



North Metropolitan Area Health Service - West  
Nurse Practitioner Clinical Protocol for the  
Management of Chemotherapy Induced Nausea and Vomiting in the Adult Population

**Sir Charles Gairdner Hospital**

**Haematology Care Centre**

**Susan Hyde: Haematology Nurse Practitioner**

**Nurse Practitioner Clinical Protocol**

**For the**

**Management of Chemotherapy Induced Nausea and Vomiting in the Adult Population**

**17/02/05**



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### **Introduction – overview of condition**

During the last decade, the management of chemotherapy related nausea, retching and vomiting (emesis) has vastly improved. The understanding of the pathophysiology of the symptoms, the efficacy and limitations of pharmacologic interventions, and the use of non-pharmacologic techniques is essential in minimising nausea, retching and vomiting. These symptoms are among the most common significant side effects of cancer chemotherapy resulting in considerable patient distress and decreased quality of life. In the early 1970s, with the advent of cisplatin, an emetogenic drug with broad spectrum antitumour activity, emesis was recognized as dose limiting and a potential deterrent to curative therapy (Rhodes, Johnson, McDaniel, 1995).

Emesis is a complicated process that requires coordination of the vomiting centre in the dorsal lateral reticular formation of the medulla oblongata. The vomiting centre lies close to the respiratory centre on the floor of the fourth ventricle and is directly activated by the visceral and vagal afferent pathways from the gastrointestinal tract, chemotherapy trigger zone, vestibular apparatus, and the cerebral cortex. When the vomiting centre is stimulated, emesis is induced via impulses to the salivation and respiratory centres and to the pharyngeal, gastrointestinal, and abdominal muscles (Camp-Sorrell, 1993).

Although nausea, retching and vomiting commonly occur together, they are considered separate conditions.

*Nausea:* is described as a subjective conscious recognition of the desire to vomit and is manifested by an unpleasant wavelike sensation in the epigastric area, at the back of the throat, or throughout the abdomen. It is mediated by the autonomic nervous system and accompanied by symptoms such as tachycardia, perspiration, light-headedness, dizziness, pallor, excess salivation, and weakness (Camp-Sorrell, 1993).

*Retching:* is a rhythmic and spasmodic movement involving the diaphragm and abdominal muscles, controlled by the respiratory centre in the brainstem near the vomiting centre. Negative intrathoracic pressure and positive abdominal pressure result in unproductive



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retching. When the negative pressure becomes positive, vomiting occurs (Camp-Sorrell, 1993).

*Vomiting:* is a somatic process performed by the respiratory muscles causing the forceful oral expulsion of gastric, duodenal, or jejunal contents through the mouth (Camp-Sorrell, 1993).



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### **Disease aetiology**

Nausea and vomiting associated with cytotoxic chemotherapy can be classified as acute, delayed and anticipatory.

*Acute nausea and vomiting* occurs 1-2 hours after administration of the chemotherapy drug regime, resolving within 24 hours. The pattern is determined by the emetogenicity of the chemotherapy and pre-treatment with an antiemetic agent(s).

*Delayed nausea and vomiting* persists or develops 24 hours after administration of the chemotherapy, perhaps due to the ongoing effect that the metabolites of chemotherapy continue to exert on the central nervous system or gastrointestinal tract (Camp-Sorrell, 1993). If nausea is controlled within the first 24 hours after chemotherapy, delayed patterns are less likely to occur.

*Anticipatory nausea and vomiting* occur in 25% of patients as a result of classic operant conditioning from stimuli associated with chemotherapy. Such conditioned responses may be subsequently experienced following one chemotherapy treatment when efforts to control emesis are unsuccessful.



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## **Population**

The population of patients who will be reviewed due to chemotherapy induced nausea and vomiting would be drawn from those receiving treatment for haematological disorders at Sir Charles Gairdner Hospital.



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### **Presentation rates**

The careful assessment of risk factors can help healthcare professionals to identify those patients who are more likely to develop chemotherapy induced nausea and vomiting. Understanding who is more at risk will help healthcare professionals to more specifically target interventions, and ultimately, achieve better control of chemotherapy induced nausea and vomiting and improve patient outcomes.

