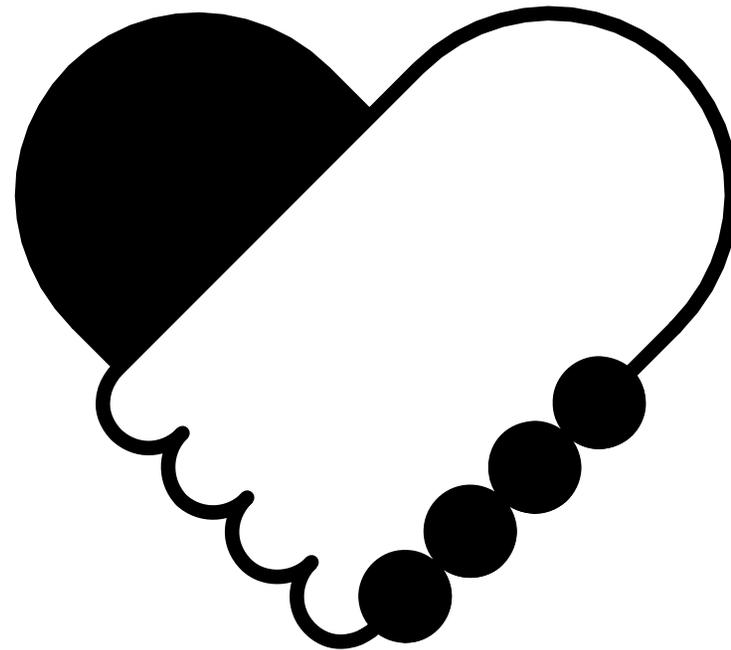


# **CLINICAL PRACTICE GUIDELINES**

**Waterloo Region Palliative Care  
Pain & Symptom Management Program**

**November 2004**



## Acknowledgements

This package of clinical guidelines has been developed by an interagency and interdisciplinary group in order to facilitate continuity of quality palliative care within our community. Our goal was to provide best practice guidelines for those who care for palliative patients, wherever they may be.

Many hours of dedication and work have been committed in the development of the guidelines in order to ensure that the information provided has met the specific needs of the individuals with life threatening illness. As a group, we shared our experiences of working with patients encountering complex side effects of their treatment and the pain and symptom issues related to their progressive disease.

This package is dedicated to the many patients from whom we have learned and worked with over the years. Many times, they have been our teachers working together through a difficult symptom management situation to a favourable solution. It was their patience, kindness, and willingness to try new ideas that enabled us to pass on to the next person in need the information that we have learned together.

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**Copies may be downloaded from website [www.hpconnection.ca](http://www.hpconnection.ca) in Word or PDF format. These guidelines may also be obtained from this office for the nominal cost \$8.00 for printing and mailing. For additional information, please contact:**

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Waterloo Region Palliative Care Pain and Symptom Management Program**

It is our goal to review and edit the guidelines bi-annually. Dosages in this guide are recommended for average size adults. While every effort has been made to give correct information, it is the responsibility of the practitioner to confirm accuracy of dosage specific to each individual patient. We wish to thank all those who have suggested new practices and materials. We also appreciate the editing and format changes suggested by the Windsor County Task Force. In addition, thanks are given to Doloplus for permission to reprint their pain scale, and to the Alberta Palliative Network for their permission to share their Clinical Practice Guidelines. Credit is given to the Network throughout this document as applicable.

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## WATERLOO REGION PALLIATIVE CARE PAIN AND SYMPTOM MANAGEMENT ASSESSMENT TOOL

System	Presenting Symptom	Recommended Interventions
<b>NEUROLOGICAL</b>	<ul style="list-style-type: none"> <li>• Has this patient/ client experienced recent onset of confusion, disorientation, or hallucinations?</li> <li>• Are there recent changes in behaviour or affect?</li> </ul>	<b>Follow the Confusion Guidelines</b>
	<ul style="list-style-type: none"> <li>• Has this patient/ client experienced numbness, tingling, loss of feeling, loss of bladder control and/or escalating back pain?</li> <li>• Are there recent balance problems?</li> <li>• Is the patient/ client having sudden muscular contractions?</li> <li>• Is the patient/ client having a seizure?</li> </ul>	<b>Follow the Spinal Cord Compression Guidelines</b>  <b>Follow the Myoclonus Guidelines</b>  <b>Follow the Seizure Guidelines</b>
<b>RESPIRATORY</b>	<ul style="list-style-type: none"> <li>• Is this patient/ client experiencing difficult or laboured breathing?</li> <li>• Are there signs and symptoms of cyanosis or oxygen desaturation?</li> </ul>	<b>Follow the Dyspnea Guidelines</b> <b>Follow the Anxiety Guidelines</b>
<b>CARDIOVASCULAR</b>	<ul style="list-style-type: none"> <li>• Does this patient/ client have a recent history of heart disease?</li> <li>• Is this patient/ client complaining of chest pain?</li> <li>• Is there evidence of peripheral edema, circulatory deficiencies or deep vein thrombosis?</li> </ul>	<b>Follow the Superior Vena Cava Syndrome Guidelines</b> <ul style="list-style-type: none"> <li>• <b>Baseline vital signs</b></li> <li>• <b>Notify physician for significant findings</b></li> </ul>
<b>GASTROINTESTINAL</b>	<ul style="list-style-type: none"> <li>• Is this patient/ client complaining of constipation?</li> <li>• Is this patient/ client experiencing diarrhea or fecal incontinence?</li> <li>• Is this patient/ client complaining of any abdominal pain?</li> </ul>	<b>Follow the Bowel Care Guidelines</b>
	<ul style="list-style-type: none"> <li>• Is this patient/ client experiencing nausea and vomiting?</li> <li>• Are there recent changes in appetite?</li> <li>• Is there evidence of dehydration?</li> <li>• Is the family distressed related to deficit in nutrition?</li> </ul>	<b>Follow the Nausea and Vomiting Guidelines</b> <ul style="list-style-type: none"> <li>• <b>Dietician referral</b></li> <li>• <b>Spiritual Care Guidelines</b></li> </ul>
	<ul style="list-style-type: none"> <li>• Is this patient/ client experiencing dry mouth or inflammation of the mucous membranes in the mouth or oral cavity?</li> <li>• Is this patient/ client experiencing mucositis (inflammation of the mucous membranes anywhere in the body)?</li> </ul>	<b>Follow the Mouth Care Guidelines</b>

<b>System</b>	<b>Presenting Symptom</b>	<b>Recommended Interventions</b>
<b>GENITOURINARY</b>	<ul style="list-style-type: none"> <li>• Is this client presenting with recent changes in genitourinary patterns?</li> <li>• Is there evidence of urinary retention?</li> </ul>	<b>Follow Spinal Cord Compression Guidelines</b>
<b>MUSCULOSKELETAL</b>	<ul style="list-style-type: none"> <li>• Is this client experiencing problems with turning, transferring, standing or walking?</li> </ul>	<b>Follow Spinal Cord Compression Guidelines</b> <b>Follow Pain Management Guidelines</b>
<b>INTEGUMENT (SKIN)</b>	<ul style="list-style-type: none"> <li>• Is this client <u>at risk</u> for skin breakdown?</li> </ul>	<b>Follow Skin Risk Assessment Guidelines</b>
	<ul style="list-style-type: none"> <li>• Does this client <u>have</u> skin breakdown?</li> </ul>	<b>Follow Malignant Wound Management Guidelines</b>
<b>ENDOCRINE</b>	<ul style="list-style-type: none"> <li>• Are there symptoms of hyperglycemia or hypoglycemia?</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Check recent blood sugars and follow up with appropriate interventions if significant difference from patient's norm.</b></li> <li>• <b>Review medications</b></li> </ul>
	<ul style="list-style-type: none"> <li>• Is the client at risk for hypercalcemia?</li> <li>• Cancers most likely to cause hypercalcemia include breast, ovarian, renal, multiple myeloma and lymphoma.</li> </ul>	<b>Follow Hypercalcemia Guidelines</b>
<b>PAIN</b>	<ul style="list-style-type: none"> <li>• Is this client experiencing pain?</li> <li>• Is the client having difficulty moving?</li> <li>• Is the patient having sudden muscular contractions (not a seizure)?</li> </ul>	<b>Follow Pain Management Guidelines</b> <b>Follow Spinal Cord Compression Guidelines</b> <b>Follow Myoclonus Guidelines</b>
<b>SLEEP/REST</b>	<ul style="list-style-type: none"> <li>• Is the client or caregiver able to get enough rest?</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Determine reason for insomnia and follow appropriate Guidelines</b></li> <li>• <b>Assess adequacy of home support services</b></li> </ul>
<b>PSYCHOSOCIAL</b>	<ul style="list-style-type: none"> <li>• Is this client experiencing anxiety?</li> <li>• Is there evidence of family/friends support?</li> </ul>	<b>Follow Acute Anxiety Guidelines</b> <ul style="list-style-type: none"> <li>• <b>Referral to social worker</b></li> </ul>
<b>SPIRITUAL</b>	<ul style="list-style-type: none"> <li>• Patient asks questions such as;" What have I done to deserve this? Who will look after my family when I die"?</li> </ul>	<b>Follow Spiritual Care Guidelines</b>

# **Pain Management Guidelines**

## PAIN MANAGEMENT GUIDELINES

	ASSESSMENT QUESTIONS	NURSING INTERVENTIONS	MEDICAL INTERVENTIONS
<b>HISTORY OF PRESENTING SYMPTOMS</b>	<p>Using the acronym <b>PQRST</b> ask the patient the following questions:</p> <p><b>Precipitating</b>- Factors. What provokes your pain? Certain movement? Body functions (cough, BM).</p> <p><b>Quality</b> – How would you describe your pain? Perhaps use words such as burning, stabbing, squeezing, dull ache.</p> <p><b>Region</b> – Where does it start? Does it radiate?</p> <p><b>Severity</b> – On a scale of 0-10, how would you rate your pain, 10 being your worst pain?</p> <p><b>Timing</b> – Is the pain there all the time or does it come and go? What makes it better? What makes it worse?</p>	<ul style="list-style-type: none"> <li>• Evaluate the appropriate use of medications.</li> <li>• Is the patient compliant?</li> <li>• Is the dose adequate?</li> <li>• Is the patient responding?</li> <li>• Provide support for emotional stress related to pain such as fear of death, fear of uncontrolled pain or overdosing, anticipatory losses, depression.</li> <li>• Clinician to become knowledgeable re: pain classification – <b>see Clinical Classification of Pain Guideline.</b></li> <li>• Apply heat/cold as appropriate.</li> <li>• Assess for need of OT for assistive devices or PT for TENS treatment.</li> <li>• Find positions of comfort.</li> <li>• Promote restful sleep, e.g. use of communication monitor to relieve night-time anxiety.</li> <li>• Relaxation Therapy, Complimentary Therapies.</li> </ul>	<p>Medications that may be ordered based on the symptoms and severity of the pain:</p> <ul style="list-style-type: none"> <li>• Opioid analgesics</li> <li>• Steroids</li> <li>• Anti-anxiety medications</li> <li>• Anti-convulsant medications</li> <li>• Radiotherapy/Chemotherapy</li> <li>• Anti-depressants</li> <li>• Bisphosphonates</li> </ul>
<b>PSYCHOSOCIAL</b>	<ul style="list-style-type: none"> <li>• Is there a fear of the use of opioids?</li> <li>• What is the meaning of pain to the patient?</li> <li>• Is there compliance with regimen?</li> <li>• What are the spiritual practices and beliefs about pain and death?</li> <li>• Are there financial concerns?</li> <li>• Is the patient able to communicate pain?</li> <li>• Is there an element of depression, anxiety, fear, and/or withdrawal?</li> </ul>		
<b>PHYSICAL AND FUNCTIONAL ASSESSMENT</b>	<p><b>Consider the following questions:</b></p> <ul style="list-style-type: none"> <li>• What is the underlying disease?</li> <li>• Associated treatment (surgery, chemotherapy, radiation)?</li> <li>• Is there redness, swelling at pain site?</li> <li>• What is the temperature, colour of skin at pain site?</li> <li>• What is the impact of pain on ADL's including sleep?</li> <li>• What is the level of consciousness?</li> <li>• Assess current effectiveness of analgesia.</li> </ul>		

## **Pain Assessment Tools Reviewed and Approved for Waterloo Region Use<sup>1</sup>**

- 1. Facial Grimace scale (Brignell)<sup>2</sup>**
- 2. Pain Assessment Tool (Brignell)**
- 3. Doloplus Behavior Scale<sup>3</sup>**
- 4. Initial Pain Assessment Tool (McCaffrey and Beebe)<sup>4</sup>**
- 5. Edmonton Symptom Assessment Scale**

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<sup>1</sup> Regional Clinical Practice Guidelines Steering Committee

<sup>2</sup> RNAO Best Practice Guidelines for Pain Assessment, 2003.

