6700.02: PALLIATIVE CARE

INTRODUCTION

A palliative care guideline has been developed to address the needs of patients receiving palliative care outside of the hospital or hospice setting. Often EHS is accessed due to exacerbation of symptoms during a time that an individual's regular medical care provider/team is unavailable or delayed. Paramedics will be fulfilling an unmet need by bridging gaps in the care of patients receiving palliative care in the community setting. A palliative care team may consist of physicians, nurses, social workers and nurse practitioners or a specialty clinic such as INSPIRED or Transitional Heart Failure. A primary care physician or team may also provide palliative care. A palliative approach to care is applicable to cancer, as well as other advanced diseases including, but not limited to, COPD, heart failure, end-stage kidney disease and dementia.

The desired outcome for these calls is the management of symptoms, maintenance of dignity, and support of family. There is a clinical, moral, ethical, and legal imperative to honor the spirit of personal directives in reaching care goals. Palliative care calls require a different mindset and focus compared to routine emergency calls. Communication and emotional support of the family are integral components of these calls. The medical needs and decision processes are less time pressured and transport to a hospital is often not necessary. Transport to the ED, at times, may be appropriate/beneficial if simple investigations and/or treatments may be within the patients' goals of care to improve quality of life.

Definitions

Personal (Care) Directive or Advance Directive: Documentation of a person's wishes regarding medical treatment in the event the individual is incapacitated and unable to communicate these decisions directly.

Breakthrough Pain: Pain that occurs between regularly scheduled doses of pain medication.

Imminent Death: Death that is likely to occur within hours.

Impending Death: Death that is likely to occur within days.

Palliate: To relieve or lessen symptoms of an illness without the intent to cure.

Substitute Decision Maker (SDM): A person authorized under a personal directive to make decisions regarding another person's home and healthcare (does not include financial decisions).

GENERAL CONSIDERATIONS

Assessment for patients receiving palliative care is a collaborative process that includes the patient, family/friend care givers and health care provider/team. It is important that the SDM is identified early in the process. All family/friend care givers may be involved in the consultative process. Ultimately, decisions will lie with the patient or with the SDM when a patient lacks capacity to make their own decisions.

Many palliative calls take a prolonged period of time. Paramedic crews should ensure the Medical Communications Centre (MCC) is aware they are on a palliative call and may be on scene for an extended period.

Guidelines for providing some medications to this population may differ from standard practice due to the goals of palliation (e.g., decreased LOC is not a contraindication for morphine or dimenhydrinate in this population).

SAFETY

Depending on the illness, some of these patients may be immunocompromised and may be managed with cytotoxic therapies. Some palliative emergencies are associated with discharge of bodily fluids. Therefore, it is important that clinicians follow routine practices to protect both the provider and the patient.

These calls may also have psychosocial impact on the provider; therefore, it is important that clinician's follow-up with the appropriate support systems as required.

ASSESSMENT

While EHS may be called to provide assistance to patients receiving palliative care in the community for many reasons, many calls relate to symptom management. Some predominant complaints include breathlessness, nausea/vomiting, constipation, pain, delirium, seizures, anxiety, or imminent death/end-of-life care.

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Initial assessment must quickly establish if there is a medical condition requiring urgent intervention and transport. Remember that you may be assessing a patient for an underlying condition unrelated to their palliative disease process. It's Important to maintain a differential diagnosis. Aggressive interventions may not be indicated for patients receiving palliative care. Utilize the Palliative Performance Scale (PPS) tool to help guide your care; the lower the PPS, the less aggressive care should be (guided by their goals of care as well).

Palliative Performance Scale (Figure 1)
This invaluable tool is used in the palliative care setting to determine a patient's health and activities of daily living (ADLs). Using the PPS will help determine the best care options for the patient. It helps map out where the patient is in their illness trajectory and, if the PPS has been trended by caregivers, it can show how slowly or quickly a patient is deteriorating. Ideally, the goals of care are aligned with the PPS. As the underlying disease advances, and the functional status declines, goals of care typically trend towards symptom control or comfort measures only. In these scenarios, the assessment focuses on the symptoms that are bothersome to the patient. A PPS of 40% or less should limit or negate the need for most or all vitals, ECG and IV access. All palliative care medications stocked by EHS can be administered subcutaneously, therefore the need for vascular access should be very rare.