The emetic potential for patients receiving cytotoxic chemotherapy for haematological disorders will vary from very low to very high depending on the chemotherapeutic agents used.

Table 1 illustrates the emetogenic potential of chemotherapeutic agents used in the management of haematological disorders.



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**Emetogenic potential of chemotherapeutic agents used in the management of haematological disorders**

<b>INCIDENCE</b>	<b>AGENT</b>	<b>ONSET (HOURS)</b>	<b>DURATION(HOURS)</b>
Very High (>90%)	cisplatin	1-6	24-48 +
	dacarbazine	1-3	1-12
	melphalan (High dose)	0.3-6	6-12
	cytarabine (High dose)	2-4	12-24
High (60-90%)	carmustine	2-4	4-24
	cyclophosphamide	4-12	12-24
	procarbazine	24-27	variable
	etoposide –high dose	4-6	24+
	lomustine	4-6	12-24
	dactinomycin	2-5	24
Moderate (30-60%)	doxorubicin	4-6	6+
	mitoxantrone	4-6	6+
	carboplatin	4-6	12-24
	daunorubicin	2-6	24
	l-asparaginase	1-4	2-12
	ifosfamide	3-6	6-12
Low (10-30%)	bleomycin	3-6	- (not reported)
	cladribine	- (not reported)	-
	cytarabine	6-12	3-12
	etoposide	3-8	-
	melphalan	6-12	-
	mercaptopurine	4-8	-
	methotrexate	4-12	3-12
	vinblastine	4-8	-
	hydroxyurea	-	-
	teniposide	-	-
	gemcitabine	-	-
	fludarabine	-	-
	Very low (<10%)	vincristine	4-8
chlorambucil		48-72	-
busulphan		-	-
thioguanine		-	-
hormones/steroids		-	-



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**TABLE 1:** Adapted from D.Camp-Sorrell in *Cancer Nursing: Principles and Practice*, Third Edition, 1993.  
p.346



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### **Morbidity and Mortality rates**

Prognostic factors for chemotherapy induced nausea and vomiting may be patient related or treatment related. Adverse patient related prognostic factors include female gender, age under 40 years, and prior susceptibility to nausea and vomiting, e.g, hyperemesis or motion sickness or any other drug related nausea and vomiting (Paice, 1999). Interestingly, patients who consume a moderate amount of alcohol on a regular basis also tend to experience less nausea and vomiting than patients who do not. (Marek, 2003)

### **Consequences of inadequate treatment**

Inadequate control of chemotherapy induced nausea and vomiting can lead to undesirable clinical outcomes, such as increased symptoms, physical complications, and non compliance with chemotherapy regimens. Nausea and vomiting remain two of the most feared consequences of cancer treatment; left uncontrolled, nausea and vomiting can affect quality of life and functional status (Grant, 1997). Some patients may be unable to work or manage their normal activities of daily living in this situation, thus creating unnecessary negative associations with cancer treatment. These issues may become profound and may lead to a lack of compliance with the therapeutic regimen, which can ultimately affect survival. Unrelieved nausea and vomiting can result in physical complications, such as poor nutrition, aspiration pneumonia, dehydration, fluid and electrolyte imbalance, and mucosal tears (Bender, 2002).



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### **Expected outcome of the protocol**

The primary goal with chemotherapy induced nausea and vomiting is prevention. Nurses should be involved continually in the management of chemotherapy induced nausea and vomiting through initial and ongoing patient assessment, providing patient and family education, and documenting findings, actions and results of previous treatments.

By preventing chemotherapy induced nausea and vomiting in patients receiving chemotherapy for haematological disorders, the following outcomes will be achieved:

- Improved patient satisfaction and outcomes by the introduction of improved, timely interventions. Enhanced continuity of patient care: The Haematology Nurse Practitioner role will provide continuity and holistic management of patient care in a collaborative and multidisciplinary environment.
- Efficient and timely coordination of patients undergoing treatment through the Haematology Care Centre.
- Expected cost savings to the health service related to early and timely nursing interventions for chemotherapy induced nausea and vomiting, thus decreasing the need for inpatient management.