<sup>3</sup> Doloplus 2 Behavior Pain Scale

<sup>4</sup> RNAO Best Practice Guidelines for Pain Assessment, 2003.

## SAMPLE 4 - Facial Grimace & Behaviour Checklist Flow Charts

Name: \_\_\_\_\_ Active  Resting  Time: \_\_\_\_\_



Regular pain Medication: \_\_\_\_\_ Rescue/PRN medication \_\_\_\_\_

Month: \_\_\_\_\_

Date or Time															
FACIAL SCORE															
10															
8															
6															
4															
2															
0															
PRN medication															

Facial Grimace Score: The facial grimace scale scores the level of pain (from 0-10 on the left) as assessed by the caregiver observing the facial expressions of the resident. Assessment is done once daily or more (14 days are indicated above). This assessment of the degree of discomfort should be done at the same time every day and during the same level of activity. **Note if rescue/PRN medication is given; yes (y), no (n) or dose.**

### Behaviour Checklist

10 – always    8 – mostly    6 – often    4 - occasionally    2 – rarely    0 - never

Date or Time															
BEHAVIOUR															
eats poorly															
tense															
quiet															
indicates pain															
calls out															
paces															
noisy breathing															
sleeps poorly															
picks															
PRN medication															

Behaviour Checklist: Behaviour changes can be used to assess pain or distress, and thereby evaluate the efficacy of interventions. At the top of the scoring graph, when the specific behaviour has been observed, it can be rated from 10 (always) to 0 (never). The behaviours being rated and scored over 24 hours are listed down the left column. This chart scores 9 different behaviours over 14 days. The caregiver can expand on the checklist, i.e., rocking, screams, etc. **Note if rescue/PRN medication given. Both tools may be adapted for individual use.**

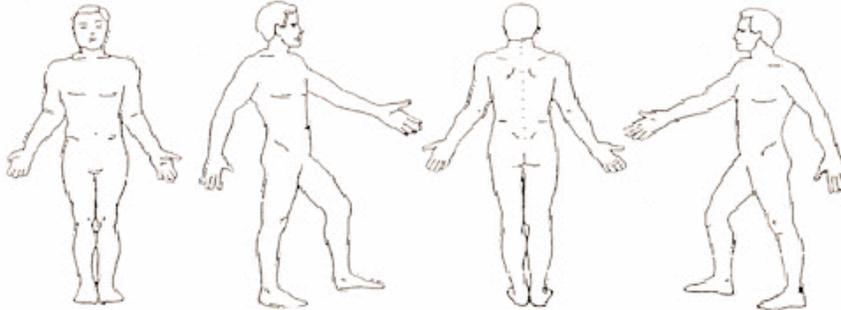
(The Facial Grimace & Behaviour Checklist are used with permission from Saint Joseph's Health Centre, Samia, Palliative Care Research Team.)

Reprinted with Permission. Brignell, A. (ed) (2000). Guideline for developing a pain management program. A resource guide for long-term care facilities, 3rd edition.

## SAMPLE 5 - Pain Assessment Tool

Assessment Date: \_\_\_\_\_ Name: \_\_\_\_\_

Location of Pain: Use letters to identify different pains.



Intensity: Use appropriate pain tool to rate pain subjectively/objectively on a scale of 0-10.

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Location	Pain A	Pain B	Pain C	Other
What is your/their present level of pain?				
What makes the pain better?				
What is the rate when the pain is at it's least?				
What makes the pain worse?				
What is the rate when the pain is at it's worst?				
Is the pain continuous or intermittent (come & go)?				
When did this pain start?				
What do you think is the cause of this pain?				
What level of pain are you satisfied with?				

Quality: Indicate the words that describe the pain using the letter of the pain (A,B,C) being described.

- Aching  throbbing  shooting  stabbing  gnawing  sharp   
 burning  tender  exhausting  tiring  penetrating  numb   
 nagging  hammering  miserable  unbearable  tingling  stretching   
 pulling  other: \_\_\_\_\_



0  
no pain



2  
mild



4  
discomforting



6  
distressing



8  
horrible



10  
excruciating

Originally adapted with permission from Grey Bruce Palliative Care/Hospice Association Manual. Reprinted with Permission. Brignell, A. (ed) (2000). Guideline for developing a pain management program. A resource guide for long-term care facilities, 3rd edition.



### SAMPLE 5 – Pain Assessment Tool (cont)

Effects of pain on activities of daily living:	yes	no	Comments
sleep and rest			
social activities			
appetite			
physical activity and mobility			
emotions			
sexuality/intimacy			

#### Effects of Pain on your Quality of Life: (happiness, contentment, fulfillment)

What can't you do that you would like to do or what activity would improve the resident's quality of life?

Current Medications and Usage: \_\_\_\_\_

Family Support: \_\_\_\_\_

#### Symptoms:

What other symptoms are you/they experiencing?

constipation  nausea  vomiting  fatigue  insomnia

depression  short of breath  sore mouth  weakness  drowsy

other \_\_\_\_\_

#### Behaviours:

What behaviours are you/they experiencing?

calling out  restless  resistant to movement  not eating  pacing

not sleeping  withdrawn  noisy breathing  rocking  other \_\_\_\_\_

Have you experienced a significant degree of pain in the past? How did you manage that pain?

\_\_\_\_\_

Is there anything else you can tell us that will enable us to work with you in managing your pain?

\_\_\_\_\_

#### Nursing Pain Diagnosis:

nociceptive  visceral  neuropathic  suffering  incident pain  somatic

muscle spasm  raised intracranial pressure

#### Problem List: (add to resident care plan)

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Originally adapted with permission from Grey Bruce Palliative Care/Hospice Association Manual. Reprinted with Permission. Brignell, A. (ed) (2000). Guideline for developing a pain management program. A resource guide for long-term care facilities, 3rd edition.

# DOLOPLUS-2 SCALE

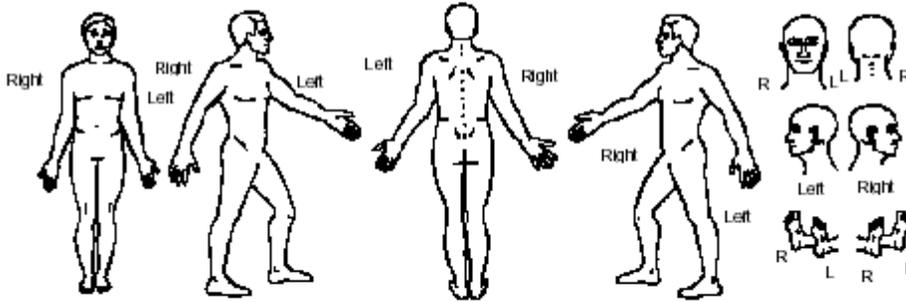
## BEHAVIOURAL PAIN ASSESSMENT IN THE ELDERLY

NAME :		Christian Name :	Unit :	DATES			
Behavioural Records							
<b>SOMATIC REACTIONS</b>							
1• Somatic complaints	• no complaints	0	0	0	0		
	• complaints expressed upon inquiry only	1	1	1	1		
	• occasional involuntary complaints	2	2	2	2		
	• continuous involuntary complaints	3	3	3	3		
2• Protective body postures adopted at rest	• no protective body posture	0	0	0	0		
	• the patient occasionally avoids certain positions	1	1	1	1		
	• protective postures continuously and effectively sought	2	2	2	2		
	• protective postures continuously sought, without success	3	3	3	3		
3• Protection of sore areas	• no protective action taken	0	0	0	0		
	• protective actions attempted without interfering against any investigation or nursing	1	1	1	1		
	• protective actions against any investigation or nursing	2	2	2	2		
	• protective actions taken at rest, even when not approached	3	3	3	3		
4• Expression	• usual expression	0	0	0	0		
	• expression showing pain when approached	1	1	1	1		
	• expression showing pain even without being approached	2	2	2	2		
	• permanent and unusually blank look (voiceless, staring, looking blank)	3	3	3	3		
5• Sleep pattern	• normal sleep	0	0	0	0		
	• difficult to go to sleep	1	1	1	1		
	• frequent waking (restlessness)	2	2	2	2		
	• insomnia affecting waking times	3	3	3	3		
<b>PSYCHOMOTOR REACTIONS</b>							
6• washing &/or dressing	• usual abilities unaffected	0	0	0	0		
	• usual abilities slightly affected (careful but thorough)	1	1	1	1		
	• usual abilities highly impaired, washing &/or dressing is laborious and incomplete	2	2	2	2		
	• washing &/or dressing rendered impossible as the patient resists any attempt	3	3	3	3		
7• Mobility	• usual abilities & activities remain unaffected	0	0	0	0		
	• usual activities are reduced (the patient avoids certain movements and reduces his/her walking distance)	1	1	1	1		
	• usual activities and abilities reduced (even with help, the patient cuts down on his/her movements)	2	2	2	2		
	• any movement is impossible, the patient resists all persuasion	3	3	3	3		
<b>PSYCHOSOCIAL REACTIONS</b>							
8• Communication	• unchanged	0	0	0	0		
	• heightened (the patient demands attention in an unusual manner)	1	1	1	1		
	• lessened (the patient cuts him/herself off)	2	2	2	2		
	• absence or refusal of any form of communication	3	3	3	3		
9• Social life	• participates normally in every activity (meals, entertainment, therapy workshop)	0	0	0	0		
	• participates in activities when asked to do so only	1	1	1	1		
	• sometimes refuses to participate in any activity	2	2	2	2		
	• refuses to participate in anything	3	3	3	3		
10• Problems of behaviour	• normal behaviour	0	0	0	0		
	• problems of repetitive reactive behaviour	1	1	1	1		
	• problems of permanent reactive behaviour	2	2	2	2		
	• permanent behaviour problems (without any external stimulus)	3	3	3	3		
COPYRIGHT				SCORE			

**Initial Pain Assessment Tool**

Patient's Name \_\_\_\_\_ Date \_\_\_\_\_  
Age \_\_\_\_\_ Room \_\_\_\_\_  
Diagnosis \_\_\_\_\_ Physician \_\_\_\_\_  
Nurse \_\_\_\_\_

I. Location: Patient or nurse marks drawing.



II. Intensity: Patient rates the pain. Scale used \_\_\_\_\_

Present: \_\_\_\_\_

Worst pain gets: \_\_\_\_\_

Best pain gets: \_\_\_\_\_

Acceptable level of pain: \_\_\_\_\_

III. Quality: (Use patient's own words, e.g. prick, ache, bum, throb, pull, sharp) \_\_\_\_\_

IV. Onset, duration, variations, rhythms: \_\_\_\_\_

V. Manner of expressing pain: \_\_\_\_\_

VI. What relieves the pain? \_\_\_\_\_

VII. What causes or increases the pain? \_\_\_\_\_

VIII. Effects of pain: (Note decreased function, decreased quality of life.)

Accompanying symptoms (e.g. nausea) \_\_\_\_\_

Sleep \_\_\_\_\_

Appetite \_\_\_\_\_

Physical activity \_\_\_\_\_

Relationship with others (e.g. irritability) \_\_\_\_\_

Emotions (e.g. anger, suicidal, crying) \_\_\_\_\_

Concentration \_\_\_\_\_

Other \_\_\_\_\_

IX. Other comments: \_\_\_\_\_

X. Plan: \_\_\_\_\_

McCaffery, RN, MS, FAAN and Alexandra Beebe, RN, MS, OCN, reprinted from the AHCPR Practice Guideline Number 9, *Management of Cancer Pain*, p. 230



**Edmonton Symptom Assessment System:  
Numerical Scale**  
Regional Palliative Care Program

**Please circle the number that best describes:**

- No pain      0 1 2 3 4 5 6 7 8 9 10      Worst possible pain
- Not tired      0 1 2 3 4 5 6 7 8 9 10      Worst possible tiredness
- Not nauseated      0 1 2 3 4 5 6 7 8 9 10      Worst possible nausea
- Not depressed      0 1 2 3 4 5 6 7 8 9 10      Worst possible depression
- Not anxious      0 1 2 3 4 5 6 7 8 9 10      Worst possible anxiety
- Not drowsy      0 1 2 3 4 5 6 7 8 9 10      Worst possible drowsiness
- Best appetite      0 1 2 3 4 5 6 7 8 9 10      Worst possible appetite
- Best feeling of wellbeing      0 1 2 3 4 5 6 7 8 9 10      Worst possible feeling of wellbeing
- No shortness of breath      0 1 2 3 4 5 6 7 8 9 10      Worst possible shortness of breath
- Other problem      0 1 2 3 4 5 6 7 8 9 10

Patient's Name \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

Complete by (check one)

