medication availability, and the care setting.[3,5,6] Midazolam has a short half-life and therefore is most effective when delivered by infusion. It is generally not suggested for intermittent dosing. If intermittent dosing is required, lorazepam, methotrimeprazine, or phenobarbital are recommended as initial medications for PST.[9,46]
7. For all medications, initial dosing depends on patient and clinical factors, such as frailty, previous medication use/exposure, level of distress, and rapidity of intended PST induction.
8. Consider discontinuing previous benzodiazepines or neuroleptics if the same class will be used for PST purposes.
9. If more rapid onset of sedation is needed based on symptom severity and/or patient goals, loading dose(s) of medication(s) should be considered.[47]
10. Titrate only to the level of sedation that is required for symptom control using the appropriate medication dose to achieve comfort.[4,5,8]
11. Consultation with a **palliative care physician/specialist should be sought** when the patient does not respond as expected to the usual dosing regimens, requires a

combination of sedating medications, and/or appears to react paradoxically to increased dosing. In exceptional cases refractory to common palliative sedation medications, propofol prescribed by a palliative care physician/specialist in a specialist acute care unit may be appropriate.

Care plan documentation:

Clear documentation of discussions held with the patient and/or SDM regarding eligibility and initiation need to be in the medical record. The following orders and care plan should also be documented in the medical record and be accessible to the inter-professional care team:[2,3,5,6]

- Medication(s) to be used, including regularly scheduled and as-needed (PRN or breakthrough) doses.
- Goal sedation level using the RASS-PAL scale[43] (see **Appendix B**).
- Schedule for monitoring sedation level (see **Appendix C**).
- Assessment for symptom control (e.g. nonverbal signs of discomfort).[34]
- Other medications to be administered during PST, and those to be discontinued.
- Treatments/interventions to be done during PST, and those to be discontinued.

Patient and family education and support: **(see Appendix D)**

- Before initiating PST, support the patient and family in doing what is important to them (e.g. saying goodbye or end-of-life rituals) as the patient will likely not awaken before natural death occurs.[3,9]
- Psychosocial and/or spiritual clinician support for the patient and family should be continued after PST is initiated.[48]
- Continue ongoing, frequent check-ins and emotional support with family members throughout the process including assessment, decision-making, initiation, during sedation, and following death.[4–7,9,18,33]
- Discuss the usual signs and symptoms of impending death that may be misinterpreted as being caused by PST (e.g. altered respirations).[2,3,9]
- Explain that medications adjustments are commonly needed during initiation and the course of PST.

Staff support:

- Address the impact of bearing witness to suffering.[3,4,9]
- Ensure staff understand the background of the decision to initiate PST and have access to documentation of the decision-making process and care plan.[6,32]
- Ensure staff are confident and competent to provide and monitor sedation[17] and have practice support as needed.[9,49]
- Provide opportunity for discussion as well as individual and/or team de-briefing with staff who may be involved with care of the patient and family before sedation, during sedation, and after death.[4,6,9,17,49]

APPENDIX A – DECISION SUPPORT TOOL FOR REFRACTORY SYMPTOMS, PALLIATIVE SEDATION THERAPY (PST) AND CARE SETTINGS

(SEE BODY OF THE GUIDELINE FOR BACKGROUND AND REFERENCES TO THE ITEMS BELOW)

It is **recommended** to consult a palliative care physician/specialist throughout the decision-making process for PST and for ongoing support and guidance for the duration of sedation. However, there are situations when palliative consultation **should be sought** as highlighted in specific areas of the complete PST guideline. Involvement of the inter-professional team throughout the process of PST **should be sought**.[1-3]

Document ASSESSMENT and BACKGROUND for the items below:

- The patient has an advanced, life-limiting, and progressive illness where death is considered imminent, and prognosis is limited from days to a short number of weeks. If prognosis is anticipated to be **two weeks or longer, consultation with a palliative care physician/specialist should be sought**.[31]
- The patient is experiencing intolerable physical and/or emotional and/or spiritual suffering.
- The symptom(s) has been determined to be refractory/intractable rather than difficult because interventions to mitigate this suffering are determined to be one or any combination of the following:[3–5]
  - Inaccessible or incapable of relieving suffering,
  - Associated with unacceptable side effects,
  - Unlikely to be effective within a reasonable time frame,
  - Not in keeping with the patient's goals of care, and/or
  - Unacceptable to the patient and/or family for other reasons.
- Patient and family goals of care are consistent with a comfort, end-of-life approach.
- Patient and family agree that PST is consistent with their current goals of care.
- **Patient or Substitute Decision-Maker (SDM) consent to PST is documented**.
- Medical Order for Scope of Treatment (MOST) or other order is in place reflecting a focus on patient comfort, not life prolonging medical management.
- All the following requirements for the **care setting** are met:[6,9]
  - Organization capacity and willingness to provide education, practice support, and emotional support for patient, family, and staff.
  - Competent nursing support for the initiation, titration, and maintenance of the dose and ongoing monitoring.
  - Access to supplies and equipment for care of an unresponsive patient.
  - Access to all anticipated medications and administration equipment required for the initiation, titration, and maintenance of PST.
- Orders for medication(s) to be used, including routine and as-needed (PRN) doses.
- The following orders and **care plan** should be documented in the medical record and be accessible to the inter-professional care team:

- Medication(s) to be used, including regularly scheduled and as-needed (PRN or breakthrough) doses.
- Goal sedation level using the RASS-PAL scale[43] (**Appendix B**).
- Schedule for monitoring of sedation level (**Appendix C**).
- Assessment for symptom control (e.g. nonverbal signs of discomfort).[34]
- Other medications to be administered during PST, and those to be discontinued.
- Treatments/interventions to be done during PST, and those to be discontinued.

- If comfort and desired level of sedation are not achieved, reassess PST medication dose(s) and medication choice.
- Consultation with a **palliative care physician/specialist should be sought** when the patient does not respond as expected to the usual dosing regimens, requires a combination of sedating medications, and/or appears to react paradoxically to increased dosing.

APPENDIX B – RASS-PAL[43]

Richmond Agitation Sedation Scale – Palliative Version (RASS-PAL)

Score	Term	Description	
+4	Combative	Overtly combative, violent, immediate danger to staff, (e.g. throwing items); + /- attempting to get out of bed or chair.	
+3	Very agitated	Pulls or removes lines (e.g. IV/SC/Oxygen tubing) or catheter(s); aggressive; + /- attempting to get out of bed or chair.	
+2	Agitated	Frequent non-purposeful movement, + /- attempting to get out of bed or chair.	
+1	Restless	Occasional non-purposeful movement, but movements are not aggressive or vigorous.	
0	Alert and calm		
-1	Drowsy	Not fully alert but has sustained awakening (eye-opening/eye contact) to voice (10 seconds or longer) .	*Verbal stimulation*
-2	Light sedation	Briefly awakens with eye contact to voice for less than 10 seconds	
-3	Moderate sedation	Any movement (eye of body) or eye opening to voice but no eye contact.	
-4	Deep sedation	No response to voice, but any movement (eye or body) or eye opening to stimulation by light touch.	*Gentle physical stimulation*
-5	Not rousable	No response to voice or stimulation by light touch.	

Procedure for RASS-PAL Assessment

	Score
1. Observe patient for 20 seconds a. Patient is alert, restless, or agitated for more than 10 seconds. **NOTE**: if the patient is alert, restless or agitated for less than 10 seconds and is otherwise drowsy, then score patient according to your assessment for the majority of the observation period.	0 to +4
2. If not alert, greet patient, calling them by name and saying, "open your eyes and look at me." a. Patient awakens with sustained eye opening and eye contact (10 seconds or longer). b. Patient awakens with eye opening and eye contact, but not sustained (less than 10 seconds). c. Patient has any eye or body movement in response to voice but no eye contact.	-1 -2 -3
3. When no response to verbal stimulation, physically stimulate patient by light touch, e.g. gently shake shoulder. a. Patient has any eye or body movement to gentle physical stimulation b. Patient has no response to any stimulation	-4 -5

APPENDIX C – MEDICATIONS FOR PALLIATIVE SEDATION[2, 3, 5, 6]

Consult palliative care physician/specialist support particularly when the patient does not respond as expected to the usual dosing regimens or appears to react paradoxically, including during the induction phase. Higher than usual doses may be required, or a combination of medications. In exceptional cases refractory to common palliative sedation medications, propofol prescribed by palliative care physicians/specialists in a specialist acute care unit may be appropriate.