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## Assessment

Complete, meticulous, ongoing assessments are required beginning with the initial patient contact and continuing throughout and after the multiple chemotherapy cycles. With the increased use of ambulatory care settings for the administration of chemotherapy, there is a demand for thorough precise assessments, and proactive interventions for these vulnerable patients (Rhodes et al, 1995).

Prior to prescribing antiemetic medication the nurse practitioner will obtain an emesis history from the patient and/or caregiver ascertaining whether the patient has ever experienced any drug related nausea and vomiting and whether they suffer from motion sickness. A clinical assessment of general health will also be performed at this time.

Accurate assessment of the patient's symptoms provides the foundation for symptom management tailored to his or her needs. It is important to remember that patients' expectations may influence their symptom experience. Patient perceptions of chemotherapy may be based on what they have seen in the media, heard from other patients, or increasingly obtained from the internet. Often these expectations are unrealistic, causing the patient to unnecessarily fear cancer treatment. It is essential to educate patients before treatment begins in order to dispel any myths they may have learned and to establish accurate, realistic expectations.

When assessing for chemotherapy induced nausea and vomiting the nurse must have a clear understanding of the extent and severity of nausea, vomiting and retching. Precise data should be collected on the frequency, duration and severity of these symptoms.

**Table 2** outlines both patient and regimen related risk factors that should be assessed in every patient. Of the factors identified, the most important is the emetogenic potential of the chemotherapeutic agent being administered. Drug dose, route and frequency are also critical factors.



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**Table 2.** Patient and regimen related risk factors for chemotherapy-induced nausea and vomiting.

<b>TYPE OF FACTOR</b>	<b>ACUTE</b>	<b>DELAYED</b>
Regimen related	Emetogenic potential of chemotherapy agent Dose Route Schedule	Emetogenic potential of chemotherapy agent (moderate or high)
Patient related	Prior inadequate control Female Age < 60 years History of motion sickness History of hyperemesis Low social functioning Increased fatigue	Poor control of acute chemotherapy induced nausea and vomiting All factors related to acute chemotherapy induced nausea and vomiting

Based on information from Osaba et al., 1997.



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## **Management**

Instructions for the antiemetic regime must be provided to the patient in writing. Patients are attempting to process a lot of information in addition to coping with their fear regarding their disease and its treatment, and they may not remember a schedule for antiemetic medications or when to institute a non-pharmacological intervention (Rhodes et al, 1995).

The Nurse Practitioner will prescribe antiemetic medication for patients with chemotherapy induced nausea and vomiting after a full clinical assessment and review.

The Nurse Practitioner will educate patients and caregivers about non-pharmacological strategies that may be useful in minimising chemotherapy induced nausea and vomiting.

Several studies have examined the safety and efficacy of such approaches. Grealish, Lomasney, and Whiteman (2000) investigated the effects of therapeutic foot massage on pain and nausea in a sample of hospitalised patients with cancer. Statistically significant differences in nausea scores were obtained pre- and post massage. Ezzone, Baker, Rosselot and Terepka (1998) demonstrated statistically significant decrease in nausea in patients undergoing stem cell transplantation when music was used as a diversionary intervention during the administration of high dose chemotherapy. Behavioural therapies are thought to be most effective in anticipatory nausea and vomiting such as that caused when patients associate the clinical setting with feelings of nausea (Moyer, 2003).

Examples of some advice that may be given to patients to decrease the symptoms of chemotherapy induced nausea and vomiting include:

### **Dietary advice:**

- ginger ale, peppermint tea and cold non-carbonated beverages
- small frequent meals, not fatty or fried foods
- dry crackers

### **Complementary therapies:**

- Aromatherapy
- Meditation
- Massage



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- Relaxation exercises
- Music therapy
- Hypnosis

### Formulary

Classification	Drug	Dosage
<b>Dopamine antagonists</b> Phenothiazines	Prochlorperazine	<i>Intravenous:</i> 12.5 mg
Orthopromides	Metoclopramide	<i>Oral/intravenous:</i> 10-20 mg every 6-8 hours
<b>5HT<sub>3</sub> antagonists</b> (serotonin type 3 receptor antagonists)	Ondansetron	<i>Oral/intravenous:</i> 8 mg per 12 hours
<b>Benzodiazepines</b>	Lorazepam	<i>Oral:</i> 1 mg bd
<b>Corticosteroids</b>	Dexamethasone	<i>Oral/intravenous:</i> 4-8 mg per day as a single or divided dose