- Patient  
 Caregiver  
 Caregiver assisted

**BODY DIAGRAM ON REVERSE SIDE**

### Clinical Classification of Pain<sup>5</sup>

TYPE/ Clinical Examples	CLINICAL MANIFESTATIONS	SPECIFIC TREATMENT POSSIBILITIES
<b>Superficial somatic</b> Skin invasion or ulceration	<ul style="list-style-type: none"> <li>• Well localized to the superficial skin area</li> <li>• Itching or burning in quality.</li> </ul>	Opioid analgesics Glucocorticosteroids Drugs for neuropathic pain Antibiotics
<b>Deep somatic – bone</b> Bone metastases Pathologic fractures	<ul style="list-style-type: none"> <li>• Relatively well localized</li> <li>• Worse on movement</li> <li>• Tender to pressure over area</li> <li>• Often accompanied by a dull background aching pain</li> </ul>	Opioid analgesics NSAIDS Radiotherapy Chemotherapy Surgery
<b>Deep somatic – muscle, soft tissue</b> Muscle invasion Soft tissue masses	<ul style="list-style-type: none"> <li>• Sometimes referred, if it is bone pain, but not along dermatomes; e.g., hip pain to the knee.</li> </ul>	Opioid analgesics Radiotherapy Chemotherapy
<b>Visceral</b> Liver capsule pain Bladder spasms	<ul style="list-style-type: none"> <li>• Often poorly localized, deep and aching</li> <li>• Usually constant</li> <li>• Often referred; e.g., diaphragmatic irritation may be referred to the right shoulder, pelvic visceral pain is often referred to the sacral or perineal area.</li> </ul>	Opioid analgesics Glucocorticosteroids Radiotherapy Chemotherapy Anti-spasmodics Nerve block
<b>Raised intracranial pressure</b> Brain tumours Meningeal carcinomas	<ul style="list-style-type: none"> <li>• Increased headaches</li> <li>• Increased nausea and vomiting</li> <li>• Increased seizure activity</li> <li>• Increased confusion</li> </ul>	Glucocorticosteroids Opioid analgesics Radiotherapy
<b>Neuropathic pain</b> Pelvic tumour invading lumbosacral plexus Spinal cord compression	<ul style="list-style-type: none"> <li>• Burning, aching, quality that may be accompanied by some sudden, sharp lancinating pain</li> <li>• Often a dermatomal or peripheral nerve distribution or radiation</li> <li>• Numbness or tingling over the area</li> <li>• Hyperesthesia over an area of skin</li> <li>• Severe pain from even slight pressure from clothing or light touch (allodynia)</li> <li>• Usually constant and severe pain often preceding the development of objective neurological findings.</li> </ul>	Opioid analgesics Anti-depressants Anti-convulsants Glucocorticosteroids Epidural analgesics
<b>Mixed</b>	Pancreatic pain from invasion of a vertebra and local spinal nerve roots	Combination therapy aimed at both neuropathic and nociceptive pain
<b>Unknown</b>	Persistent pain, the cause of which cannot be determined by history and investigations.	Opioid analgesics or adjuncts or both

<sup>5</sup> Librach, Larry, The Pain Manual. 2001.

## Non-Pharmacological Methods of Pain Control

### Palliative Radiotherapy

Palliative radiation can be very effective for controlling bone pain, as well as those pains caused by tumour infiltration. Consider early in management of pain. Often only 1-2 treatments will be required.

### Orthopedic Procedures

Surgical procedures may be considered in pathological fractures to achieve pain control.

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Below is a list of complementary, alternative, or professional service therapies to be considered in the treatment of pain. While our patients are under the care of nurses and physicians, the individual choices that complement (and indeed sometimes replace) drug therapy should always be discussed in an open dialogue with our patients and families. It is prudent that the practitioner be aware of herbs and alternative treatments the patient may be receiving, so that side effects, and improvements or declines in status are accurately being evaluated by the practitioner.

Finally, the palliative care and symptom management is a team effort. Consults with therapists for mobility and safety issues, skin breakdown, difficulty swallowing, positioning for bed care, are essential to addressing total pain. Spiritual and psychosocial care should always be included in the treatment of total pain.

### Professional Services

#### Nursing

**Occupational Therapy** (consider for pressure relief areas, positioning, ADL management)

**Physiotherapy** (consider for mobility concerns, TENS, acupuncture, acupressure)

**Dietician** (consider for food likes/ dislikes, anorexia, chronic nausea, swallowing problems)

**Speech Therapist** (for swallowing and aspiration concerns)

**Social Work** (consider for support to patient and family in caregiver burden, financial difficulties, grief and bereavement-current and anticipatory, and psychological/ social challenges).

#### Spiritual Care

**Recreational Therapy** (where available).

### Alternative and Complementary Therapies (Not inclusive and in no specific order)

Hot and Cold applications

Alternative pressure surfaces

Relaxation techniques/ Meditation

Reiki

Massage Therapy

Therapeutic Touch

Hypnosis

Visualization

Music Therapy

Reflexology

Herbal Therapy

Naturopathy

Special Diet Applications

Chiropractic Treatment

Osteopathy

## PRINCIPALS OF DOSING AND TITRATION<sup>6</sup>

1. Always start with short acting analgesics and a bowel regime if on opioids.
2. Consider the use of adjuvant medications **with the opioids** and non-pharmacological intervention pain management.
3. Give medication orally whenever possible.
4. Dose pain medication on **around the clock** basis with PRN doses for breakthrough pain.
5. There is no upper limit to Opioid dosage. The dose should be **titrated** until either pain control is achieved or adverse effects experienced. “Contrary to other drugs such as anticoagulants or anticonvulsants that have an established safety dose range, the adequate dose of opioid agonist is extremely variable and it should be titrated according to analgesic effects and toxicity, e.g.: while one patient may achieve excellent pain control on 5mg of morphine orally every 4 hours, another may require 50 mg of morphine every 4 hours and another 500 mg ever 4 hours. The maximum dose is limited by toxicity and this varies widely from patient to patient”.<sup>7</sup>
6. The analgesic effectiveness should be reassessed. Adjust dose by titration technique as frequently as required to achieve pain control.
7. Assess daily for and treat **expected** side effects such as nausea and constipation.
8. Assess daily for expected potential toxicities such as confusion, delirium, myoclonus and sedation level.
9. Patients with renal disease should use Morphine with caution due to poor excretion of metabolites.

### TITRATION TECHNIQUE

- a) Add up total mg given over previous 24 hours, including both regular and breakthrough doses.
- b) Convert all opioids to one opiate.
- c) Divide total mg to obtain the appropriate dose per interval. Give as regular dose.
- d) Still allow PRN breakthrough doses – at 30 to 50% of the new scheduled dose if using Q4H dosing. While there are various accepted ways to determine the breakthrough dose, the PRN breakthrough dose should be calculated to equal 10-20% of the total 24-hour dose.
- e) The breakthrough dose is adjusted based on individual response and on route of administration. Breakthrough doses may be given q1h prn.
- f) Repeat the process and titrate up until pain relief or unwanted side effects. In cases of severe pain crises, reassessment and titration should be more frequent.

#### CONVERSION TO PARENTERAL ROUTE FROM ORAL/ RECTAL ADMINISTRATION

DRUG	PARENTERAL DOSE	ORAL DOSE
Morphine	10 mg	20-30 mg
Hydromorphone	2 mg	4-6 mg

<sup>6</sup> For more detailed information on formulation, opioid conversions, switching opioids and adjuvant therapies, link to [www.http://albertapalliative.net](http://albertapalliative.net)

<sup>7</sup> Alberta Palliative Care Resource. What is the Maximum Dose of an Opioid Agonist?

## Equianalgesic Chart

STRONG ANALGESIC EQUIVALENT DOSES				DURAGESIC PATCH CONVERSIONS #		
Equivalent Doses (MG) Compared to Standard Morphine 10 mg SQ				Oral Morphine (mg/day)	Duragesic (µg/hour)	Oral Dilaudid (mg/day)
DRUG	SQ	PO	BRAND			
Morphine Sulphate	10	20	MS IR	45 – 134	25	9 – 26
Codeine Phosphate	120	200		135 – 224	50	27 – 44
Hydromorphone	2	4	Dilaudid	225 – 314	75	45 – 62
Levorphanol	2	4	Levo-Dromoran	315 – 404	100	63 – 80
Oxycodone	—	10 – 15	Supeudol	405 – 494	125	81 – 98
Anileridine	25	75	Leritine	495 – 584	150	99 – 116
Meperidine*	75	300	Demerol	585 – 674	175	117 – 134
Oxymorphone	1.5	Supp 5	Numorphan	675 – 764	200	135 – 152
Methadone**	10	20		765 – 854	225	153 – 170
Pentazocine*	60	180	Talwin	855 – 944	250	171 – 188
Nalbuphine*	10	—	Nubain	945 – 1034	275	189 – 206
Butorphanol*	2	—		1035 – 1124	300	207 - 225

\* Not Recommended

\*\* To be introduced and monitored by experienced Physician in use of this drug only. Special licensing for prescribing required.

# An alternate conversion formula is: Morphine Sulphate 60 mg orally = Duragesic Patch 25 mcg.

## Some of the More Commonly Used Adjuvant Analgesics<sup>8</sup>

Drug	Indication/s	Comments	Starting Dose	Usual Effective Dose Range
Corticosteroids (C/S)	Bone, Visceral, and Neuropathic Pain	C/S have a range of effects including mood elevation, anti-inflammatory activity, anti-emetic activity and temporary appetite stimulation. They also reduce cerebral and spinal cord edema and are essential in the emergency management of elevated intracranial pressure and epidural spinal cord compression. Adverse effects of long term C/S administration are well known. Amongst the potential early side effects are loss of glucose control, increased risk of infection and acute psychiatric disorders (e.g.: mania).	This is empiric. Dexamethasone 2-8 mg tid to qid po or s.c.	This is empiric. After starting the c/s, it needs to be tapered according to clinical effect.
Nonsteroidal Anti-inflammatory Drugs (NSAID)	Bone pain; various soft tissue, visceral or neuropathic pains	The long term benefits of traditional NSAIDS are limited by adverse effects such as gastrointestinal perforation and hemorrhage, and renal impairment. However, the new COX-2 specific NSAIDS <i>may</i> offer analgesia with decreased incidence of gastro-intestinal and renal adverse effects.	The optimum NSAID and the optimum dose has not been determined for cancer pain.	
Tricyclic Antidepressants	Neuropathic pain (Dysesthetic type)	Their adjuvant effects often occur at lower doses than are used for the treatment of depression and may be seen within 24-48 hours of initiating treatment. The most widely reported experience has been with amitriptyline. The adjuvant analgesic properties of other antidepressants have not been researched extensively.	Amitriptyline or desipramine 10-25 mg hs po. (a trial of 7-10 days may be necessary while monitoring for adverse effects).	Amitriptyline or desipramine 50-100 mg hs po.
Anticonvulsants	Neuropathic pain (neuralgic type)	These need to be used with caution in patients undergoing marrow-suppressant therapies such as chemo or radiotherapy. Periodic monitoring of complete blood count are recommended.	carbamazepine: 100 mg bid po	carbamazepine: increase dose over about 2 weeks to a maximum of 400 mg TID (followed by blood levels).

<sup>8</sup> Alberta Palliative Care Resource

Anticonvulsants (Continued)			phenytoin: 100 mg TID  gabapentin: an anti-convulsant that can be useful for neuropathic pain (reported to have fewer adverse effects than carbamazepine and dilantin)	phenytoin: 100 mg TID (followed by blood levels).  gabapentin: starting dose is $\pm$ 100 mg po tid and this can be titrated over about 2 weeks to a maximum of 3,000 mg per day in 3 divided doses.
Oral local anesthetics	Neuropathic pain (dysesthetic type)	Controlled clinical trials have demonstrated efficacy in both lancinating and dysesthetic neuropathic pains. However, they are more frequently indicated for dysesthetic pains. Side effects are common and include gastrointestinal (nausea) and central nervous system side effects (ataxia, tremors, confusion) and are often dose limiting. Patients with a history of heart disease may be at risk for serious adverse effects. Mexilitine is the preferred drug, generally not administered with tricyclics.	mexilitine: 100 mg q12h po  flecainide: 50 mg q12h po	mexilitine: increase gradually to a maximum of 300 mg q8h po  flecainide: 100 mg q12h po
Bisphosphonates	Bone pain	See Chapter on hypercalcemia. Primarily for pain secondary to diffuse, lytic metastatic bone lesions. Appears to be helpful in decreasing the risk of skeletal complications.	See Chapter on hypercalcemia.	

<sup>1</sup> Alberta Palliative Care Resource

# Bowel Care Guidelines

**\* Dosages in this section are recommended for average size adults. While every effort has been made to give correct information, it is the responsibility of the practitioner to confirm accuracy of dosage specific to each individual patient.**

## SUGGESTED BOWEL ROUTINE FOR PATIENTS ON REGULAR OPIOIDS<sup>9</sup> \*

1. Stool softeners and bowel stimulants: **Must be given regularly, NOT prn**, and should be started simultaneously with initiation of opioids.