Determining Goals of Care in Patients Receiving Palliative Care
Personal care preferences, the patient's current clinical status, and the family's ability to cope and provide care need to be considered in the decision whether to have the patient remain at home. Transport decisions need to take into consideration the patients' goals of care and the possibility of potentially reversible illnesses or if the injury/illness is unrelated to their underlying illness.

Patients are eligible for the palliative approach outlined in this CPG, if the presentation is related to their underlying condition and paramedics can confirm that both:

1) The goals of care are consistent with a palliative approach (S1, S2, C1, C2), AND
2) The patient is followed closely by a provider/team who will be able to adjust the care plan to address the present crisis in a more long-term fashion.

The goals of care can be verified in multiple ways, including, but not limited to, registration in the EHS Special Patient Program (SPP), a Nova Scotia Health levels of intervention form in the home, a palliative care binder, or the patient and/or family/friend caregivers' verbal assertion. Note that the team following them may be a formal palliative care team, a specialized clinic for advanced non-cancer disease such as INSPIRED and Transitional Heart Failure or another specialist (e.g., neurology, or their own family doctor). The important part is that they have regular contact with palliative intent, and the confidence that a next-business-day follow up is possible.

Pain
Pain is the most feared complication for patients receiving palliative care, with most patients experiencing some level of pain requiring control at the end stages of their disease. Assessment and management will follow the principles of the EHS Pain Management CPG. Managing pain may require higher than normal medication doses due to pain level and medication tolerance.

Patients often have ongoing pain associated with their underlying condition (e.g., metastatic cancer). They will often be able to tell you whether the pain is an exacerbation of their more chronic pain or if it is a new pain all together. For a pain that the patient has not experienced before, more consideration will be required to ensure a new diagnosis isn't present. Depending on their goals of care, patients may still be candidates for emergency surgery or other treatments.

Patients receiving palliative care are often on long-acting and short-acting opioids. Pain that increases or intensifies at certain times of the day generally indicates that the medication dosage is inadequate and breakthrough pain is being experienced. This should be treated with fast-acting short-duration pain medication using the same analgesic agent the patient is already prescribed. When speaking with the Medical Communications Centre Physician (MCCP), include information about the timing and doses of all short-acting and long-acting opioids, as well as and any other pain medications received in the last 24 hours, so an accurate breakthrough dose can be calculated. Please see Figure 2 for an example of

how to calculate an appropriate dose. Individuals may wish to balance sedative side effects against tolerating mild pain levels.

Breathlessness
Dyspnea, or breathlessness, is a frequent complaint, often described as a feeling of suffocation or inability to take a full breath. It is multi-factorial in nature and can be associated with any cardio-respiratory condition, including cancer. A positive feedback loop can be generated as increased anxiety leads to increased respiratory efforts leading to increasing levels of breathlessness along with tachycardia.

Noisy Breathing
Noisy breathing (also known as a death rattle) is common in the final days of life. It is caused by retained oropharyngeal and bronchial secretions due to decreased frequency of breathing or decreased ability to mobilize secretions through coughing. This breathing pattern does not cause patient discomfort, but families are often distressed by it and require reassurance.

Delirium
Delerium may be present in the last days of life. Delirium presenting earlier in the course of illness should be considered as a potentially reversible condition. Common signs of delirium include:

- Disturbance of sleep/wake cycle
- Insistence of walking or standing when too weak
- Uncomfortable in all positions even with managed pain
- Use of uncharacteristic language and yelling
- Hallucinating
- Paranoia
- Confusion of surroundings
- Not recognizing people

Delerium can be alarming to witness. Intervention is required to manage the symptoms and family may require education and emotional support.

In cases of delirium, search out a reversible cause if it is appropriate for the patient. Causes of delirium are often multi-factorial and can include opioid neurotoxicity, dehydration, particular medications, infection, organ failure, hypoxemia and/or brain disease.