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### **Drug Formulary**

**Drug generic name:** Prochlorperazine

**Poisons schedule:** 4

**Therapeutic class:** Phenothiazine/Dopamine antagonist

**Dosage range:** Intravenous: 12.5mg per 4-6 hours

**Routes:** Intravenous

**Frequency of administration:** 4-6 hourly

**Duration of order:** Once only order

**Actions:** Central dopamine antagonist activity

**Indications for use:** Chemotherapy induced nausea and vomiting

**Contraindications for use:** Previous adverse reactions to dopamine antagonists  
CNS depression

**Side effects:**

**Common:** constipation, dry mouth, drowsiness, akathisia, parkinsonism, blurred vision, extrapyramidal reactions, hypotension, hyperprolactinaemia.

**Rare:** Prolongation of QT interval

Endorsed by:

Date: \_\_\_\_\_ Effective date: \_\_\_\_\_

Review date: \_\_\_\_\_



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**Drug generic name:** Metoclopramide

**Poisons schedule:** 4

**Therapeutic class:** Orthopromide/Dopamine antagonist/Prokinetic agent

**Dosage range:** 10-20mg

**Route:** Oral/Intravenous

**Frequency of administration:** 6-8 hourly prn

**Duration of order:** 7 days

**Actions:** Central dopamine antagonist activity

**Indications for use:** Chemotherapy induced nausea and vomiting

**Contraindications for use:** Previous adverse reactions to dopamine antagonists  
Phaeochromcytoma

**Side effects:** May cause extrapyramidal adverse effects: Restlessness, drowsiness,  
dizziness, headache

Reduce dose in renal impairment

Reduce dose in the elderly

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**Drug generic name:** Ondansetron

**Poisons schedule:** 4

**Therapeutic class:** 5HT<sub>3</sub> antagonist

**Dosage range:** 8mg bd

**Route:** Oral/Intravenous

**Frequency of administration:** 12 hourly

**Duration of order:** 5 days

**Actions:** Central and peripheral 5HT<sub>3</sub> receptor blockade

**Indications for use:** Chemotherapy and radiotherapy induced nausea and vomiting

**Contraindications for use:** Previous adverse reactions to 5HT<sub>3</sub> antagonists

**Side effects:**

**Common:** abdominal pain, anxiety, diarrhoea, dizziness, drowsiness, constipation, headache, malaise, transient rise I hepatic transaminases

**Infrequent:** chest pain, hypotension, itch, rash

**Rare:** anaphylaxis, extrapyramidal effects, seizures, arrhythmias, heart block

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**Drug generic name:** Lorazepam

**Poisons schedule:** 4

**Therapeutic class:** Benzodiazepine

**Dosage range:** 1mg

**Route:** Oral

**Frequency of administration:** 12 hourly prn

**Duration of order:** 3 days

**Actions:** Potentiate the inhibitory effects of gamma-aminobutyric acid (GABA) throughout the CNS

**Indications for use:** Chemotherapy induced nausea and vomiting

**Contraindications for use:** Respiratory depression, severe hepatic impairment, particularly when hepatic encephalopathy is present, myasthenia gravis.

**Drug interactions:**

- CNS depressants (eg alcohol, opioid analgesics, antidepressants, antihistamines, antipsychotics) have an additive CNS depression, enhanced sedative effect and respiratory depression, to be monitored and benzodiazepine dose reduced if necessary.
- Azole anti-fungals(eg itraconazole, ketoconazole, cimetadine, macrolides) inhibit metabolism of some benzodiazepines by CYP3A4 potentially resulting in enhanced sedative effect and respiratory depression may result: monitor and reduce or cease dose if necessary

**Side effects:**

**Common:** drowsiness, oversedation, light-headedness, memory loss, ataxia, slurred speech

**Infrequent:** headache, vertigo, hypotension, disorientation, confusion, paradoxical excitation, euphoria, aggression and hostility, decreased libido, anterograde amnesia,

**Rare:** blood disorders including leucopenia and leucocytosis, jaundice, transient elevated liver function tests, allergic reactions, including rash and anaphylaxis.