When a combination of medications is required, starting doses of the second medication may be higher than those used to initialize PST. In this situation, **consultation with a palliative care physician/specialist should be sought**.

Medication selection: Midazolam has a short half-life and therefore is most effective when delivered by infusion. It is generally not suggested for intermittent dosing. If intermittent dosing is required, lorazepam, methotrimeprazine, or phenobarbital are recommended as initial medications for PST.[9,46]

For all medications, initial dosing depends on patient and clinical factors, such as frailty, previous medication use/exposure, level of distress, and rapidity of intended PST induction. Review all medications and discontinue those not required for symptom control. Do **not** stop other medications used for symptom control unless they become contraindicated. Ensure medications supportive to patient comfort (e.g. opioids for pain or dyspnea, neuroleptics for delirium) are continued.

Medications for PST Initiation	
Midazolam [2,3,5–7,44,50,51]	
	Loading dose (if indicated): 1 to 5mg; usually 2.5 to 5mg **Initial infusion**: 0.5 to 1mg/hr + 1 to 5mg PRN, may be higher if indicated
	Titration: 0.2 to 1 mg/hr, titrate up or down Q10-30min until sedation target achieved Start with a low dose and titrate up as needed, especially with elderly and/or low weight patients
	Usual maintenance dose: 1 to 10mg/hr
	Route: Continuous SC or IV; **intermittent dosing is not recommended due to short half-life**
	Monitoring: Q30min with each titration and/or PRN dose until goals are achieved, then regularly based on setting
	Notes: Anticonvulsant; rapid onset; delirium or agitation is a rare complication. Midazolam is preferred when it can be delivered by infusion, it is not suggested for intermittent dosing as it has a short half-life. If requiring doses beyond 5 mg/hour consider the need for an additional PST medication.
Methotrimeprazine [3,5–7,52]	
	Loading dose (if indicated): 6.25 to 25mg; usually 12.5 to 25mg
	Titration: 6.25 to 12.5mg per dose, titrate up or down Q12H if needed until sedation target achieved
	Usual maintenance dose: 12.5 to 25mg Q8H and Q2H PRN

	May wish to shorten dosing interval to as short as Q4H if effect not durable Maximum 300mg/24hr
	Route: Intermittent SC, or continuous SC or IV
	Monitoring: Q1H with each titration and/or PRN dose until goals are achieved, then regularly based on setting
	Notes: Seizure threshold may be decreased. In patients with renal or hepatic dysfunction doses may accumulate, so lower doses may be sufficient. **If approaching maximum dosing, consultation with a palliative care physician/specialist is recommended.** A common practice in BC and a peer reviewed recommendation is to induce PST for the patient with 6.25mg SC (or 12.5 to 25mg for hyperactive delirium) Q30min until desired sedation achieved. Change to regular dose with PRN. Add up total dose over 24 hours and divide by three, then give resulting dose regularly Q8H, with a PRN dose of 6.25 to 12.5mg.
Phenobarbital [3,5–9,53,54]	
	Loading dose (if indicated) 60 to 100mg, in some cases up to 200mg may be indicated
	Titration: 30 to 120mg per dose, titrate up or down Q12H if needed until sedation target achieved
	Usual maintenance dose: 600 to 2400mg/24hr in 2-3 divided doses.
	Route: Deep intermittent SC, continuous SC, or IV infusion. Deep SC administration recommended due to risk of tissue necrosis.
	Monitoring: Q1H with each titration and/or PRN dose until goals are achieved, then regularly based on setting.
	Notes: Anticonvulsant; can potentially decrease effectiveness of midazolam, if used in combination monitor closely. Mostly used for deeper levels of sedation, use with caution if goal is light sedation; very long half-life (53 to 118 hours). Often added to midazolam or methotrimeprazine if adequate sedation is not achieved.[52] In this case, start with a larger loading dose.
Lorazepam [3,5,6]	
	Loading dose (if indicated) / Initial infusion: 0.5 to 1mg SC or IV; 1 to 4mg sublingual/buccal Buccal not often used due to inconsistent absorption
	Titration: 0.5 to 2mg Q2H PRN, until sedation target achieved
	Usual maintenance dose: 1 to 4mg SC/IV Q2-4H or 1 to 8mg sublingual/buccal Q2-4H
	Route: SC/IV or may start with sublingual or buccal
	Monitoring: Q1H with each titration and/or PRN dose until goals are achieved, then regularly based on setting
	Notes: May be readily accessible in community settings. Worsening of delirium or agitation is a rare but known complication. Advantage of a longer half-life compared to midazolam. Lorazepam is the only PST medication that can be used in a non-injectable (sublingual) form.
Medications Requiring Palliative Care Physician/Specialist Involvement	
Propofol [3,5,6,55–58]	
Limited use in challenging, refractory PST cases	
	Loading dose (if indicated): If rapid sedation indicated, bolus 0.25 to 0.5mg/kg IV, may repeat Q3-5min until adequate sedation achieved. **Initial infusion**: 0.5 to 1mg/kg/hr
	Titration: Adjust infusion by 0.5mg/kg/hr as often as Q15min until sedation target achieved
	Usual maintenance dose: 0.5 to 2.5mg/kg/hr; may be higher than 3mg
	Route: Continuous IV
	Monitoring: Use restricted to acute care, monitoring for PST, not as per typical OR/ICU use; recommend Q15min for the first hour and until goals are achieved, then Q1-2H.