Usual starting dosages: Senna 1-2 tabs @ hs and docusate 100- 200 mg po bid. Adjust dosages and frequencies as needed to ensure the patient has a soft, formed bowel movement every 1-2 days.

Patients often require senna 2-4 tabs bid up to qid prn, and docusate 200 mg tid up to qid prn.

If patients experience diarrhea (e.g. from radiotherapy to the pelvic area or chemotherapy), hold temporarily until diarrhea subsides.

2. Stimulant suppository (e.g. bisacodyl) and fleet enema: Administer suppository and, if ineffective, give high fleet enema whenever patient does not have a bowel movement for 3 days.

### **If ...**

1. Suppository and fleet enema are ineffective ... repeat.
2. Still ineffective... high oil retention enema and high fleet.
3. Still ineffective ... soap suds enema (irritating and often poorly tolerated).

**NB: Be sure to assess for bowel obstruction BEFORE initiating aggressive laxative and enema administration. Such therapies are contraindicated in the presence of bowel obstruction, except if obstruction is due to constipated stool**

3. Lactulose 30ml tid may need to be added to the laxative regime.
4. Occasionally, magnesium citrate - 1 bottle in 24 hours may be needed, especially if the flat plate abdominal x-ray shows a large amount of stool in the ascending or transverse colon.

**NB: One good response to a laxative or enema may not treat the constipation fully. The sigmoid may be clear but the rest of the colon may still be full of stool.**

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<sup>9</sup> Alberta Palliative Care Resource

\* Dosages in this section are recommended for average size adults. While every effort has been made to give correct information, it is the responsibility of the practitioner to confirm accuracy of dosage specific to each individual patient.

# BOWEL CARE: CONSTIPATION GUIDELINES<sup>10</sup>

Constipation is a common cause of morbidity in palliative care patients. It affects up to 95% of patients who are taking opioids if not treated prophylactically. Suspect constipation in any patient with advanced cancer presenting with irregular bowel movements, diarrhea, nausea, vomiting or abdominal discomfort. Preventative treatment of constipation assists in the patient's sense of well-being, to enjoy a greater quality of life.

## History and Investigation of Possible Causes of Constipation

- What is the date and approximate time of the last BM?
- What is patient's usual bowel pattern?
- What are the characteristics of the last stool i.e. loose, formed, constipated, colour?
- Was passing stool painful?
- Is patient on a bowel regime?
- Has the patient received any medications or chemotherapy known to cause constipation i.e. Vincristine Vinblastine?
- Does the patient have disease in the bowel i.e. cancer, anal fissures, irritable bowel syndrome?
- Is the patient taking feeding supplements?
- Is there urinary incontinence?

## Physical Assessment and Investigations:

- Observe abdomen for distention.
- Listen for bowel sounds.
- Palpate abdomen for stool in colon.
- Digital rectal exam Is there associated N&V?
- Is there overflow diarrhea?
- Assess diet/fluid intake.
- Assess for dehydration.
- Assess activity level.
- Assess pain level.
- Three views of the abdomen may be useful in confirming diagnosis.

## TIPS

Always exclude overflow diarrhea secondary to stool impaction when a palliative care patient presents with diarrhea.

Try avoiding long-term use of osmotic laxatives as they may result in fluid and electrolyte imbalances.

On rectal examination, consistency of the stool is helpful in guiding treatment. In the presence of hard stools, increase stool softeners (e.g.: glycerin, docusate). When stools are soft, try bisacodyl or senna.

When you suspect significant stool impaction and the rectum is empty on rectal exam, a plain abdominal x-ray may be useful. If bowel obstruction is present, treat appropriately.

For patients unable to take laxatives orally, senna is available in formulations for rectal use. Other effective methods are bisacodyl suppositories (q3d) or fleet enemas (q3d).

<sup>10</sup> \* Dosages in this section are recommended for average size adults. While every effort has been made to give correct information, it is the responsibility of the practitioner to confirm accuracy of dosage specific to each individual patient.

## Preventative Interventions

- **When starting a patient on an opioid, start laxatives simultaneously.\*\*** Start with a bowel stimulant and a stool softener e.g.: senna 1-2 tabs hs. + docusate 100 mg bid po.\*
- Large amounts of dietary fibre are often poorly tolerated by debilitated patients and should only be increased gradually.
- Maintain adequate oral fluid intake: 8-10 glasses/day.
- Encourage activity/ambulation.
- Create a favourable environment; Avoid bedpans.
- Keep record of bowel movements.
- **Do not use suppositories or enemas if low WBC or platelet count.**
- Health teach re: stool softeners, stimulants, laxatives, and/or enemas and reinforce compliance.
- For rectal irritation/discomfort suggest sitz bath, warm/cold packs and position changes
- Doses can be titrated upwards to achieve a bowel movement regularly (every 1 to 2 days).
- If patients find it difficult swallowing tablets/capsules, senna and docusate come in liquid forms. (Lactulose, 30 ml tid, is an alternative).
- If unable to achieve a bowel movement within 3 days, administer a fleet enema or bisacodyl suppository rectally on day 3.
- Commonly used doses are: senna 2-4 tabs bid, up to qid if necessary docusate 240 mg tid, up to qid if necessary.

\* See Recommended Bowel Routine

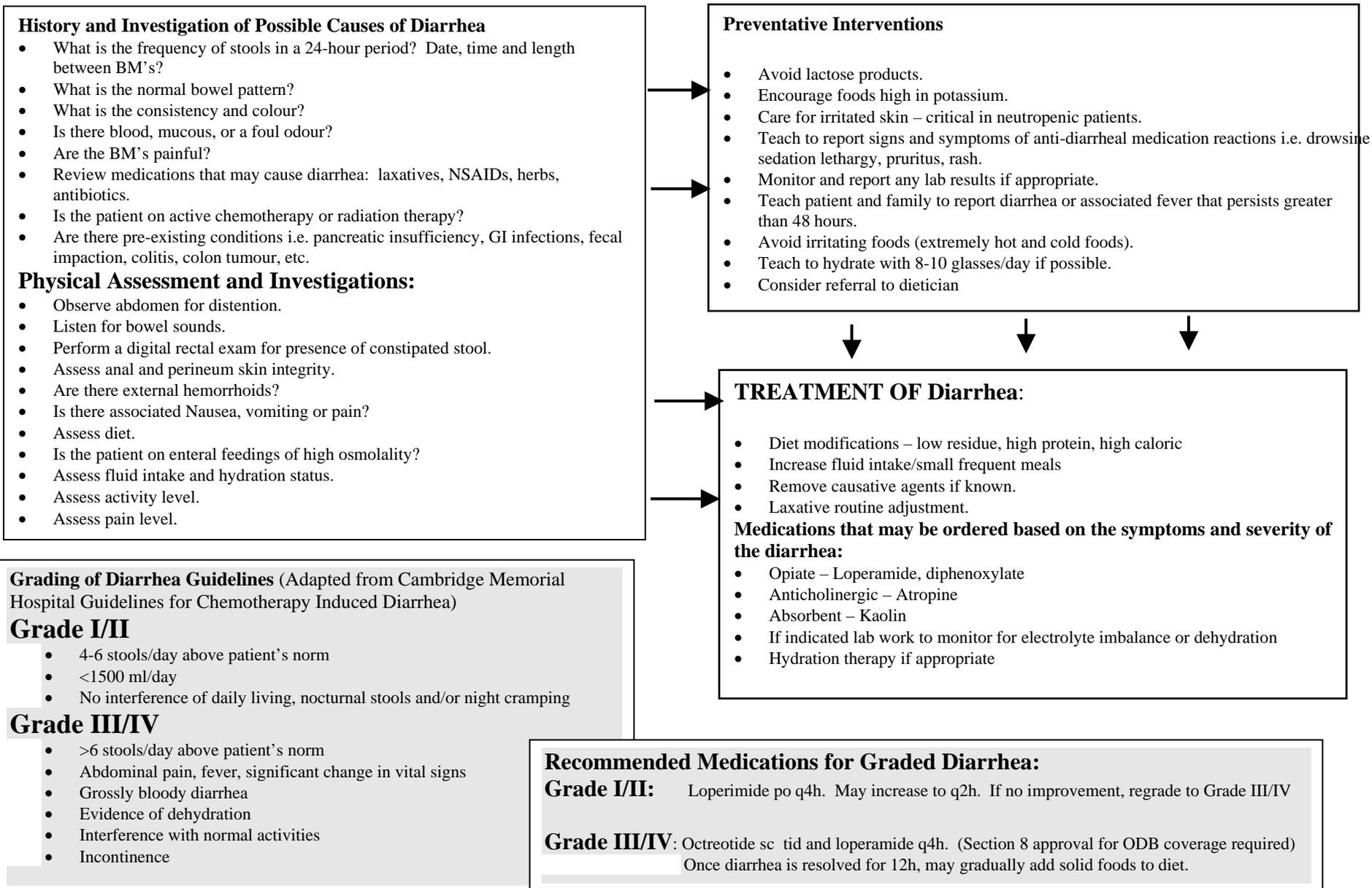
\*\* Exceptional patients may include those with ostomies and short gut syndromes

## TREATMENT OF ESTABLISHED CONSTIPATION (with or without fecal impaction):

- Requires the use of enemas and/or suppositories.
- **Do not use supp/enemas if low WBC or platelet count.**
- Administer a fleet enema or a bisacodyl suppository. Repeat if unsuccessful.
- If still unsuccessful, administer an oil retention enema followed by a soap suds enema several hours later. (Caution: soap suds enemas may be poorly tolerated by debilitated, frail patients. A high fleet is an alternative in these patients).
- If the impaction appears to be in the proximal colon, magnesium citrate, up to 250 ml po, may be tried.
- **Seldom** is manual disimpaction necessary.
- Start bowel routine if not already started.
- **See Bowel Obstruction**

## BOWEL CARE: DIARRHEA GUIDELINES

The presence of diarrhea in the palliative patient should be reported and treated early to prevent both dehydration and anal and perineum skin irritation. Incontinence of stool can be very demoralizing, as well as cause anxiety in the ability to manage activities of daily living.



# **BOWEL OBSTRUCTION**<sup>11\*</sup>

## **Signs and Symptoms:**

- Nausea and vomiting (will occur in almost all patients with complete obstruction).
- Abdominal (visceral) pain.
- Abdominal distension.
- High pitched or absent bowel sounds.
- Tympanic sounds with percussion of abdomen.
- History of infrequent bowel movements.
- Absence of flatus.

**NB: Prokinetic agents such as metoclopramide should be avoided in the presence of complete malignant bowel obstruction.**

## **Medical management:**

- Several medical options are available to help improve the comfort of patients with inoperable obstructions.
- It is important to differentiate between a partial and a complete bowel obstruction. Prokinetic agent may be appropriate in the presence of an incomplete obstruction.
- Prevent dehydration by using hypodermoclysis (1-2 litres of fluid/day).
- Corticosteroids can be used to reduce swelling and inflammation related to peri-tumor edema. Dosages for this are not well studied but we use (e.g. dexamethasone 6-8 mg sc tid to qid, followed by a tapering regimen).
- To control nausea and vomiting use dexamethasone 10 mg po/sc bid, then taper to lowest effective dose when response observed. If ineffective, haloperidol 1-2 mg sc q8-12h and q 1h prn. If dexamethasone and haloperidol together are ineffective, try hyoscine butylbromide to reduce GI secretions
- To reduce GI secretions, and severe abdominal cramping related to the obstruction, consider using hyoscine butylbromide 10 mg sc qid or 10 mg /24 hr with continuous infusion. Hyoscine butylbromide is indicated as long as there is a complete bowel obstruction. In the presence of an incomplete obstruction, hyoscine would be less appropriate. If the obstruction persists and the patient remains symptomatic, try adding octreotide 50- 100 mcg sc bid.
- Although, it is not feasible for the long term, in the short term the nasogastric (NG) tube can provide significant relief until the obstruction is overcome or until a PEG tube is inserted.
- Providing mouth care is advised if the patient is NPO.

## **Surgical Management:**

Suitability for surgery should be assessed to justify any surgical intervention. This includes assessing the general condition of the patient, the evidence of mechanical obstruction, reasonable expectation of survival and quality of life.

Surgical interventions vary from aggressive procedures such as resection (with/ without colostomy, enterostomy) to less aggressive options such as a Percutaneous Endoscopic Gastrostomy (PEG) tube. Gastrostomy tubes can be helpful to drain gastro-intestinal contents when a proximal bowel obstruction is complete and irreversible. A Naso-gastric (NG) tube may be used temporarily until the obstruction resolves or a gastrostomy tube is inserted.

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<sup>11</sup> Alberta Palliative Care Resource

\* Dosages in this section are recommended for average size adults. While every effort is made to give correct information, it is the responsibility of the practitioner to confirm accuracy of dosage specific to each individual patient.