Nausea and Vomiting
Nausea and vomiting are difficult symptoms to cope with and can prevent the intake of proper nutrition, hydration, and medications. Consider bowel obstruction, constipation, increased ICP or side effects of medications as potential causes of nausea/vomiting.

Seizures
Seizures may be secondary to brain metastases, primary brain tumors, metabolic disorders, or stroke. The seizures are usually self-limiting but upsetting for families to witness.

Dehydration
Dehydration is common and can be caused by nausea/vomiting, fever, lack of intake, and precipitated by medications the patient is taking. When assessing hydration status ensure you note mucus membranes (mucus membranes may also appear dry secondary to mouth breathing), skin turgor, if the patient is taking anything by mouth or if death is imminent.

Constipation
Constipation can be a cause of nausea, delirium, confusion, abdominal pain, and vomiting. Provide symptom management as appropriate and defer to the regular care provider. It is important to keep in mind that some patients may develop a bowel obstruction (this can be confused with constipation) which may require palliative surgery. Consider the patient's medical history to determine if a bowel obstruction may be present (e.g., bowel cancer).

Impending/Imminent Death
Caregivers may call EHS when they believe their loved one is in the active phase of dying. Family may only wish confirmation of the dying process, or they may not recognize the symptoms as part of the dying process and be unprepared to deal with the circumstances.

Common signs that indicate death may occur within days (impending):

- *Loss of gag reflex*
- *Difficulty swallowing*
- *Difficulty speaking*
- *Decreased blood pressure*
- *Respiratory changes*

- *Increased temperature*
- *Taste and smell impairment*
- *Visual blurring*

Common signs that indicate death may occur within hours (imminent):

- *Coma-like state*
- *Cheyne-Stokes respiration pattern*
- *Noisy breathing/secretions*
- *Mottling*
- *Open eyes with fixed stare*
- *Weak pulse*
- *New onset incontinence*
- *Loss of reflexes*
- *Posturing*

The goal of prehospital clinician care is to assist the patient and family to experience death with dignity.

PALLIATIVE TREATMENT PRINCIPLES

Determining the most appropriate intervention for patients receiving palliative care must include consideration of the assessment findings as well as the patient's and family/friend caregivers wishes. The idea is to ease symptoms while also focusing on emotional support of those present.

Personal (Care) Directives

If the patient has capacity and can communicate effectively, the care wishes they express to the paramedics on scene should be followed and personal directives are not required.

If the patient does not have capacity, then directives should be used to direct care. Directives may be constructed by lawyers or may simply be handwritten notes. Current law in Nova Scotia states that any directive that is signed and dated by the patient or their delegate and witnessed should be followed.

Personal Directives might be found in the patient's green sleeve, palliative care binder, or often in/on the fridge or somewhere prominent. When no directive can be located and the patient no longer has capacity to make their own decisions, family members may communicate a verbal directive. If there is no designated decision maker, there is a hierarchy of who can act in that role as noted in the text box below.

If a patient does not have the capacity to make their own care decisions, the SDM is the person ranked in the highest priority based on the following order:

1. A person who has been authorized to give consent under the Medical Consent Act or delegate authorized under the Personal Directives Act
2. The patient's court appointed guardian
3. The patient's spouse
4. A child of the patient
5. A parent of the patient
6. A person standing in place of a parent
7. A sibling of the patient
8. A grandparent of the patient
9. A grandchild of the patient
10. A aunt or uncle of the patient
11. A niece or nephew of the patient
12. Any other adult next of kin of the patient
13. The Public Trustee

*For relatives, the person must be 19 years of age or older, except in the case of a spouse.

Medical Oversight

The MCCP must be consulted for all palliative care calls. A palliative care call may be defined as a call that requires adjustments to management because their goals of care indicate palliation regardless of transport decision. The MCCP must also be called when death appears to be imminent, and goals of care are unclear.