	Notes: Limit use to setting with appropriate personnel, monitoring, and support; dose required can vary widely depending on patient factors including age, frailty, comorbidities. Fast acting medication: can titrate as rapidly as Q5min; should patient become apneic or over-sedated, hold infusion for 2 to 3 minutes, then restart at lower rate. **Palliative care physician/specialist involvement is required.**
Dexmedetomidine[59,60]	
Limited use, not a typical medication for PST	
	Dexmedetomidine is on many BC hospital formularies and used occasionally for symptom control by inducing conscious sedation in palliative care. It is not used for deep sedation. Anecdotally effective when the patient goal is to be in an altered mental state but not sedated per se (e.g. wishes to eat and drink) **Palliative care physician/specialist involvement is required**.

APPENDIX D – RECOMMENDATIONS FOR PATIENT AND FAMILY PRINTED MATERIALS

Links to Health Authority Resources for Patients & Families:

1. **Interior Health Authority**: Palliative Sedation
2. **Island Health Authority:** Palliative Sedation Therapy

The information below is not intended to be printed and handed out. Rather, it is to be used as a guide to develop organization-specific materials. Follow your organization's policies and procedures for developing patient and family education materials.

Italics indicate possible phrasing which was developed for BC by consensus of palliative experts and limited consultation with patient and family representatives; however, there was no consultation with experts in health communication.

Recommend eliciting significant patient and family feedback and evidence-based development of appropriate language including literacy level.

1. Introduction – *it is difficult to see someone you love suffering, or to suffer yourself.*
2. Defining Palliative Sedation Therapy (PST) – *PST is when medication is given to make a person less alert, less able to rouse, and more comfortable, so they aren't suffering.*
3. Distinguishing PST from MAiD

   PST is different from MAiD because:
   a. *PST is only offered when a person is not able to be comfortable with other interventions.*
   b. *PST is only offered if a person is expected to die soon.*
   c. *When a person is sedated with PST, they die naturally from their illness. When a person is given MAiD, they die from the medication.*
   d. *A person must be alert and capable to consent to receiving MAiD, whereas a Substitute Decision Maker (SDM) can consent to PST on the person's behalf.*
   e. *The estimated timing of death is not known with PST and is more predictable with MAiD.*

If you are considering MAiD, we can provide you with information about your local MAID program and the process for requesting a MAID assessment to determine your eligibility.