## DYSPNEA CARE GUIDELINES

Dyspnea is a sense of breathlessness experienced by the patient. As with pain, the dyspnea assessment is subjective, and should be evaluated by the patient using a distress scale 0-10, with 10 indicating greatest distress. The sensation of breathlessness often causes anxiety for both the patient and family. Offering strategies to deal with this symptom usually requires a mixture of both non-pharmacological and pharmacological interventions.

### History and Investigation of Symptoms:

- Is the shortness of breath (SOB) a change or a pre-morbid condition? (acute vs. chronic)
- Does the patient experience SOB at rest or with activity?
- Does positioning affect the SOB?
- Are there pre-existing medical conditions such as:
  - Cancer of Lung
  - Anemia
  - Congestive Heart Failure
  - Chronic Obstructive Pulmonary Disease
  - Asthma
  - Pleural Effusion

### Physical Assessment and Investigations:

- Is the patient febrile?
- Are the respirations rapid, shallow, congested, or periods of apnea?
- Are there crackles, wheezes or hyperventilation?
- Is the patient cyanotic around the nail beds, dizzy or pale?
- Is the patient coughing or diaphoretic?
- Assess amount of IV fluids, abdominal ascites, vein distension and presence of edema.
- Monitor level of consciousness.
- If available, check O2 sats.
- Administer a 0-10 distress scale, to assess patient's perception of severity of dyspnea.

### Non-Pharmacological Interventions:

- Review the current medications including any over the counter medications
- Monitor vital signs.
- Listen to both lung fields for stridor, wheezes, and crackles.
- Reassurance. Maintain calm atmosphere.
- Fresh air. Use of a fan may help.
- Elevate head of bed.
- Support and elevate the arms on pillows.
- Conserve energy.
- Complimentary therapies – touch therapy, relaxation therapy, etc.
- Administer oxygen as ordered.
- Explanation and health teaching to patient and family.
- Administer all medications as ordered by the physician, as quickly as possible.
- Pain and symptom management assessment.

### Treatment of Dyspnea Treat the Underlying Cause if Appropriate (*Alberta Palliative Care Resource*)

**Step 1:** **Pleural effusion:** Drain if clinically significant.

**Anemia:** Transfusion of packed cells if it is felt that this could improve the dyspnea. Sometimes a therapeutic trial is required to determine this.

**Airway obstruction:** Radiotherapy is an option. Corticosteroids may be useful (e.g.: dexamethasone tid to qid). The optional dose is variable.)

**Lymphangitis Carcinomatosis:** Corticosteroids may be helpful (e.g.: dexamethasone tid to qid).

**Pulmonary emboli:** Anticoagulate.

**Radiation fibrosis:** Corticosteroids can be tried.

**Pneumonia:** Antibiotics.

### Ordering Oxygen in the home: (*Ontario Blood Gas Classifications, VitalAire*) Ministry Guidelines for ODB Coverage for Palliative Care Patients

Patients may receive Oxygen in the home ONCE in his/ her lifetime for a period of three months without meeting any criteria (no ABG's required)

To qualify for ongoing funded Oxygen: ABG's are required, and the paO2 must be <55.

### Step 2: Treat Symptoms: Refer to Non-Pharmacological Interventions above:

• **Supplemental Oxygen.**

• **Opioids (oral or injectable).**

Opioids have been shown to decrease the perception of dyspnea. For the patient already on opioids for pain, additional breakthrough doses can be ordered for dyspnea as well.

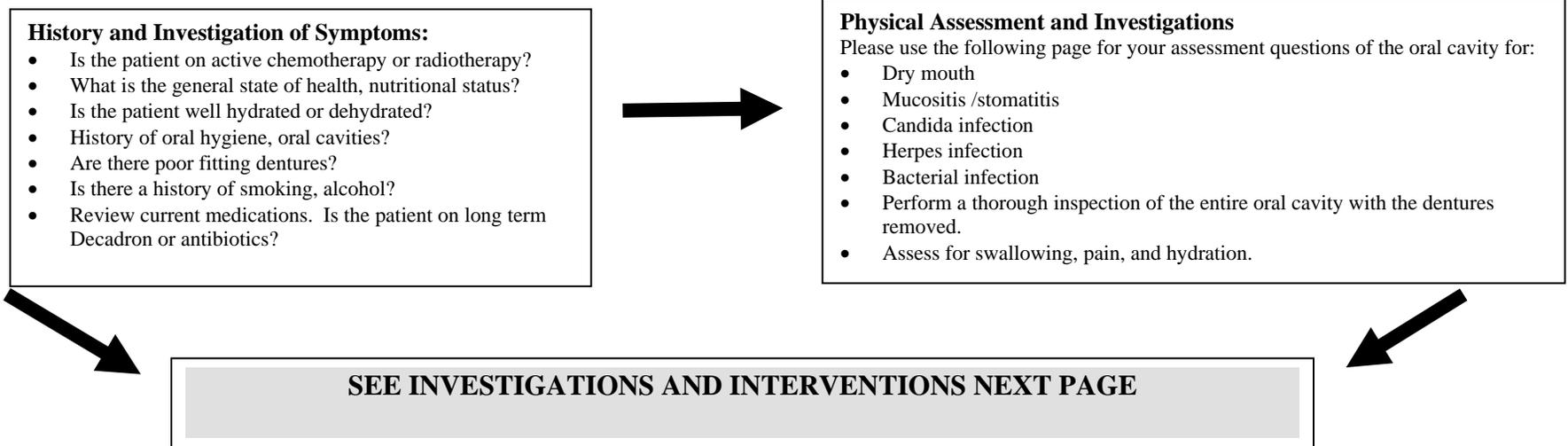
• **Other Medications:** Consider Sedatives. See or Link to Anxiety Guidelines.

Bronchodilators

Diuretics

# MOUTH CARE GUIDELINES

“Many palliative patients will experience mouth problems at some time during the course of their illness. Stomatitis is characterized by an inflamed oral mucosa that can range from mild inflammation to ulceration that can bleed or become infected. There are many possible causes of stomatitis.”<sup>12</sup> Consideration of dietary practices, habits, and culture will assist in determining appropriate and best treatment interventions.



**History and Investigation of Symptoms:**

- Is the patient on active chemotherapy or radiotherapy?
- What is the general state of health, nutritional status?
- Is the patient well hydrated or dehydrated?
- History of oral hygiene, oral cavities?
- Are there poor fitting dentures?
- Is there a history of smoking, alcohol?
- Review current medications. Is the patient on long term Decadron or antibiotics?

**Physical Assessment and Investigations**  
Please use the following page for your assessment questions of the oral cavity for:

- Dry mouth
- Mucositis /stomatitis
- Candida infection
- Herpes infection
- Bacterial infection
- Perform a thorough inspection of the entire oral cavity with the dentures removed.
- Assess for swallowing, pain, and hydration.

**SEE INVESTIGATIONS AND INTERVENTIONS NEXT PAGE**

**MOUTHWASH RECIPES**  
(Physician order needed for frequency, 5-10ml., 3-4 times daily is recommended)

**Magic Mouthwash**

Dexamethasone 4 mg/ml injection	0.56 mL
Diphenhydramine Elixir 125 mg/mL	120. mL
Nystatin 100,000 u/mL suspension	30. mL
Tetracycline 125 mg/mL suspension	30. mL
Sterile water to final volume of	202. mL

Swish and swallow  
Stable 60 days at room temperature  
SHAKE WELL

**Analgesic Mouthwash**

Nystatin Suspension	1500 ml
Lidocaine Viscous 2%	1500 ml
Sugar free Cherry Koolaid – 1 pkg.	4.5 gm
Sterile Water for Injection	qs to 4.5 L

Swish and swallow  
Stable 90 days at room temperature  
SHAKE WELL

**Hydrocortisone/Coolstat**

HC powder	1.0 gm
Propylene Glycol	50 ml
Simple Syrup	225 ml
Distilled Water	qs to 500 ml

Mix HC powder and PG, then add SS with H2O.  
Rinse and Spit  
Stable 90 days in fridge  
SHAKE WELL

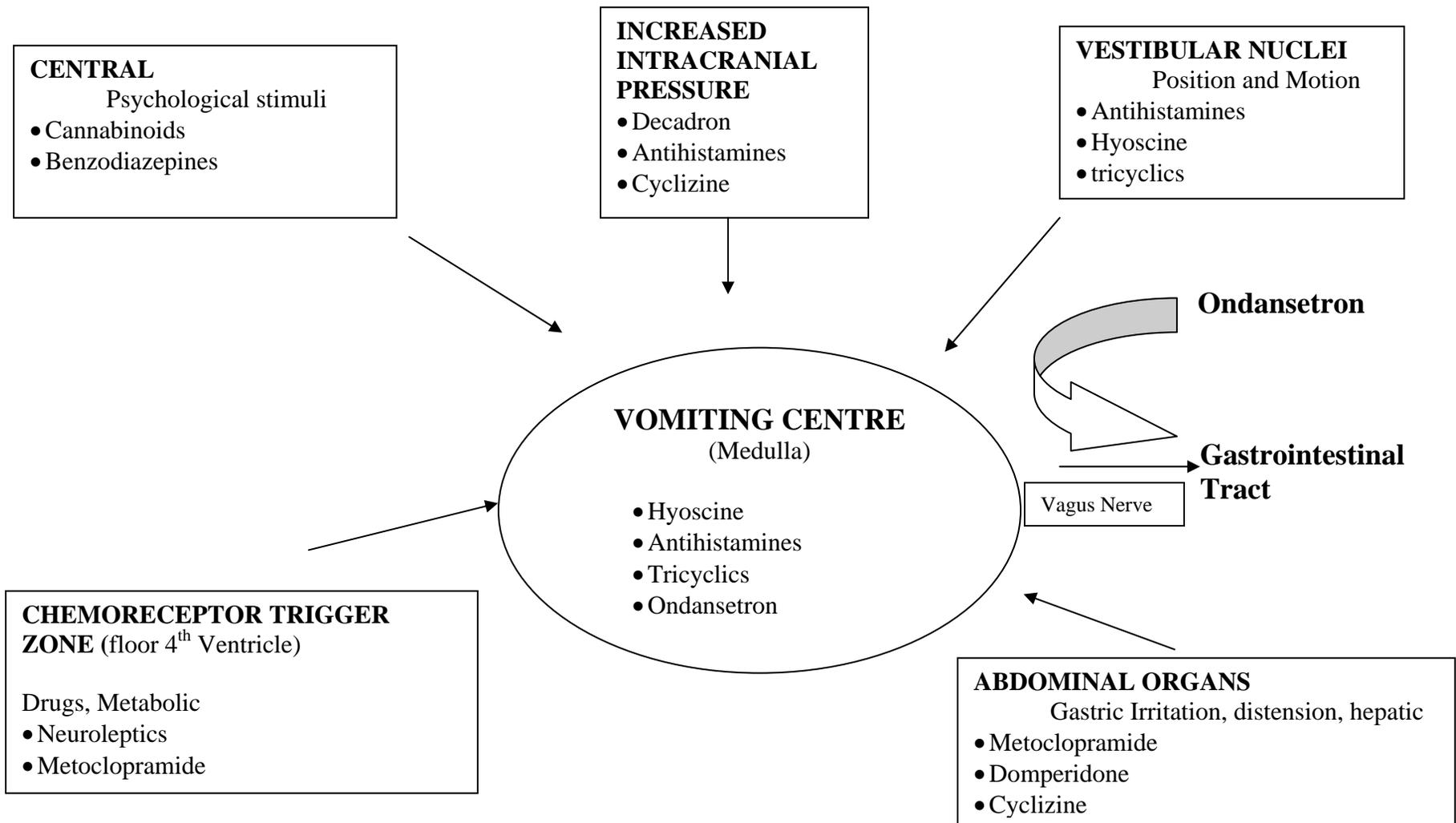
**Note: Mouthwashes that are “swallowed” are usually funded through the Ontario Drug Benefit Plan**