The MCCP can help with decisions around the most appropriate treatment, medication dose, and transport. Be sure to relay primary palliative diagnosis and reason for the consultation (e.g., analgesia, breathlessness, transport, etc.). Consultation with the MCCP occurs once the following pertinent information is collected:

- Patient history (primary palliative diagnosis)
- An appropriate patient assessment
- A previous and current PPS
- Changes in condition
- List of current medications including dosing and times
- Personal Directives, including goals of care
- Expectations of family/friend caregiver and patient or SDM

- Treatments already provided
- Preliminary treatment plan
- Next scheduled follow up with care provider

In most cases the palliative or primary care physician should not be called by the crew on scene. If the family has been given contact information and instructions to contact the team providing palliative care, then crews may contact that person. The MCCP must legally give the final approval to EHS clinicians for the proposed care plan.

Interventions

Special Considerations While this CPG may help to allow some people to spend their dying days and moments at home instead of being transported to an emergency department, there may be cases for which a transport is more beneficial, for example, when there is no linkage to home care or palliative/primary care for follow up or treatment for a reversible cause that is in the goals of care.

There may sometimes be medications at home, put in place by the palliative teams. If the specific medication is within the scope of practice of the paramedic, the paramedic may assist the family with giving the home medications. This should be carefully documented in the ePCR and the home chart (if available) to avoid any questions about the use of the medication. For example, if the patient has doses of hydromorphone, or metoclopramide, drawn up but the family wasn't sure whether that was the right thing to give, this would be appropriate. If the paramedic is not trained in the indications, contraindications, and potential adverse effects the home medications are not to be administered by the paramedics.

Due to weakening muscles, many patients will be unable to take PO medications. Subcutaneous (subcut) is the preferred route of administration in palliative care when PO is not tolerated (IM is generally not recommended). Subcut and PO will have similar time of onset and duration, while IV will have a faster onset, if IV access is within the goals of care, and/or they are getting IV access for another reason. Intranasal administration of medications is preferred for children over IV, IM or subcut.

Patients receiving palliative care are frequently on an extensive list of prescribed medications. Dosing may be high due to intolerance. These medications should be considered in any treatment plan for drug-to-drug interactions and dosing limitations.

Many of the interventions the clinician will initiate can be taken over by family to maintain patient comfort in the hours/days before the next follow-up by their care provider. Clinicians can coach family members on patient positioning, mouth care, lighting, distraction techniques and what to expect in the upcoming hours/days.

Pain Non-pharmacological interventions such as distraction, reassurance and positional changes should be considered. Opioids (e.g., morphine and hydromorphone) are the most common analgesic agents used by prehospital clinicians [**PEP 1 supportive** (fentanyl, morphine), **PEP 3 supportive** (oxycodone, topical narcotic, hydromorphone)]. Utilize a shared decision-making approach balancing pain relief and sedation/cardio-respiratory side effects.

For patients already on oral opioids and still tolerating PO intake, unless the pain is severe, the most appropriate recommendation may be for the patient to take their oral breakthrough/fast-acting opioid medication in consultation with the MCCP. For more acute/severe pain, parenteral opioids may be more appropriate. If using parenteral medication, attention to concentration/potency differences is important; the IV/subcut formulation of many opioids is up to 3-5 times more potent than the oral form. Acetaminophen (**PEP 1 neutral**) and corticosteroids (**PEP 3 neutral**) may be used as adjuncts. In some cases, NSAIDS (e.g., ketorolac) may be used as well (**PEP white**) but is generally not advisable in patients with any renal or cardiac concerns.

Breathlessness related to anxiety may be eased with measures such as reassurance and distraction or increasing airflow over the face (electric fan, open window). Positional changes and loose clothing can also ease the sense of breathlessness. Oxygen is only helpful in hypoxic patients (**PEP 2 neutral**).

Opioids such as morphine or hydromorphone may be indicated, particularly if dyspnea is associated with pain, anxiety, increased work of breathing, or aggravated with any exertion. The choice of morphine or hydromorphone is guided by the patients existing medications. In those with chronic kidney disease and older adults, low dose hydromorphone is preferred

over morphine due to less metabolite accumulation (**PEP 1 supportive**). Opioids effects on dyspnea are based on their effect on the brain's recognition of the gap between O_2 saturation and work to maintain it. They may be beneficial for any condition causing dyspnea where the route cause of the condition is being managed optimally without satisfactory results. In opioid naive people start very low and slowly titrate.