4. When would PST be offered?
   PST is offered when everything else has been tried to help the person dying to be comfortable and all other options:

a. *Are not easy to access or cannot help with the symptom.*
b. *Have unacceptable side effects.*
c. *Would take too long to work.*
d. *Do not fit with what you and your loved one want.*
e. *Cannot be given in your preferred care setting and a transfer is not what you want.*

5. The decision-making process.

   The patient and/or family, physician/specialist, and other health care team members will decide together if PST is the best option. PST will only be offered if:

   a. The illness is serious and a natural death from that illness is likely soon.
   b. Suffering is unbearable and unmanageable.
   c. It fits with patient and family goals for care and the remainder of life.
   d. The person and/or SDM understand the risks and benefits and give informed consent.

6. What is expected if PST is initiated?
   a. The person will die as they would have, except they will be more comfortable.
   b. You will see the usual changes as someone dies (e.g. skin mottling, etc.)
   c. A decision will be made with the patient, family, and health care team about the goal sedation level and only enough medication to reach that goal will be given.
   d. The healthcare team will work together to find the right dose to reach the goal.
   e. The healthcare team will regularly check-in on the person to make sure they are comfortable without being too sedated.
   f. The patient and family will be supported emotionally throughout the decision-making and PST process.
   g. The time until the person's death after PST is started may be shorter or longer than expected.
   h. Medications adjustments are commonly needed during initiation and the course of PST.

REFERENCES

1. Canadian Society of Palliative Care Physicians. Statement on continuous palliative sedation therapy. https://archive.cspcp.ca/wp-content/uploads/2017/11/CSPCP-Statement-CPST-FINAL.pdf (2017).

2. Alberta Health Services. Palliative sedation guideline. https://www.albertahealthservices.ca/info/Page14559.aspx (2015).

3. Fraser Health Hospice Palliative Care Program. Refractory Symptoms and Palliative Sedation Therapy Guideline. https://www.fraserhealth.ca/-/media/Project/FraserHealth/FraserHealth/Health-Professionals/Professionals-Resources/Hospice-palliative-care/Sections-PDFs-for-FH-Aug31/9524-28-FH---Sym_Guide-RefractoryPalliativeSedation.pdf (2011).

4. Dean, M. M., Cellarius, V., Henry, B., Oneschuk, D. & Librach. Framework for Continuous Palliative Sedation Therapy in Canada. J Palliat Med 15, 870–879 (2012). doi:10.1089/jpm.2011.0498

5. Champlain Hospice Palliative Care Program. The Champlain Region Palliative Sedation Therapy Clinical Practice and Medication Guidelines. https://champlainpalliative.ca/wp-content/uploads/2018/10/PST-Guidelines-Regional-2018_ENG-final.pdf (2018).

6. Harlos, M. & Embleton, L. Sedation for Palliative Purposes Guideline. Winnipeg Regional Health Authority (2017).

7. Cherny, N. I. ESMO clinical practice guidelines for the management of refractory symptoms at the end of life and the use of palliative sedation. Annals of Oncology 25, iii143–iii152 (2014). doi:10.1093/annonc/mdu238

8. Twycross, R. Reflections on palliative sedation. Palliat Care 12, 1178224218823511 (2019). doi:10.1177/1178224218823511

9. Waterloo Wellington Interdisciplinary HPC Education Committee: PST Task Force. The Waterloo Wellington Palliative Sedation Protocol. https://hpcconnection.ca/wp-content/uploads/20191209_ww_pst_guide_final.pdf (2019).

10. Beller, E. M., van Driel, M. L. & Mitchell, G. Palliative pharmacological sedation for symptom relief in terminally ill adults. Cochrane Database of Systematic Reviews (2012) doi:10.1002/14651858.CD010206.

11. Maltoni, M., Scarpi, E. & Nanni, O. Palliative sedation in end-of-life care. Curr Opin Oncol 25, 360–367 (2013). doi:10.1097/CCO.0b013e3283622c47

12. Soh, T. L. G. B., Krishna, L. K. R., Sim, S. W. & Yee, A. C. P. Distancing sedation in end-of-life care from physician-assisted suicide and euthanasia. Singapore Med J 57, 220–227 (2016). doi:10.11622/smedj.2016086

13. Government of British Columbia. Medical Assistance in Dying. https://www2.gov.bc.ca/gov/content/health/accessing-health-care/home-community-care/care-options-and-cost/end-of-life-care/medical-assistance-in-dying (n.d.).