<sup>12</sup> Alberta Palliative Care Resource

## MOUTH CARE GUIDELINES

ASSESSMENT QUESTIONS	NURSING INTERVENTIONS	MEDICAL INTERVENTIONS
<ul style="list-style-type: none"> <li>• Is the saliva thick, absent?</li> <li>• Does the patient have a fever?</li> <li>• Are there swollen glands?</li> <li>• Is there swelling in the uvula or tongue?</li> </ul>	<p><b>FOR DRY MOUTH</b></p> <ul style="list-style-type: none"> <li>• Good oral hygiene NS, NaHCO<sub>3</sub></li> <li>• Patient teaching</li> <li>• Oral base gel</li> <li>• Sucking hard candies</li> <li>• Increase fluid intake if possible</li> <li>• Popsicles, fresh fruit</li> <li>• Frozen pineapple chunks, frozen grapes</li> <li>• Lip balm for dry lips</li> </ul>	<ul style="list-style-type: none"> <li>• Saliva substitutes may be ordered such as <i>Oral-balance Gel</i></li> </ul>
<ul style="list-style-type: none"> <li>• Is the mucous membrane cracked or red?</li> <li>• Are there ulcerations?</li> <li>• Is there inflammation?</li> <li>• Does the patient c/o pain, hoarseness, difficulty swallowing?</li> <li>• Is there a change in voice?</li> <li>• Sore throat?</li> </ul>	<p><b>FOR MUCOSITIS/STOMATITIS</b></p> <ul style="list-style-type: none"> <li>• Good oral hygiene</li> <li>• Soft bland diet/avoid high acid foods</li> <li>• Soft toothbrush</li> <li>• Analgesics – see Pain Guidelines</li> <li>• Use alcohol-free mouthwashes</li> <li>• Soda water rinses (1 tsp. baking soda in 16 oz. warm water)</li> <li>• Encourage fluids/ice chip</li> </ul>	<ul style="list-style-type: none"> <li>• Special mouth washes containing antibiotics may be ordered (<b>See previous page</b>)</li> <li>• Oral anaesthetics may be ordered such as rinses containing xylocaine 2%.</li> </ul>
<ul style="list-style-type: none"> <li>• Is there white cottage cheese like patches?</li> <li>• Is there a red inflamed mucous membrane?</li> <li>• Is there alteration in taste?</li> </ul>	<p><b>FOR CANDIDA/THRUSH</b></p> <ul style="list-style-type: none"> <li>• Requires physician's assessment or an order</li> <li>• Administer oral anti-fungal medications and oral anaesthetics as ordered</li> <li>• Good oral hygiene, normal saline/soda water rinses</li> </ul>	<ul style="list-style-type: none"> <li>• Anti-fungal medications may be ordered. These are available in tablet and suspension preparations</li> <li>• Oral anaesthetics may be ordered</li> </ul>
<ul style="list-style-type: none"> <li>• Are there small vesicles filled with clear fluid on a raised base on the lips or in the mouth?</li> </ul>	<p><b>FOR HERPES INFECTIONS</b></p> <ul style="list-style-type: none"> <li>• Physician's assessment</li> <li>• Administer antiviral medications and oral anaesthetics as ordered</li> <li>• Good oral hygiene</li> <li>• Patient teaching – prevention of spread to other family members</li> </ul>	<ul style="list-style-type: none"> <li>• Culture and sensitivity test may be ordered</li> <li>• Antiviral medications may be ordered</li> <li>• Oral anaesthetics may be ordered</li> </ul>
<ul style="list-style-type: none"> <li>• Are there ulcerations?</li> <li>• Is the mucous membrane inflamed?</li> <li>• Is there pain?</li> </ul>	<p><b>FOR BACTERIAL INFECTIONS</b></p> <ul style="list-style-type: none"> <li>• Physician assessment</li> <li>• Perform C&amp;S as ordered</li> <li>• Administer antibiotics as ordered</li> <li>• Good oral hygiene, normal saline/soda water rinses</li> <li>• Administer oral anaesthetics as ordered</li> </ul>	<ul style="list-style-type: none"> <li>• Culture and sensitivity test may be ordered</li> <li>• Oral antibiotics may be ordered</li> <li>• Oral anaesthetics may be ordered</li> </ul>

# NAUSEA AND VOMITING GUIDELINES<sup>13</sup>



## NAUSEA AND VOMITING GUIDELINES

Nausea is a common and distressing symptom in patients with advanced cancer disease. It is important to determine the underlying cause for the nausea, so that the chosen interventions have the best chance at success in treatment of this often difficult to treat problem.

### History and Investigation of Nausea/ Vomiting (N/V)

- How long has the N & V been present?
- Is there vomiting associated with the nausea, or just nausea?
- Review medications for toxicity, side effects, or gastric irritation.
- Has the patient received recent chemotherapy or radiation to fields including the GI tract?
- Is the N/V diet related?
- Is there a pattern to the N/V?
- When was the last BM? See [Constipation Guidelines](#) or [Bowel Obstruction Guidelines](#)
- Is the N/V disease related to malignancy or metastasis?

### Physical Assessment and Investigations:

- Measure the symptom distress using a scale of 1-10, as in the pain assessment rating.
- What are the volume, colour, and consistency of the emesis? Is it projectile?
- Exclude bowel obstruction.

If suspected cause for N/V is biochemical, review of electrolytes, BUN, Cr, CBC, Calcium or Albumin may be indicated.

In some instances, hydration may be considered:

See Hypodermoclysis at [www.albertapalliative.net](http://www.albertapalliative.net)

### For Further Cross Reference, Please See:

**Constipation** – See [Constipation Guidelines](#)

**Anxiety** – See [Acute Anxiety Guidelines](#).

**Pain** – See [Pain Management Guidelines](#)



### Non-Pharmacological Interventions

- **Environment** – maintain cool, well ventilated room avoiding exposure to noxious smells or sights – vomitus removed quickly and follow with good mouth care
- **Food** – offer frequent small servings of food, replace fluid loss with high calorie electrolyte-rich cool liquids (Gatorade, popsicles, soft drinks)
- **Movement and position changes** – change position slowly, support patient with pillows, elevate head of bed
- If drink is carbonated add one teaspoon sugar or warm in microwave oven
- Frequent sips of fluid
- No aroma
- Encourage hydration to alleviate constipation, drug toxicity, and dehydration
- Anti-nausea medication before meals
- Avoid lying down for at least two hours after eating
- Sit in an upright position to ease digestion after eating
- Encourage client to wash and dress for meals and to eat with others
- Fresh air
- Eat slowly and chew well
- Let others cook, then sit in another room or go for a walk while food cooks to avoid smell if bothersome
- Use prepared foods from freezer that can be warmed at low temperatures or foods that don't need cooking
- Eat more when feeling better
- Encourage activity – often raises mood and stimulates appetite

### Pharmacological Interventions

**In addition to Antiemetic medications, the physician may order the following based on the symptom:**

- **Recent chemotherapy** –  
Acute <48 hrs: ondansetron, decadron.  
Delayed >48 hrs: prochlorperazine
- **Change in drug treatment** –  
Rx: maxeran, haloperidol, domperidone ± discontinue noxious medication
- **Biochemical** –  
Check electrolytes, BUN, Cr, CBC, and Calcium with Albumin
- **Esophageal irritation** –  
Radiation, chemo, g/j tube, TPN
- **Bowel obstruction** –  
Octreotide
- **Reflux/gastritis** –  
Rx: ranitidine, omeprazole, antacids, sucralfate, misoprostol
- **Decreases GI motility** –  
Rx: Metoclopramide, domperidone
- **Anticipatory** –  
Rx: lorazepam, CPZ, methotrimeprazine
- **Increased cranial pressure** –  
Rx: dexamethasone
- **Vestibular** –  
Rx: gravol, benadryl, scopolamine, hysocine



# ACUTE ANXIETY GUIDELINES

Acute anxiety may be related to many different components. Feelings of apprehension, dread, or panicking may be connected to dyspnea, pain, a change in medical condition, spiritual care needs, or an inability in the patient's coping mechanism.

## History and Investigations of Anxiety:

- Are there precipitating factors i.e. family dynamics, coping skills, family's anxiety?
- Are there contributing factors i.e. upcoming tests, procedures, treatments, approaching death, environmental stimuli?
- Any previous negative experiences?
- What is the duration, frequency of the anxiety?
- Are they experiencing hallucinations?
- Is anxiety related to spiritual needs? See [Spiritual Care Guidelines](#).

## Physical Assessment and Investigations:

- Assess vital signs.
- Is the anxiety related to pain? See [Pain Management Guidelines](#).
- Is the anxiety related to bowels? See [Bowel Care Guidelines](#).
- Is the anxiety related to dyspnea? See [Dyspnea Guidelines](#).
- Is the anxiety related to nausea or vomiting? See [Nausea and Vomiting Guidelines](#).
- Assess facial expression and body language.
- Assess level of alertness.
- Is patient competent to make own decisions?
- Assess sleep pattern.
- Is the patient restless or fatigued?
- Assess nutritional status.
- Assess over the counter medications.

## Non-Pharmacological Interventions:

- Provide reassurance.
- Stay calm since the patient and family are able to sense your anxiety.
- Decrease stimuli.
- Provide a safe environment.
- Decrease level of anxiety by health teaching or explanation of situation.
- Explain services available i.e. Hospice, community resources, relaxation and complimentary therapies.
- Assist in developing a coping mechanism that the patient and family can use.
- Refer to Social Work.

## Pharmacological Interventions:

Review current medications and compliance to administration.

**Medications that may be ordered based on the symptoms and severity of the anxiety includes:**

Anxiolytic medications:

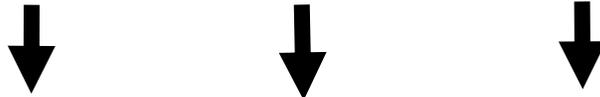
- Benzodiazepines
- Sedatives
- Anti-psychotic medications

## CONFUSION and DELIRIUM GUIDELINES

“Up to 85% of terminal cancer patients will develop delirium in the last weeks of life. A smaller percentage develops delirium earlier in the course of their illness. Delirium makes assessment of pain and symptoms difficult and is a common cause of distress for patients, families and health care providers. Delirium presents a “clinical dichotomy” in palliative care. On the one hand, it can be seen to be an expected end-of-life occurrence. On the other hand, 25% to 45% of episodes (especially those occurring in the pre-terminal phase) are reversible by implementing relatively non-invasive management strategies. One of the clinical dilemmas, therefore, lies in attempting to predict which is an end-of-life episode, and one, which is potentially reversible. If reversible, the patient may still have many weeks and months of good quality of life, able to communicate with loved ones and clearly express needs. To complicate this decision-making process, predicting life expectancy can be difficult and often inaccurate. It would therefore be reasonable to approach delirium as a reversible episode (unless there are clear signs suggesting death is near or the cause is irreversible such as with significant hepatic encephalopathy). The management of delirium should be on a “case-by-case” basis.”<sup>14</sup>

### Cardinal Features that Distinguish Delirium from Dementia in Palliative Care Patients<sup>14</sup>:

- Delirium: sudden onset, altered level of consciousness, clouded sensorium, occasionally reversible.
- Dementia: gradual onset, unimpaired level of consciousness, chronic.



### Assess the Patient<sup>14</sup>:

- Maintain a high index of suspicion. Use a screening tool on a regular basis to look for cognitive decline or other signs of delirium. For example, the Folstein Mini-Mental State Examination (MMSE) is a well validated screening tool for cognitive impairment (Appendix A). Almost 1/4 of episodes of delirium are missed by both physician and nurse until late unless such a tool is used. Orientation questions alone (re: person, place and time) do not provide an accurate assessment of cognitive status. Although the MMSE has some deficiencies and does not capture the neurobehavioral changes associated with delirium, it has been shown to be a useful tool. (Other more specific screening and diagnostic tools are available or under development.)
- Ask the patient specifically about hallucinations (usually visual and tactile) and assess for paranoid ideation.
- Examine and look for clinical signs of infection, opioid toxicity (myoclonus, hyperalgesia), dehydration, uremia, hepatic encephalopathy, etc.
- Order appropriate investigations, e.g.: CBC, electrolytes, calcium (with albumin), urea and creatinine, CXR, O2 sats, etc.

<sup>14</sup> Alberta Palliative Care Resource.

## CONFUSION and DELIRIUM GUIDELINES

Common Causes of Confusion	Treatment Choices for Reversible Causes	Treatment Choices for Irreversible Causes
<b>Infection</b>	Discuss with patient and/ or family: Start antibiotic if appropriate	If febrile, provide cooling measures.
<b>Opioid Toxicity</b>	Rotate Opioid.	Provide a quiet environment.
<b>Medication Profile</b>	Consider all medications and discontinue possible drugs that may be aggravating the confusion.	Recent literature now suggests the use of Neuroleptics may be more effective in treatment, and that Benzodiazepines may make delirium/ agitation worse. Treatment should be individualized to the clinical situation.  Assess and manage pain appropriately. When distinguishing pain from delirium symptoms is difficult to determine, it is recommended that the delirium be treated.
<b>Hypercalcemia</b>	See <u>Hypercalcemia Guidelines</u> . Discuss with patient and / or family. Hydration or Bisphosphonates may be appropriate.	
<b>Dehydration</b>	Discuss with family. Rehydration may be appropriate.	
<b>Hypoxia</b>	Oxygen. See <u>Dyspnea Guidelines</u> if SOB.	
<b>Brain Metastasis</b>	Consider steroids.	

### **If immediate management of confusion is required:**

*(Recent literature suggests hydration and opioid rotation be considered along with immediate measures listed below)*

The following medications should be considered, taking into account whether delirium is hypoactive, hyperactive, or mixed.

#### **For less sedation:**

- Haldol

#### **For more sedation**

- Chlorpromazine
- Nozinan
- One could also consider atypical Neuroleptics such as risperdal, olanzapine, and quetiapine. These are available in oral form only at this time.