Noisy breathing/pulmonary congestion may be eased by positional changes such as turning the patient onto their side, elevating the patient's head, or elevating the head of the bed. Encourage family to use these positional interventions. Suctioning is typically avoided in end-of-life settings as it may increase physical and mental distress for the patient, although it may be specifically indicated for certain conditions and/or in an SPP plan (**PEP white**). End-of-life audible airway congestion is sometimes treated with medications used to dry secretions, such as scopolamine or glycopyrrolate (**PEP white**). Patients may be taking these medications in the community, however the evidence for their use is inconclusive and practices variable. For this reason, they are not stocked by EHS. Nebulized saline may also help for thick secretions, as might oral care.

Delerium Interventions such as adequate light, avoiding overstimulation, communication, orientation to time (having a clock and/or calendar visible) and reassurance of the patient and family may assist in alleviating the severity of delirium. In palliative settings delirium is best treated using antipsychotics such as haloperidol (**PEP 3 supportive**). Severe agitation not responding to normal doses of antipsychotics may require midazolam (**PEP white**).

Nausea and vomiting Primary treatment of nausea and vomiting is done with metoclopramide (**PEP 3 supportive**) or haloperidol (**PEP 1 neutral**), depending on etiology. If bowel obstruction is potentially the cause of nausea and vomiting, the patient may require transport for palliative surgery.

Seizure If self-limiting, assess the patient for injury and document the seizure activity as well as any assessment findings. There should be no need for any further intervention. If the patient continues to actively seize then obtain a glucose reading and treat with a benzodiazepine (if indicated).

Dehydration Decreased oral intake is a normal part of the dying process and can lead to dehydration. Dehydration is not painful or uncomfortable for the patient, however the patient's family may find it alarming. IV rehydration is not indicated for patients where imminent or impending death is expected, as this conveys no benefit and may cause harm (prolong discomfort or volume overload). The PPS can help determine whether IV rehydration is indicated. Comfort is best achieved without rehydration when death is imminent or impending. Thirst and dry mouth at this stage are often caused by medication and are better managed with proper mouth care. Where IV rehydration is deemed inappropriate, family may require support and education to understand why rehydration will serve no benefit and may increase suffering.

In some cases, IV hydration may be appropriate for patients who are not at end-of-life and dehydration is causing symptoms such as cramping, nausea, weakness, vomiting, headache, hypotension, or tachycardia. Patients receiving palliative care who require hydration may have fluids administered through the subcut route via butterfly over a longer period (hypodermoclysis) by their palliative care team. The prehospital clinician should not be expected to provide subcut fluid administration.

POST-INTERVENTION

Pain Monitor mental status, vitals, and adverse reactions (e.g., allergic reaction, nausea, confusion). Hypotension is a relative contraindication in the palliative care setting and depending on the disease trajectory, blood pressure may not be assessed/required. Reassess comfort levels with pain scales.

Delirium Monitor mental status, vitals, and adverse reactions (e.g., allergic reaction, hypotension, respiratory depression). Assess if symptomatic behavior is diminished to a manageable level. If haloperidol is administered, monitor for extrapyramidal side effects.

Nausea and vomiting Monitor mental status, vitals (if appropriate as per the PPS) and adverse reactions (e.g., drowsiness, hypotension). Assess for cessation of vomiting and absence or diminished level of nausea. If metoclopramide or haloperidol is administered, monitor for extrapyramidal side effects.

Breathlessness Monitor mental status, vitals, and adverse reactions (allergic reaction, hypotension, respiratory depression, nausea).

Dehydration Monitor hydration status and early recognition of volume overload.

Transport to an acute care facility should be considered when:

- Advanced care is desired for potentially reversible causes (e.g., infection, delirium, bowel obstruction, or oncological emergencies such as spinal cord compression, etc.), OR
- Reasonable symptom control has not been achieved, OR
- Caregivers are unable to provide required level of care at home, OR
- It is the wish of the patient/family/caregiver.

Conflict may arise if a patient with capacity wishes to remain home but the caregiver requests transfer to a medical facility. EHS clinicians must assist in resolving the conflict. The MCCP should be used as a resource to help reach potential solutions.