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**Drug generic name: Dexamethasone**

**Poisons schedule: 4**

**Therapeutic class: Immunosuppressant**

**Dosage range: 4-8 mg**

**Route: Oral/Intravenous**

**Frequency of administration: 12 hourly**

**Duration of order: 3 days**

**Actions:** Corticosteroids enter cells and bind to cytoplasmic receptors. This complex regulates the expression of corticosteroid-responsive genes, which results in the suppression of inflammation and immune response. The mechanism of dexamethasone's antiemetic activity is not fully understood, but may involve central inhibition of prostaglandin synthesis

**Indications for use:** Adjunctive treatment of chemotherapy induced nausea and vomiting

**Contraindications for use:** Uncontrolled infection, active peptic ulcer disease

**Side effects:**

**Common:** Dyspepsia, acne, oedema, hypertension, hypokalaemia, increased appetite, Hyperglycaemia, delayed wound healing, skin atrophy, muscle weakness, fat redistribution producing cushingoid appearance, increased susceptibility to infection, masking signs of infection, amenorrhoea, psychosis, euphoria, depression, easy bruising

**Infrequent:** Burning and tingling in perineal area with high dose IV treatment.

**Rare:** Peptic ulceration with short courses of high doses



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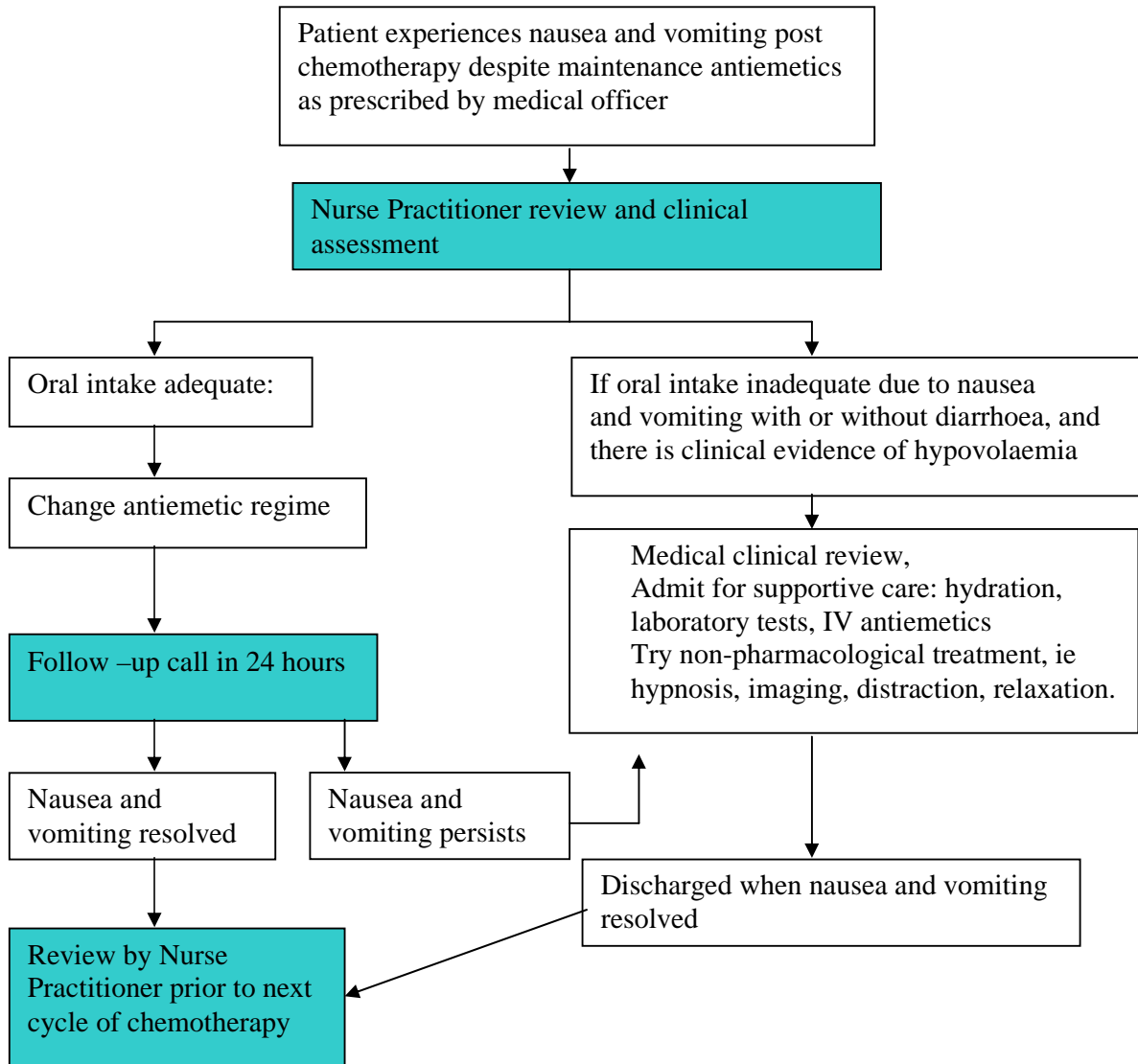
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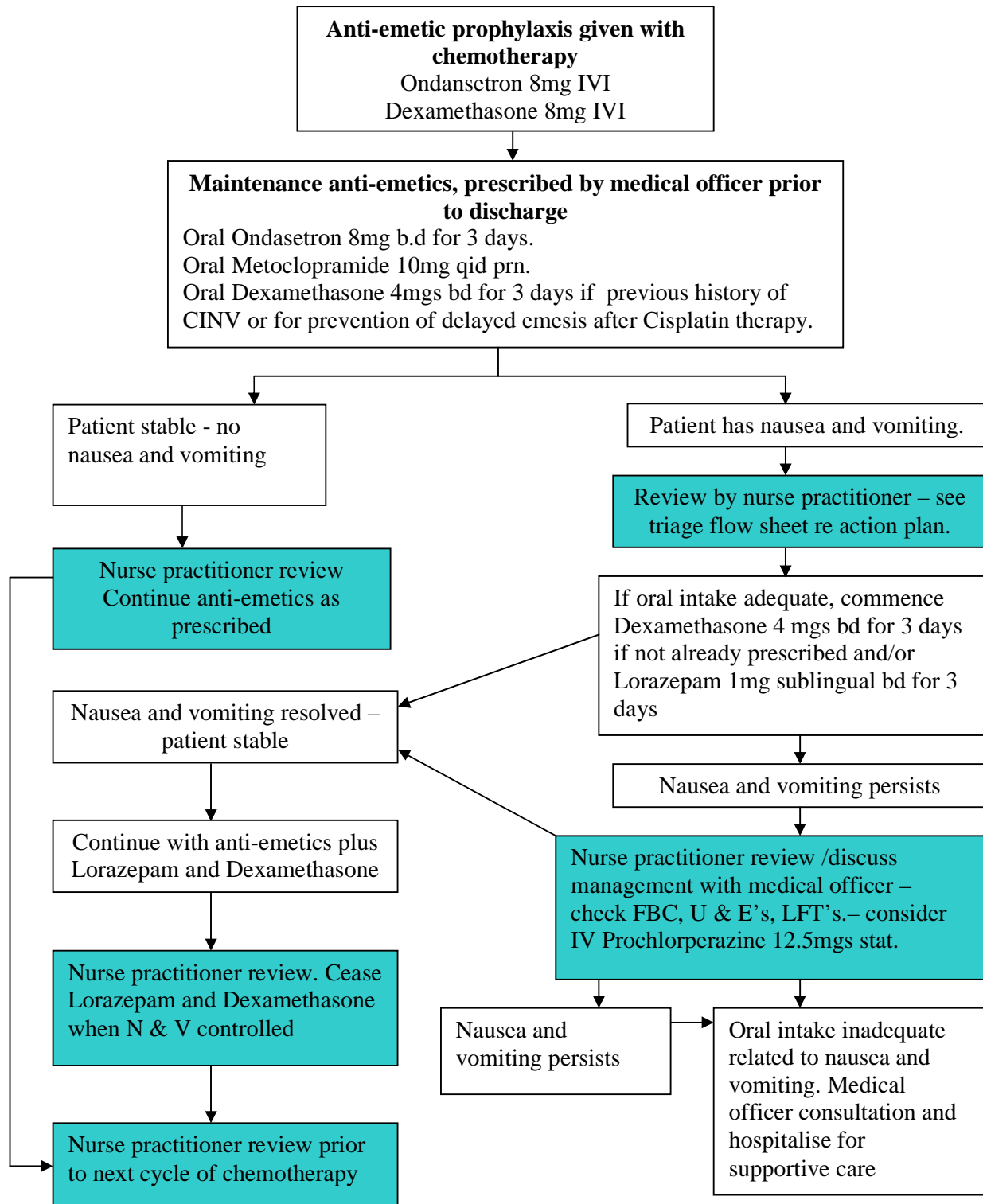
**Nurse Practitioner Nausea and Vomiting Triage Flow Chart**