14. BC Ministry of Health. Medical Assistance in Dying: Waiver of Final Consent. Provincial Health Services Authority https://www2.gov.bc.ca/assets/gov/health/forms/1645fil.pdf (2022).

15. Harty, C., Chaput, A. J., Trouton, K., Buna, D. & Naik, V. N. Oral medical assistance in dying (MAiD): informing practice to enhance utilization in Canada. Canadian Journal of Anesthesia/Journal canadien d'anesthésie 66, 1106–1112 (2019). doi:10.1007/s12630-019-01389-6

16. Stukalin, I. et al. Medications and dosages used in medical assistance in dying: a cross-sectional study. CMAJ Open 10, E19–E26 (2022). doi:10.9778/cmajo.20200268

17. White, K., Wilkes, L., Cooper, K. & Barbato, M. The impact of unrelieved patient suffering on palliative care nurses. Int J Palliat Nurs 10, 438–444 (2004). doi:10.12968/ijpn.2004.10.9.16049

18. Tursunov, O., Cherny, N. I. & Ganz, F. D. Experiences of Family Members of Dying Patients Receiving Palliative Sedation. Oncol Nurs Forum 43, E226–E232 (2016). doi:10.1188/16.ONF.E226-E232

19. Bruinsma, S. M., van der Heide, A., van der Lee, M. L., Vergouwe, Y. & Rietjens, J. A. C. No Negative Impact of Palliative Sedation on Relatives' Experience of the Dying Phase and Their Wellbeing after the Patient's Death: An Observational Study. PLoS One 11, 1–13 (2016). doi:10.1371/journal.pone.0149250

20. Schildmann, E. & Schildmann, J. Palliative Sedation Therapy: A Systematic Literature Review and Critical Appraisal of Available Guidance on Indication and Decision Making. J Palliat Med 17, 601–611 (2014). doi:10.1089/jpm.2013.0511

21. Belar, A., Arantzamendi, M., Menten, J., Payne, S., Hasselaar, J., & Centeno, C. The Decision-Making Process for Palliative Sedation for Patients with Advanced Cancer-Analysis from a Systematic Review of Prospective Studies. Cancers 14, (2022). doi:10.3390/cancers14020301

22. Ingravallo, F., de Nooijer, K., Pucci, V., Casini, C., Miccinesi, G., Rietjens, J. A. C., & Morino, P. Discussions about palliative sedation in hospice: Frequency, timing and factors associated with patient involvement. Eur J Cancer Care 28, e13019 (2019). doi:10.1111/ecc.13019

23. Sulmasy, D. P. The last low whispers of our dead: when is it ethically justifiable to render a patient unconscious until death? Theor Med Bioeth 39, 233–263 (2018). doi:10.1007/s11017-018-9459-7

24. Rodrigues, P., Crokaert, J. & Gastmans, C. Palliative Sedation for Existential Suffering: A Systematic Review of Argument-Based Ethics Literature. J Pain Symptom Manage 55, 1577–1590 (2018). doi:10.1016/j.jpainsymman.2018.01.013

25. Voeuk, A., Nekolaichuk, C., Fainsinger, R. & Huot, A. Continuous Palliative Sedation for Existential Distress? A Survey of Canadian Palliative Care Physicians' Views. J Palliat Care 32, 26–33 (2017). doi:10.1177/0825859717711301

26. Alessia, S. et al. The quality of palliative sedation in end-stage disease: audit from a department of oncology and haematology. Support Care Cancer 30, 3849–3855 (2022). doi:10.1007/s00520-021-06730-8

27. Ciancio, A. L., Mirza, R. M., Ciancio, A. A. & Klinger, C. A. The Use of Palliative Sedation to Treat Existential Suffering: A Scoping Review on Practices, Ethical Considerations, and Guidelines. J Palliat Care 35, 13–20 (2020). doi:10.1177/0825859719827585.