ACTIVELY DYING / DEATH HAS OCCURED

Impending/Imminent Death

The dying process is a highly personal experience, and clinicians must carefully assess the role the family needs them to fill. Some families will wish you to leave when they are aware active dying is occurring others will wish you to stay until death has occurred.

Some things paramedics can do on scene is provide comfort and reassurance to the family. Suggest that the family contact those they would like present. Remind families that hearing is the last sense to be lost and encourage them to talk to their loved one.

The dying process can vary between minutes to days. Even when family may wish clinicians to stay to provide support this is often not possible. Ensure the caregiver has additional support available. If the caregiver is unable to cope with the situation, transport may be necessary.

Psychosocial Support

Apply interactional skills (e.g., active listening, discussing difficult topics directly but with sensitivity, empathy, provision of relevant information, etc.). Patients receiving palliative care and their caregivers/family members may experience emotional distress; provide support in these situations. Also be prepared for some cases where a patient may wish for certain individuals to be present or absent.

In actively dying patients, monitoring their pulse, colour and breathing patterns is more helpful than vitals; mottling, shallow breathing and thready pulse being signs of imminent death. There is no need to attach a monitor; in fact, that adds a "medical" element that may take away some of the peaceful dignity of the moment.

After death has occurred, if possible, paramedics may stay on scene and provide support and answer any questions the patients' family or friends may have. Providing support may be as simple as offering to contact additional family or friends to either notify them or request their support. Offering to make a hot beverage (e.g., tea or coffee) may also provide comfort for the family or friend. Sometimes family may not want to talk but will appreciate your company until additional support is available.

Expected Death at Home

An expected death means that the person has a terminal condition for which they have a Personal Directive denoting a Do Not Resuscitate order, and that there is no reason to think that the death is unrelated to their underlying palliative condition (e.g., a fall, a motor vehicle collision, etc.).

There may be an Expected Death at Home form in the Green Sleeve. If there is an expected death there is no reason to call the Medical Examiner or law enforcement.

When Death Has Occurred

In the case of an expected death at home, if a patient receiving palliative care is deceased on arrival (or dies in the care of EHS clinicians) the clinicians should then ask the family if there is a plan in place [i.e. has the physician or nurse practitioner (NP) agreed to sign the paperwork (death certificate?)] and which funeral home would they like to use (they can choose the funeral home in that moment, or even after you leave, provided there is a physician or NP caring for the patient. The funeral home can collect the body prior to the death certificate being completed, provided that the physician or NP has agreed to come in at the next reasonable business

hour. This DOES NOT mean that paramedics need to contact the physician immediately. The EHS SPP care plan will contain, where available, the name of the physician or NP who has agreed to complete the death certificate. Only under two conditions is a call to the Medical Examiner required to initiate the process:

1) no physician who has agreed to complete the death certificate, or
2) it seems that the death is unrelated to the underlying condition.

TRANSFER OF CARE

If the patient is not transported:
For patients receiving palliative care, there is no need to complete a non-transport form or non-transport worksheet; no patient or witness signatures are required.

- Leave a written report for the patient or SDM summarizing pre- and post-intervention assessment and intervention delivered to the patient.
- Verify with family/patient the need for reassessment by the provider (e.g., physician, VON, NP, palliative consult nurse, care coordinator, etc.) caring for their palliative care needs.

If patient is transported:
If the patient is nearing end of life, ensure patient and family are aware the patient may die enroute. Provide all relevant details to the receiving facility in terms of initial presentation, treatment rendered, patients' response to treatment, and family expectations. In addition, when available, a copy of the patient's Personal Directive should be given to the receiving facility. Bring the Green Sleeve and its contents and ensure the receiving facility is made aware of it.

CHARTING

Record on the ePCR:

- Presence of Personal Directives and Goals of Care
- Medical contact information
- Patient assessments
- All interventions, including clinical response or changes in patient condition
- The PPS
- Result of discussion with the MCCP
- Expectations of family
- Care plan and follow up instructions

In the ePCR, ensure 'Palliative or End-of-Life Care' is selected under the Clinical Impression section.