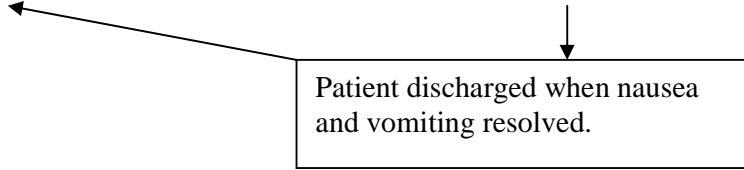
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**Nurse practitioner management of chemotherapy induced nausea and vomiting**





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## **Discharge**

Prior to discharge, pre-discharge medication review and dispensing of adequate antiemetic medication should take place in a planned and timely fashion. Adequate medication means sufficient medication to carry the patient through to the next arranged review by their General Practitioner, outpatient clinic (or some other arrangement), or complete the course of treatment (APAC Guidelines, 1998).

The Haematology Nurse Practitioner will have the legislative authority to prescribe antiemetic therapy only as stated in the approved formulary.

### **Criteria of discharge**

Patients will be discharged from the ambulatory and in-patient treatment areas following administration of the appropriate chemotherapy regimen, providing that their clinical condition is satisfactory for self management in the home environment.

### **Social supports**

The collaborative multidisciplinary haematology team will ensure that patients being discharged following chemotherapy will have adequate social support allowing them to function independently in the home environment.

### **Treatment plan**

At the commencement of chemotherapy treatment the patient and caregiver/support person will be given written information on the plan of care. This will be reinforced by oral education by members of the collaborative multidisciplinary haematology team.

### **Consumer handout**

Patients and caregiver/support persons will be given consumer handouts related to their clinical condition and the chemotherapeutic treatment proposed.



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### **Evidence base**

This clinical protocol for management of chemotherapy induced nausea and vomiting is based on the systematic identification and synthesis of the best available scientific evidence (see reference list)



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## **Review**

Establishing a follow-up plan requires ongoing monitoring of patient response to interventions both in the ambulatory and in-patient settings. The Haematology Nurse Practitioner should provide clear instructions for self-care management at home, and coordinate referrals as needed. Follow-up phone calls should be made to assess patient status and ensure compliance with the plan of care. Care givers and support persons play an important role in helping to manage patient care and should be included in all follow-up assessments and teaching. Special note should be taken of culture specific issues and incorporated into follow-up care.

Patients will be reviewed by the Nurse Practitioner in the first week post administration of the chemotherapy regimen in the nurse led post chemotherapy symptom management clinic. Progress and response to therapy will be documented in the patient medical records and the treatment plan will be reviewed in an ongoing consultative process with the patient's physician.



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### **Implementation plan**

The plan is the 'road map' used by the Nurse Practitioner implementation team to deliver the agreed health service aims and objectives to introduce the Nurse Practitioner service into haematology at SCGH. The implementation plan includes:

- Project plan – hospital based project plan commenced 2003 to introduce nurse practitioner roles. This has included the nurse practitioner clinical protocol development panel and education circulated at public forums.
- Consultation plan with relevant key stakeholders involved in the implementation of the clinical protocols.
- Quality procedures – performed within existing EQUIP framework with yearly activity reporting
- Reporting procedures - report quarterly to Hospital Executive Committee following introduction, annual report to DOH and Health Service.
- Risk management planning: SCGH will ensure that the Haematology Nurse Practitioner will have continuous access to approved medical supervision and the opportunities to maintain clinical competencies.
- The Haematology Nurse Practitioner will review patients in the Haematology Care Centre with scheduled and urgent appointments and will have the legislative authority to initiate treatment for the management of chemotherapy induced nausea and vomiting in a timely manner under the guidance of the agreed clinical protocol.