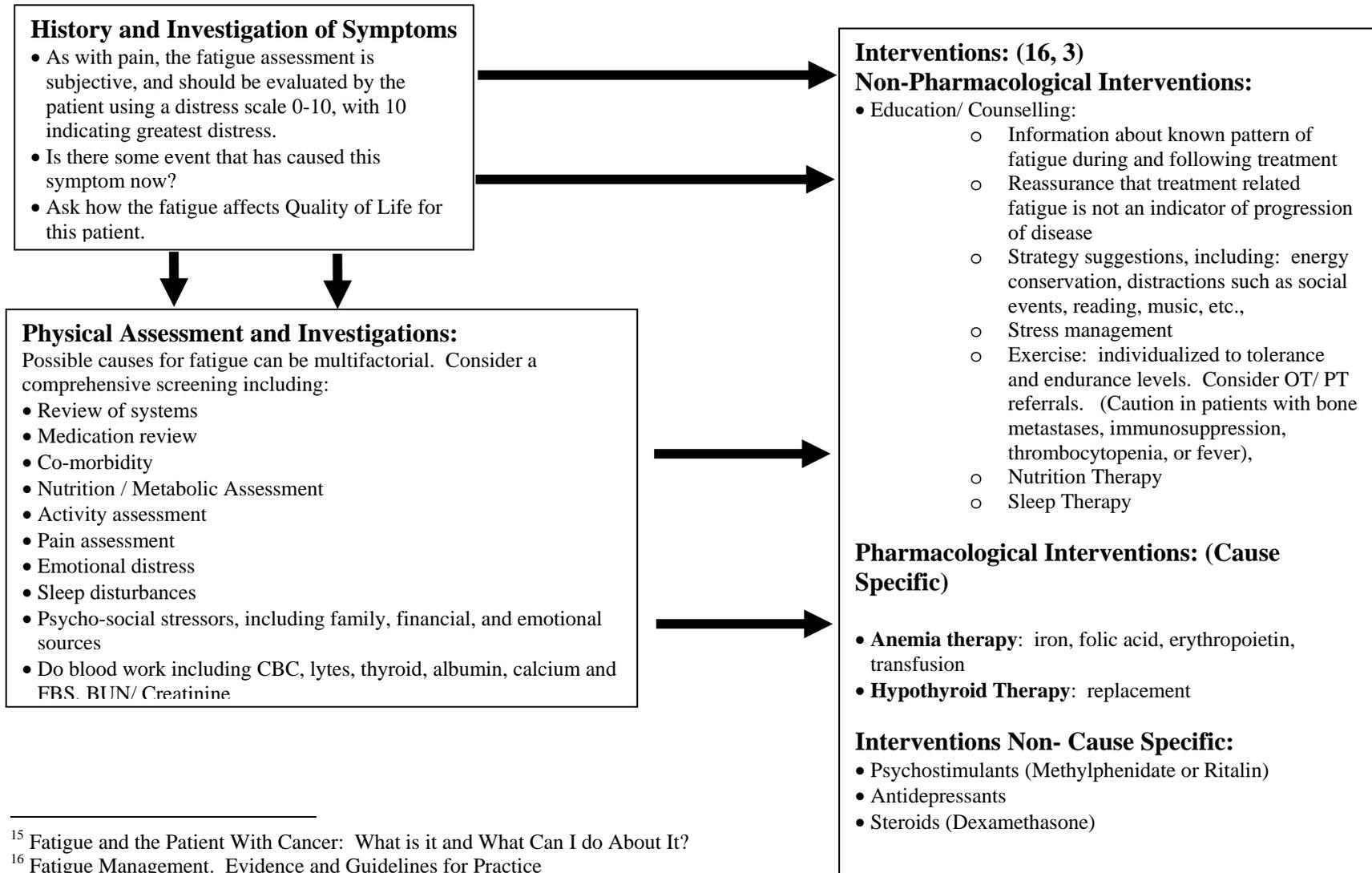
#### **If additional sedation is required, consider:**

- Midazolam
- Lorazepam

# Fatigue

Fatigue can be caused by physical problems, mental stress, or difficulties in a person's daily life. Physical problems that might cause fatigue are tumors, stress, medications, anemia, or a hormone imbalance. Tumors can cause fatigue by competing with the body for nutrients.<sup>15</sup>

Patients report fatigue as the most distressing symptom associated with cancer and cancer treatment, affecting 70-100% of these patients. Cancer survivors report that fatigue is a disruptive symptom that may last for many months to years after treatments end. When patients are no longer able to engage in the activities that they enjoy, quality of life is adversely affected.<sup>16</sup>



<sup>15</sup> Fatigue and the Patient With Cancer: What is it and What Can I do About It?

<sup>16</sup> Fatigue Management. Evidence and Guidelines for Practice

## **SPIRITUAL CARE GUIDELINES<sup>17</sup>**

Many patients experience spiritual distress in association with their disease process, impacting the broader psychosocial spiritual system of which the individual is part. Spiritual Caregivers may assist in identifying coping strategies or support for the individual and or psychosocial spiritual system. This service is particularly critical for those near death or facing incurable illnesses.

### **Spiritual distress in coping may be present in the following circumstances:**

- Grave diagnosis or poor prognosis
- Pain and symptom management
- Quality of life issues
- Bio-ethical decisions
- Losses
- Life meaning and purpose

### **PRESENTING SYMPTOMS**

Indicators of Spiritual Distress may include sense of abandonment, anger, frustration, fear of death, unforgiveness, discouragement, hopelessness, depression, questioning or doubting God or Higher Power, questions regarding afterlife, issues regarding death rituals.

### **RECOMMENDED INTERVENTIONS**

The goal of spiritual caregivers is spiritual wholeness and well being indicated by a sense of connectedness, peace, and support through a relationship with a Higher Power, faith community, family, and self.

- Listen compassionately and non-judgmentally. Asking clarifying questions is helpful to facilitate and honour telling their life story. Reflectively listen and affirm stories about their life, their illness, and their experience of coping with suffering. They may describe or imagine how God or a Higher Power is present or absent for them at this time.
- Assess the person's need to be with a professional spiritual caregiver (chaplain or Community Spiritual Caregiver) for counselling, rituals, or other religious needs. Assess the person's desire to see specific family members, or significant others. Respond according to their assessed needs and follow up as appropriate.

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<sup>17</sup> St. Mary's General Hospital Spiritual Care

# **Palliative and Oncological Emergencies**

## Febrile Neutropenia Guidelines<sup>18\*</sup>

Febrile Neutropenia is a common complication of standard chemotherapy (including oral preparations), some radiation treatments and bone marrow transplant. Neutropenia refers to a decrease in the number of circulating neutrophils. As it is associated with an impaired immune system, the body is limited in its ability to mount a response to infection leading to a lack or minimization of the usual signs and symptoms of infection i.e.: erythema, swelling, heat, cough and pain. Indeed a small rise in the patient's temperature may very well be the only response detected.

**Measures to ensure early identification and prompt treatment for patients with a suspected febrile neutropenic episode are essential.**

### Regular assessment:

- Identification of risk factors i.e.: neutropenia, immunosuppressive treatments, steroid treatments, non-intact skin or mucous membranes and the presence of a vascular access device.
- Changes in usual respiratory pattern;
- GI tract functioning (nausea, vomiting, dysphagia, hiccoughs, abdominal pain, cramping, diarrhea, rectal pain or itching).
- Genitourinary system: dysuria, oliguria, anuria, pelvic pain, vaginal or urethral discharge.
- Breaks in the integrity of the skin and mucous membranes (oral, anal, vaginal).

### Neutropenia Precautions

- Wash hands frequently throughout the day and before eating.
- Clean any scrape or cut immediately with warm water and soap.
- Avoid large crowds and people with infection.
- Ensure all meat is properly cooked.
- Maintain good mucous membrane and skin care.
- Practice good oral hygiene.

### Clinical Features

- Temperature = 38.0 C x 1 hour (or 100.4 F), or 38.3C degrees once
- Any symptom that may indicate an infectious process, including the following:
  - Shaking, chills
  - Loose bowels for more than two days
  - Burning on urination
  - Cough
  - Sore throat
  - Tender red or white raised patches in the mouth
  - Confusion, mental status change

### Cambridge Memorial Hospital (Medical Day Care Patients)

- Contact physician with any of the symptoms as per Clinical Features or any other symptom suspicious of an infectious process. Contact the clinic Monday-Friday 0900 to 1600 hrs at 740-4940. After hours and weekends or holidays contact CMH at 621-2330 and ask for the on call Oncology Physician

### Grand River Regional Cancer Center

- Contact the Cancer Centre and speak to the Supportive Care Coordinator Mon-Fri (excluding holidays) 8:30-4:30pm, at 749-4300, x 5773. After hours or holidays for fever (as described above), go directly to the emergency department. If suspicious of an infection without a fever, contact the on call physician at 651-5606.
- GRRCC has routine orders for Febrile Neutropenia patients directed to the emergency room.
- Patients should inform their own Supportive Care Coordinator when they have been to the emergency room for treatment.

<sup>18</sup> Oncology Exchange, Volume No. 2. 2003. pp. 20-23.

### **Diagnosing febrile neutropenia**

A patient with both of the following is considered to have febrile neutropenia:

- An oral temperature = 38.0 C x 1 hour (or 100.4 F), or 38.3C degrees once
- An absolute neutrophil count of  $< 0.5 \times 10^9/L$  or  $< 1 \times 10^9/L$  with a predicted decrease to  $< 0.5 \times 10^9/L$ .

On rare presentations the neutropenic patient may present afebrile but with signs and symptoms of an infectious process. Management of this patient should be the same as the patient presenting with a febrile response. Special attention to the patient receiving steroid treatment is required, as it often masks infections.



### **Investigations**

Investigations are targeted at diagnosis a site of infection. However, a site of infection is not always disclosed. This does not affect the treatment plan. 20% of the presentations are due to gram-positive blood borne bacteria.

- Blood work including CBC, electrolytes, creatinine and cross and type hold specimen.
- Blood cultures. If the patient has a central venous catheter in place, concurrent samples need to be drawn from the central line device and peripherally.
- Chest x-ray
- Urine C&S and R&M
- Sputum C&S
- Throat swab C&S
- C&S of any infected area



**Treatment** is based on the patient's risk factors including the absolute neutrophil count. The following interventions or medications maybe ordered:

#### **High Risk Patients**

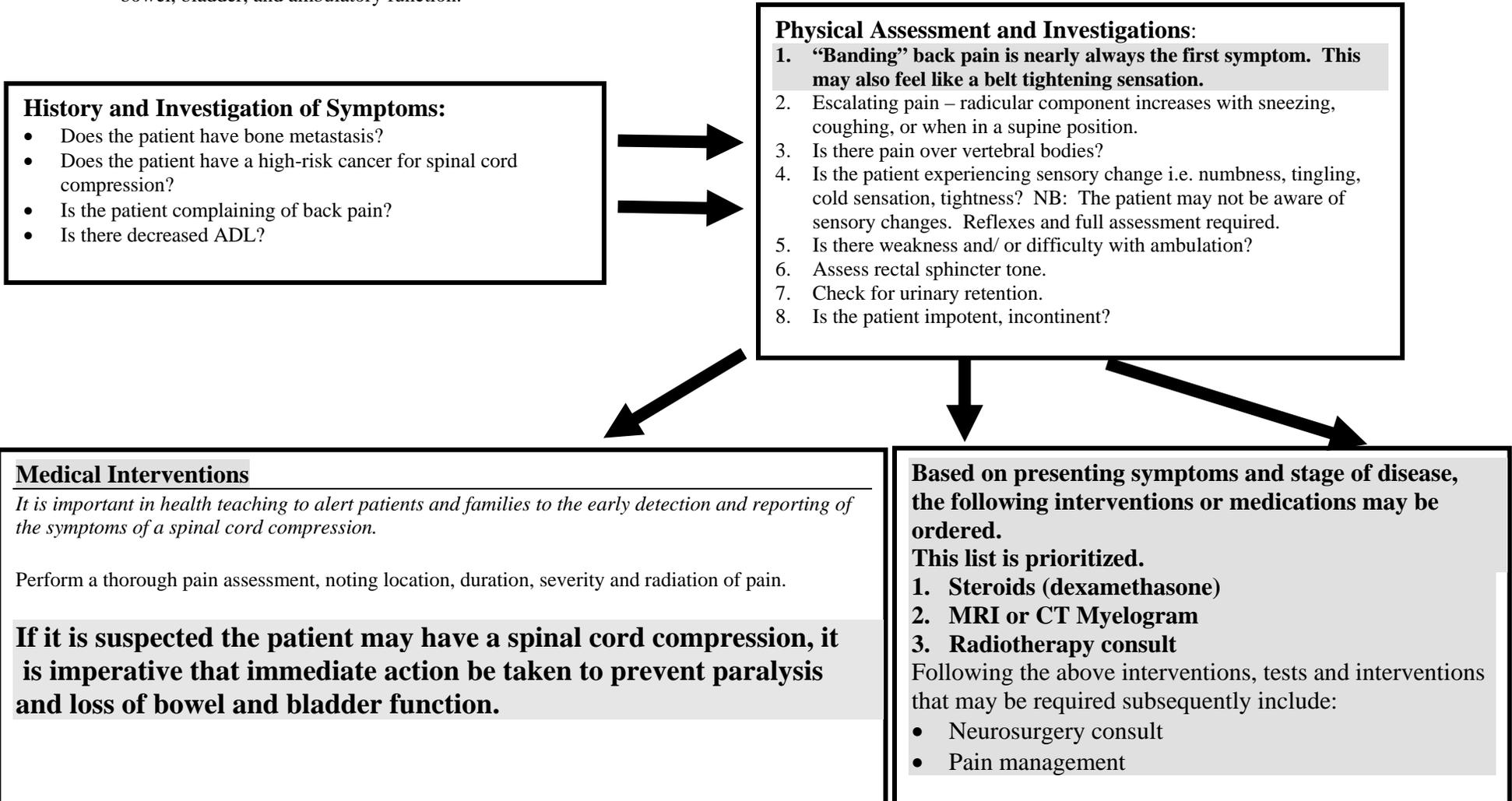
- Hospitalization and treatment with I.V administered broad-spectrum antibiotics.