Key Points – Palliative Care

The patient is eligible to receive the care outlined in this CPG if they are followed closely by a provider/team who will be able to adjust the care plan to address the present crisis in a more long-term fashion

The PPS is a valuable assessment tool used to determine a patient's health and level of ADL

Care should align with the Personal Goals of Care determined by the patient and/or SDM

Identify any palliative emergencies or reversible causes to symptoms and discuss potential management

The MCCP must be consulted for all palliative calls

KNOWLEDGE GAPS

The benefits associated with paramedics providing palliative care at home have been established in recent years and further optimization of this role is ongoing.

QUALITY IMPROVEMENT

Record the decision-making process used to arrive at treatment plan. Only by appropriate, accurate and complete charting can we build the case for new strategies for management of patients receiving palliative care.

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(http://nslegislature.ca/legc/bills/60th_2nd/3rd_read/b163.h)

Figure 1. Palliative Performance Scale

Referenced from cancercare.on.ca; Developed by Victoria Hospice Society

The PPSv2 is used to assess the patient's overall condition. It can be used as a communication device with other health care professionals and it is believed to have prognostic value.

To use the PPSv2 the pre hospital clinician starts at the first column and reads down the column until reaching the row that best defines the patient. Next, starting from that row, they move to the next column and read down until reaching the row that best defines the patient. This process is repeated until they are at the end of the chart. Once complete the prehospital clinician records the % that is at the beginning of the row they finished in.

PPS Level	Ambulation	Activity & Evidence of Disease	Self-Care	Intake	Conscious Level
100%	Full	Normal activity & work No evidence of disease	Full	Normal	Full
90%	Full	Normal activity & work Some evidence of disease	Full	Normal	Full
80%	Full	Normal activity with Effort Some evidence of disease	Full	Normal or reduced	Full
70%	Reduced	Unable Normal Job/Work Significant disease	Full	Normal or reduced	Full
60%	Reduced	Unable hobby/house work Significant disease	Occasional assistance necessary	Normal or reduced	Full or Confusion
50%	Mainly Sit/Lie	Unable to do any work Extensive disease	Considerable assistance required	Normal or reduced	Full or Confusion
40%	Mainly in Bed	Unable to do most activity Extensive disease	Mainly assistance	Normal or reduced	Full or Drowsy ± Confusion
30%	Totally Bed Bound	Unable to do any activity Extensive disease	Total Care	Normal or reduced	Full or Drowsy ± Confusion
20%	Totally Bed Bound	Unable to do any activity Extensive disease	Total Care	Minimal to sips	Full or Drowsy ± Confusion
10%	Totally Bed Bound	Unable to do any activity Extensive disease	Total Care	Mouth care only	Drowsy or Coma ± Confusion
0%	Death	-	-	-	-

Figure 2. Palliative Care Dose Calculations

Maintenance Dose	
Definition	The amount of a medication administered to maintain a desired level of the medication in the blood. Also called the effective therapeutic dose; the dose that provides therapeutic efficacy without significant adverse local or systemic reactions. Can also be called the total daily dose.
Calculation	Regular scheduled dose + Regular scheduled dose + Regular scheduled dose + …
Example	A patient takes 2 mg Dilaudid q 4 hrs. What is their total daily dose? Answer: 12 mg A patient takes 10 mg morphine q 6 hrs and 2 mg prn q 1 hr. What is their total daily dose? Answer: 40 mg morphine
Notes	Breakthrough doses or prn doses should not be taken into account when calculating the maintenance or total daily dose.

Breakthrough Dose	
Definition	Extra dose on top of the regularly prescribed dose in order to manage symptoms. This is often used to treat episodic or breakthrough pain. This can be given on an as needed basis, generally q 1 hour.
Calculation	10% of total daily maintenance dose.
Example	A patient takes 2 mg Dilaudid q 4 hrs. What should their breakthrough dose be? Answer: 12 mg total daily dose, so 1.2 mg for breakthrough (can be rounded to 1.5 mg) If a patient takes 10 mg of morphine q 6 hours what should their breakthrough dose be? Answer: 40 mg morphine total daily dose, so 4 mg for breakthrough.
Notes	Though it is generally 10% of the total daily dose, this can be titrated between 5-20%.