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### **Evaluation plan**

There will be a commitment by Sir Charles Gairdner Hospital to audit and evaluate the role of the Haematology Nurse Practitioner on an annual basis. The evaluation will include:

- Assessment of quality dimensions of safety
- Intended outcomes
- Effectiveness
- Appropriateness
- Consumer participation
- Access and efficiency of the service
- Audit of the utilisation of clinical protocols and subsequent patient outcomes.

The evaluation will be based on the four pillars of clinical risk management, these are:

- Clinical performance and evaluation
- Professional development and management
- Clinical risk
- Consumer value

The evaluation of the Haematology Nurse Practitioner service will include

- Ongoing monitoring and review of the service, consistent with the principles of continuous quality improvement, performance management, and local health service evaluation strategies.
- Formal evaluation of the Haematology Nurse Practitioner services, including an evaluation of the utilisation and effectiveness of the agreed clinical protocols. This evaluation will be completed one year from the commencement of the Haematology Nurse Practitioner service at SCGH.
- The evaluation report will be included in the Annual Report and forwarded to the Director General of Health, Department of Health, Government of Western Australia.



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### Reference list

Australian Medicines Handbook (2003)

Australian Pharmaceutical Advisory Council (1998). *National guidelines to achieve the continuum of quality use*

*of medicines between hospital and community.*

Bender, C. M., McDaniel, R.W., Murphy-Ende, K., Pickett, M., Rittenberg, C.N., Rogers, M.P., et al. (2002). Chemotherapy-induced nausea and vomiting. *Clinical Journal of Oncology Nursing*, 6, 94-102.

Cain, M., Leather, H., & Wilkes, J (2001) Oncology. In J. Hughes, R. Donnelly, G. James-Chatgilaou (Eds). *Clinical Pharmacy: A practical approach* (pp 406-470).

Melbourne, MacMillan Publishers, Australia Pty Ltd.

Camp-Sorrell, D. (1993). Chemotherapy: Toxicity Management. In S.L. Groenwald, M. Goodman., C.H. Yarbrow (Ed.), *Cancer Nursing: Principles and Practice* (Third Edition ed., pp. 331-365). Boston: Jones and Bartlett.

Ezzone, S., Baker, C., Rosselot, R., & Terepka, E. (1998). Music as an adjunct to antiemetic therapy. *Oncology Nursing Forum*, 1551-1556.

Grealish, I., Lomasney, A., & Whiteman, B. (2000). Foot massage: A nursing intervention to modify the distressing symptoms of pain and nausea in patients hospitalised with cancer. *Cancer Nursing*, 23, 237-243.

Marek, C. (2003). Antiemetic therapy in patients receiving cancer chemotherapy. *Oncology Nursing Forum*, 30, 259-269.

Moyer, P. (2003). New understanding of emesis pathways leading to new treatment, better control. *Oncology Times*, 25(10), 24-25.

Osaba, D., Zee, B., Pater, J., Warr, D., Latreille, J., & Kaizer, L. (1997). Determinants of post chemotherapy nausea and vomiting in patients with cancer. *Journal of Clinical Oncology*, 15, 116-123.

Paice, J.A. (1999). Symptom management. In C. Miaskowski & P. Buchsel (Eds). *Oncology nursing:*



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Nurse Practitioner Clinical Protocol for the  
Management of Chemotherapy Induced Nausea and Vomiting in the Adult Population

*Assessment and clinical care* (pp. 275-304). St. Louis, MO: Mosby.

Rhodes, V.A., Johnson, M.H., & McDaniel, R.W. (1995). Nausea, vomiting and retching:  
The management of the symptom experience. *Seminars in Oncology Nursing*, Vol 11,  
No 4 (November), 256-265.