28. Lucena, A. & Yuguero, O. Systematic Review of Common Refractory Symptoms in the End-Of-Life Situation and Its Relation With Euthanasia. Omega (Westport) 003022282210891 (2022) doi:10.1177/00302228221089123.

29. Reich, M. et al. Refractory psycho-existential distress and continuous deep sedation until death in palliative care: The French perspective. Palliat Support Care 18, 486–494 (2020). doi:10.1017/S1478951519000816

30. Veldwijk-Rouwenhorst, A. E. et al. Continuous Palliative Sedation in Nursing Home Residents With Dementia and Refractory Neuropsychiatric Symptoms. J Am Med Dir Assoc 22, 305-311.e4 (2021). doi:10.1016/j.jamda.2020.11.004

31. Alberta Health Services & Slawnych, M. Provincial Clinical Knowledge Topic Palliative Sedation, Adult – All Locations. https://extranet.ahsnet.ca/teams/policydocuments/1/klink/et-klink-ckv-palliative-sedation-adult-all-locations.pdf (2018).

32. Lokker, M. E. et al. Palliative sedation and moral distress: A qualitative study of nurses. Applied Nursing Research 40, 157–161 (2018). doi:10.1016/j.apnr.2018.02.002

33. Shen, H.S. et al. Differential Family Experience of Palliative Sedation Therapy in Specialized Palliative or Critical Care Units. J Pain Symptom Manage 55, 1531–1539 (2018). doi:10.1016/j.jpainsymman.2018.02.007

34. McGuire, D. B., Kaiser, K. S., Haisfield-Wolfe, M. E. & Iyamu, F. Pain Assessment in Noncommunicative Adult Palliative Care Patients. Nurs Clin North Am 51, 397–431 (2016). doi:10.1016/j.cnur.2016.05.009

35. Rosengarten, O. S., Lamed, Y., Zisling, T., Feigin, A. & Jacobs, J. M. Palliative sedation at home. J Palliat Care 25, 5–11 (2009). PMID: 19445337

36. Warden, V., Hurley, A. C. & Volicer, L. Development and Psychometric Evaluation of the Pain Assessment in Advanced Dementia (PAINAD) Scale. J Am Med Dir Assoc 4, 9–15 (2003). doi:10.1097/01.JAM.0000043422.31640.F7

37. Horgas, A. & Miller, L. Pain Assessment in People with Dementia. AJN, American Journal of Nursing 108, 62–70 (2008). doi:10.1097/01.NAJ.0000325648.01797.fc

38. Buttes, P., Keal, G., Cronin, S. N., Stocks, L. & Stout, C. Validation of the critical-care pain observation tool in adult critically ill patients. Dimensions of critical care nursing 33, 78–81 (2014). doi:10.1097/DCC.0000000000000021

39. Gélinas, C., Fillion, L., Puntillo, K. A., Viens, C. & Fortier, M. Validation of the critical-care pain observation tool in adult patients. American journal of critical care 15, 420–7 (2006). PMID: 16823021

40. Zhuang, Q., Yang, G. M., Neo, S. H.-S. & Cheung, Y. B. Validity, Reliability, and Diagnostic Accuracy of the Respiratory Distress Observation Scale for Assessment of Dyspnea in Adult Palliative Care Patients. J Pain Symptom Manage 57, 304–310 (2019). doi:10.1016/j.jpainsymman.2018.10.506

41. Campbell, M. L. & Templin, T. N. Intensity cut-points for the Respiratory Distress Observation Scale. Palliat Med 29, 436–442 (2015). doi:10.1177/0269216314564238

42. Campbell, M. L. Psychometric Testing of a Respiratory Distress Observation Scale. J Palliat Med 11, 44–50 (2008). doi:10.1089/jpm.2007.0090

43. Bush, S. H. et al. The Richmond Agitation-Sedation Scale modified for palliative care inpatients (RASS-PAL): A pilot study exploring validity and feasibility in clinical practice. BMC Palliat Care 13, 1–9 (2014). doi:10.1186/1472-684X-13-17