PEP 3x3 TABLES for Palliative Care

Throughout the EHS Guidelines, you will see notations after clinical interventions (e.g.: **PEP** 2 neutral). PEP stands for: the Canadian **P**rehospital **E**vidence-based **P**ractice Project.

The number indicates the Strength of cumulative evidence for the intervention:
1 = strong evidence exists, usually from randomized controlled trials;
2 = fair evidence exists, usually from non-randomized studies with a comparison group; and
3 = weak evidence exists, usually from studies without a comparison group, or from simulation or animal studies.

The coloured word indicates the direction of the evidence for the intervention:
Green = the evidence is supportive for the use of the intervention;
Yellow = the evidence is neutral;
Red = the evidence opposes use of the intervention;
White = there is no evidence available for the intervention, or located evidence is currently under review.

PEP Recommendations for Sepsis Syndrome Interventions, as of 2024/04/16. PEP is continuously updated. See: https://emspep.cdha.nshealth.ca/ for latest recommendations, and for individual appraised articles.

Agitation

Recommendation		RECOMMENDATION FOR INTERVENTION			
STRENGTH OF EVIDENCE FOR INTERVENTION		SUPPORTIVE (Green)	NEUTRAL (Yellow)	AGAINST (Red)	NOT YET GRADED (White)
	1 (strong evidence exists)				• Benzodiazepines • Fans • Levomepromazine • Repositioning
	2 (fair evidence exists)				
	3 (weak evidence exists)	• Haloperidol • Ketamine			

Analgesia

Recommendation		RECOMMENDATION FOR INTERVENTION			
STRENGTH OF EVIDENCE FOR INTERVENTION		SUPPORTIVE (Green)	NEUTRAL (Yellow)	AGAINST (Red)	NOT YET GRADED (White)
	1 (strong evidence exists)	• Fentanyl • Morphine	• Acetaminophen		• Benzodiazepines • Inhaled analgesic • Ketamine • Ketorolac (Toradol) • NSAIDs
	2 (fair evidence exists)				
	3 (weak evidence exists)	• Hydromorphone • Oxycodone • Topical Narcotic	• Corticosteroids		

6700.02: PALLIATIVE CARE

Breathlessness

Recommendation		RECOMMENDATION FOR INTERVENTION			
		SUPPORTIVE (Green)	NEUTRAL (Yellow)	AGAINST (Red)	NOT YET GRADED (White)
STRENGTH OF EVIDENCE FOR INTERVENTION	1 (strong evidence exists)	• Narcotic			
	2 (fair evidence exists)		• Oxygen		
	3 (weak evidence exists)				

Nausea

Recommendation		RECOMMENDATION FOR INTERVENTION			
		SUPPORTIVE (Green)	NEUTRAL (Yellow)	AGAINST (Red)	NOT YET GRADED (White)
STRENGTH OF EVIDENCE FOR INTERVENTION	1 (strong evidence exists)		• Antidopaminergic		• Dimenhydrinate
	2 (fair evidence exists)				
	3 (weak evidence exists)	• Levomepromazine • Metoclopramide	• Ondansetron/Granisetron • Scopolamine		

Secretions

Recommendation		RECOMMENDATION FOR INTERVENTION			
		SUPPORTIVE (Green)	NEUTRAL (Yellow)	AGAINST (Red)	NOT YET GRADED (White)
STRENGTH OF EVIDENCE FOR INTERVENTION	1 (strong evidence exists)				• Anticholinergic • Suction
	2 (fair evidence exists)				
	3 (weak evidence exists)				

6700.02: PALLIATIVE CARE

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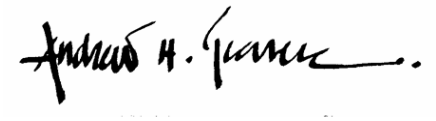
Signature of Program Director 		Signature of Program Document Coordinator Teena Robinson *Signed Electronically*

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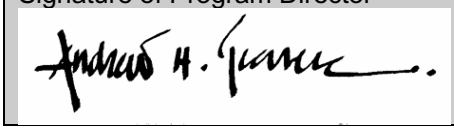
Signature of Program Director 		Signature of program Document Coordinator Teena Robinson *Signed Electronically*