#### **Low Risk Patients**

- Hospitalization and treatment with oral antibiotics.
- Outpatient management with oral antibiotics.

# SPINAL CORD COMPRESSION GUIDELINES

Spinal Cord Compression (SCC) usually develops when a tumour compresses on the spinal cord. Two thirds of SCC occurs due to a metastatic tumour. Highest incidence occurs in breast, prostate, lung, myeloma, kidney, thyroid, and other cancers with known bone metastases. **A delay in treatment may leave the patient paralyzed and without bowel and bladder control.** Prompt interventions yield approximately an 80% success rate, with bowel, bladder, and ambulatory function.



## HYPERCALCEMIA GUIDELINES

Hypercalcemia develops in 30-40% of all cancer patients. The highest incidence occurs in breast, prostate, lung, head and neck, myeloma, renal cell cancer and in cancers with known bone metastasis. “The main desired outcome in treating hypercalcemia is improvement in symptoms. It is therefore useful to monitor these clinical outcomes during the course of the treatment. (e.g.: In some cases, cognitive failure may precede the development of hypercalcemia and may therefore not be expected to improve with correction of the calcium. In other instances, the two are co-existent and a therapeutic trial might be required. In case of doubt about implementing therapy, consult a palliative care physician).”<sup>19</sup>

### HISTORY and INVESTIGATION of PRESENTING SYMPTOMS

Classification	Calcium Level
<b>Mild</b> – fatigue, anorexia, nausea	2.65 – 3.0 mmol
<b>Moderate</b> – vomiting, thirst, mild confusion, muscle weakness	3.0 – 3.5 mmol
<b>Severe</b> – dehydration, ileus, psychosis, drowsiness	3.5 – 4.0 mmol
<b>Life threatening</b> – bradycardia, heart block, coma, systolic arrest and death	Over 4.0 mmol
<b>Neuromuscular symptoms</b>	Fatigue, lethargy, confusion, obtundation, coma, profound muscle weakness
<b>Gastrointestinal symptoms</b>	Anorexia, nausea, vomiting, abdominal pain, constipation
<b>Cardiac symptoms</b>	Arrhythmias, bradycardia, tachycardia, ECG changes
<b>Renal symptoms</b>	Polyuria leading to dehydration polydypsia, renal failure

**Hypercalcemia Interventions: Adjust the blood calcium according to the blood albumin. Please consult with the pharmacy and laboratory in making this calculation. Consideration should be given to treating hypercalcemia if the patient is symptomatic.**

• **Fluids/** 3 litres, plus may consider a daily fluid loop diuretic once well rehydrated.

**Biphosphonates:** Inhibits osteoclasts. **Pamidronate**, IV infusion. Response in 3 days, with effect lasting 7-30 days *or* **Clodronate**- orally or intravenously.

• *Hypercalcemia refractory to the above Biphosphonates may respond to the newer more potent Biphosphonates*

**Other Treatments:**

• **Steroids:** Dexamethasone

• **Phosphate** daily in divided doses (50% experience severe diarrhea)

• **Mithramycin** IV. Response in 12-72 hours. Rebound in 1 week

• **Calcitonin:** Inhibits bone resorption. Incomplete effect, lasts 2-3 days, but provides good response for high calciums requiring rapid reduction while waiting for other treatments to take effect.

<sup>19</sup> Alberta Palliative Care Resource

# SUPERIOR VENA CAVA OBSTRUCTION GUIDELINES

Superior Vena Cava (SVC) Obstruction usually develops when blood flow through the superior vena cava is obstructed. **The drastic change in appearance is quite startling to patients and families, and requires immediate attention on detection.**

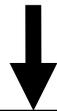
**This may occur when:**

- Tumour expansion compresses the superior vena cava externally; or
- Cancer cells invade the vessel itself, result of malignancy-related thrombosis
- A central venous device is in situ

Under pressure, the SVC begins to shut down, causing a pattern of decreased venous return to heart and an increased blood pressure. This leads to the characteristic pattern of upper extremity manifestations and if untreated can lead to airway obstruction. The highest incidence will occur in patients with cancer of the lung (SCLC) Squamous Cell Lung Cancer and Non-Hodgkin's Lymphoma.

## PRESENTING SYMPTOMS

INITIAL	INTERMEDIATE	LATE
<ul style="list-style-type: none"> <li>• Slight facial swelling</li> <li>• Slight periorbital conjunctival edema</li> <li>• Symptoms will at first dissipate within a few hours after rising in the morning</li> </ul>	<ul style="list-style-type: none"> <li>• Flushing, increased facial swelling, beefy red colour of face (erythema of face)</li> <li>• Progressive neck and upper trunk swelling/edema</li> <li>• Full feeling in arms, swelling of fingers and hands</li> <li>• Watery eyes, congested conjunctiva</li> <li>• Epitaxis and erythema of face</li> </ul>	<p><b>Central venous system</b></p> <ul style="list-style-type: none"> <li>• Increased JVD</li> <li>• Tachycardia, decreased BP, periorbital cyanosis</li> <li>• Extremely dilated, prominent chest veins</li> </ul> <p><b>Respiratory</b></p> <ul style="list-style-type: none"> <li>• Cough, dyspnea, hoarseness, tachycardia, wheeziness</li> </ul> <p><b>Central nervous system</b></p> <ul style="list-style-type: none"> <li>• Headache, confusion, anxiety, vision changes</li> </ul> <p><b>Gastrointestinal</b></p> <ul style="list-style-type: none"> <li>• Dysphagia</li> </ul>



**Interventions based on Symptoms:**

**Prompt intervention is indicated for the above findings.**

- Decrease anxiety, maintain a calm reassuring manner
- Elevate head of bed to minimize shortness of breath
- Health teach re: condition

**Based on presenting symptom and the stage of disease, one of the following interventions or medications may be ordered. This list is prioritized.**

1. Steroids
2. Diagnostic imaging to confirm diagnosis
3. Radiotherapy/chemotherapy
4. Anti-coagulants if thrombosis
5. Diuretics
6. Pain management
7. Sedation
8. Oxygen
9. Opiates

# SEIZURE GUIDELINES

Seizures occur most frequently in patient with cerebral tumors or meningeal involvement. Less frequent causes are metabolic disturbances, infection, drug toxicity, drug withdrawal or intracerebral hemorrhages.<sup>20</sup>

## History and Investigation of Symptoms:

- Is there a history of seizures?
- Common causes of seizures – metabolic, brain metastases, infectious, toxic, traumatic, idiopathic
- Is the patient taking their medication correctly?

## Physical Assessment and Investigations:

- Assess vital signs.
- Assess patient for seizure activity.
- Assess muscle group(s) involved, onset, duration, type of muscle movement (tonic, clonic).
- Assess for incontinence, loss of consciousness.
- Assess for hypoxia, aspiration pneumonia.
- Assess and monitor post-ictal phase.
- Review current medications and compliance to administration.

## Non-Pharmacological Interventions:

- Do not force anything into patient's mouth during seizure.
- Protect person from injury – avoid restraining extremities.
- Turn to side to let secretions drain from mouth; suction if available – watch for signs of hypoxia.
- Provide reassurance. Stay calm since the patient and family are able to sense your anxiety. Decrease level of anxiety by health teaching or explanation of situation.
- Decrease stimuli, provide environment conducive to prevention of seizure.

## For patients with pre-existing seizure disorder and no longer able to swallow, seizures may be prevented by:\*

- Dilantin intravenously
- Phenobarb subcutaneously
- Increase steroids (give sc)
- Lorazepam sublingually or subcutaneously
- Midazolam subcutaneously
- Diazepam Injectable may be given rectally
- Valproic Acid may be given rectally
- Dilantin Injectable may be given rectally.

## For patients unable to swallow, and requiring active seizure management, treatment may include:

- Opioid rotation
- Diazepam per rectum q1h until settled, then maintenance dose per rectum q hs
- Sodium amytal IV under specialized supervision only.

\*Dr. D. Ward. *Symptom Management in Palliative Care*. August 2003.

## Diagnostic testing that may be ordered base on the symptoms and stage of disease:

- CT Scan
- EEG
- Serum Electrolytes
- Serum Calcium
- Therapeutic drug levels

## Pharmacological Interventions (see shaded box to left)

### Medications that may be ordered based on the symptoms and stage of disease:

- Anti-convulsant medications
- Muscle relaxants – Valium
- Steroids
- Sedatives – Phenobarbital

### Surgical intervention to remove or reduce the tumour if applicable or if appropriate

**Radiation may also be beneficial.**

# MYOCLONUS GUIDELINES

MYO = muscle CLONUS = jerks

Myoclonus is central nervous system excitability. It presents as sudden, brief muscular contractions often seen at higher doses of strong opioids, however may be seen at lower doses of opioids. Myoclonus is **NOT a seizure**. A seizure will generally last more than a few seconds and the muscles will be in a continuous contraction for a longer period than seen with myoclonus. Myoclonus and delirium are early signs of opioid toxicities.

The patient and family require increased assurance and support while myoclonus is being assessed and treated.

## History and Investigation of Symptoms

- Is the patient on strong opioids?
- When did the myoclonus start?
- How long does it last?
- Does patient have sudden frequent muscular contraction?
- Are they repetitive in nature?
- Are the contractions mild, occasional and occurring at rest?
- Is the pain increased with the myoclonus?
- Do they interfere with ADL?



## Investigations and Interventions:

- Health teach patient and family the difference between myoclonus and seizure.
- Offer reassurance and support.
- Monitor for escalation of symptoms.
- Review medication profile.

If the patient is on Demerol, consider an alternative opioid because of the toxic metabolite found in Demerol.

## Based on presenting symptom and the degree of myoclonus, one of the following interventions or medications may be ordered:

- Opioid rotation may help.
- Rehydrate if appropriate SQ, PO, IV.
- Lower opioid dose by analyzing pain and adding adjuvant medications.

## Drugs that may be ordered based on symptoms:

- Anti-convulsants.
- Benzodiazepines.
- Muscle relaxants.

## DEEP VEIN THROMBOSIS GUIDELINES

Deep Vein Thrombosis (DVT) is a common complication experienced by the palliative patient due to many inter-related causes. Changes in hematology with the advancement of cancer disease, and decreased mobility increase the risk of this complication. Depending on the severity of the symptom along with the stage of disease, the choice of interventions will be very individualized.

### History and Investigation of Symptoms:

- Is the patient immobile?
- Is the patient post-op?
- Is there a central venous catheter?

### Physical Assessment and Investigation:

- Is one arm/leg more swollen than the other is?
- Is there pain, tenderness or swelling?
- Is there redness or increased warmth?
- Is there a positive Homan's Sign?
- Check pulse and vital signs.
- If appropriate, check lab results.
- Measure affected limb if appropriate.



### Investigations and Interventions:

- Health teaching re DVT; Offer reassurance and support.
- Elevate affected limb.
- Avoid massaging or application of heat or cold.
- Check pulse and vital signs.
- Measure affected limb if appropriate
- Gentle rehabilitation as appropriate.
- If anticoagulation is chosen for treatment, follow up with appropriate lab work.
- Perform pain assessment, and provide analgesia as required.

### Based on presenting symptom and stage of disease, any of the following interventions or medications may be ordered:

- Doppler ultrasound.
- Shuntogram if suspected cause from a central catheter.
- Anti-coagulant medications.
- Anti-inflammatory medications.

**TED Stockings** may be considered for **prevention** of DVT in high risk patients.

**TED Stockings should not be used during an active DVT episode**, but may be considered after the DVT has resolved and swelling of the limb has subsided.

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