44. Lux, M. R., Protus, B. M., Kimbrel, J. & Grauer, P. A Survey of Hospice and Palliative Care Physicians Regarding Palliative Sedation Practices. Am J Hosp Palliat Care 34, 217–222 (2017). doi:10.1177/1049909115615128

45. Zaal, I. J. et al. Benzodiazepine-associated delirium in critically ill adults. Intensive Care Med 41, 2130–2137 (2015). doi:10.1007/s00134-015-4063-z

46. Division of Palliative Care, Department of Family Medicine, McMaster University. Continuous Palliative Sedation Therapy (CPST) Guidelines. https://hfam.ca/wp-content/uploads/2020/04/McMaster-Palliative-Sedation-Guidelines-2020-31March2020.pdf (2020).

47. Bodnar, J. A Review of Agents for Palliative Sedation/Continuous Deep Sedation: Pharmacology and Practical Applications. J Pain Palliat Care Pharmacother 31, 16–37 (2017). doi:10.1080/15360288.2017.1279502

48. Abdul-Razzak, A., Lemieux, L., Snyman, M., Perez, G. & Sinnarajah, A. Description of Continuous Palliative Sedation Practices in a Large Health Region and Comparison with Clinical Practice Guidelines. J Palliat Med 22, 1052–1064 (2019). doi:10.1089/jpm.2018.0372

49. Leboul, D. et al. Palliative sedation challenging the professional competency of health care providers and staff: a qualitative focus group and personal written narrative study. BMC Palliat Care 16, 25 (2017).

50. De Graeff, A. & Dean, M. Palliative Sedation Therapy in the Last Weeks of Life: A Literature Review and Recommendations for Standards. J Palliat Med 10, 67–85 (2007). doi:10.1089/jpm.2006.0139

51. Prommer, E. Midazolam: an essential palliative care drug. Palliat Care Soc Pract 14, 263235241989552 (2020). doi:10.1177/2632352419895527

52. Dietz, I., Schmitz, A., Lampey, I. & Schulz, C. Evidence for the use of Levomepromazine for symptom control in the palliative care setting: a systematic review. BMC Palliat Care 12, 2 (2013).

53. Thomas, B. Phenobarbital sedation via subcutaneous infusion in a palliative medicine unit: retrospective review. BMJ Support Palliat Care (2021) doi:10.1136/bmjspcare-2021-003263.

54. Stirling, L. C., Kurowska, A. & Tookman, A. The Use of Phenobarbitone in the Management of Agitation and Seizures at the End of Life. J Pain Symptom Manage 17, 363–368 (1999). doi:10.1016/s0885-3924(99)00006-8

55. Bodnar, J. The Use of Propofol for Continuous Deep Sedation at the End of Life: A Definitive Guide. J Pain Palliat Care Pharmacother 33, 63–81 (2019). doi:10.1080/15360288.2019.1667941

56. Fredheim, O. M., Skulberg, I. M., Magelssen, M. & Steine, S. Clinical and ethical aspects of palliative sedation with propofol-A retrospective quantitative and qualitative study. Acta Anaesthesiol Scand 64, 1319–1326 (2020). doi:10.1111/aas.13665

57. Cherny, N. I. & Radbruch, L. European Association for Palliative Care (EAPC) recommended framework for the use of sedation in palliative care. Palliat Med 23, 581–593 (2009). doi:10.1177/0269216309107024

58. Schildmann, E. K., Schildmann, J. & Kiesewetter, I. Medication and Monitoring in Palliative Sedation Therapy: A Systematic Review and Quality Assessment of Published Guidelines. J Pain Symptom Manage 49, 734–746 (2015). doi:10.1016/j.jpainsymman.2014.08.013

59. Lemus, R., Jacobowski, N. L., Humphrey, L. & Tobias, J. D. Applications of Dexmedetomidine in Palliative and Hospice Care. The Journal of Pediatric Pharmacology and Therapeutics 27, 587–594 (2022). doi:10.5863/1551-6776-27.7.587

60. Gaertner, J. & Fusi-Schmidhauser, T. Dexmedetomidine: a magic bullet on its way into palliative care—a narrative review and practice recommendations. Ann Palliat Med 11, 1491–1504 (2022). doi:10.21037/apm-21-1989