Nutrition-related PMBs for Palliative and End-of-life Care: Adults

Background

Nutrition in Palliative Care

- Disease-related malnutrition related to any progressive disease process is associated with poor outcomes, and in some conditions independently impacts negatively upon prognosis.
- Cachexia in cancer and other chronic, progressive or incurable conditions causes fatigue, anorexia, early satiety, weakness, reduced performance status and reduced quality of life.
- Nutrition support alone does not reverse cachexia, and the emphasis in palliative care is not on active medical nutrition therapy. However, nutrition support may slow physical deterioration, enhance tolerance to other palliating interventions, enhance life quality and provide a considerable psychological benefit to patients and family who may find the *perception* of "starving to death" distressing. Additionally, such patients may have significant nutrition-relevant symptoms, requiring management by a dietitian.
- The Nutrition Care Process should be managed by a dietitian, who should perform a relevant nutrition assessment and diagnosis, and plan an appropriate nutrition intervention.
- Goals of nutrition support should change in response to the changing clinical condition of the patient and harm-benefit evaluations. The nutrition care plan should reflect this.
- Many, if not most, patients can be managed using oral intake or modified oral intake of ordinary food under the supervision of a dietitian. However, there are subsets of patients who may benefit from formal oral nutrition supplementation using commercially available products, or enteral nutrition support because this approach may alleviate troublesome symptoms and better maintain nutritional status (see Table 1).
- Where advancing disease can be predicted to compromise or completely exclude oral intake months before the pre-terminal stage occurs, advanced care planning should include the option/possibility of prophylactic feeding tube placement and enteral nutrition support (tube-feeding) in the home setting, at least for certain patient sub-groups.
- Nutritional support in palliative care should be attentive to ethical principles, patient/family expressed desires and advance directives.
- Parenteral Nutrition support is, with very rare exceptions, futile and contraindicated and should not be considered PMB level of care in this patient group.

Nutrition in End-of-life Care

- At this stage of care nutrition support becomes significantly less important, may no longer be benign and may worsen symptoms placing added burdens on carers/nursing staff, as well as the patient.
- New initiation of oral supplementation or enteral nutrition is not indicated during end-of-life care. There may be selected, unusual cases where enteral nutrition already commenced in previous stages of illness might simply be continued at low levels until death (e.g. motor neurone disease, severe stroke etc) where there is no specific clinical or ethical indication for withdrawal.

- It is inappropriate to initiate parenteral nutrition support at end-of-life. Parenteral nutrition already in place when active dying commences should be withdrawn in concert with the withdrawal of other active treatment measures.

Table 1: Out-of-hospital Nutrition PMBs for Palliative and End-of-life care

	During Palliative Care Journey								
	Cancers		Dementia	Neurological Disease	Heart Disease	Respiratory Disease	Kidney Disease	Liver Disease	HIV/AIDS and/or TB
Nutrition Support PMB	**Oral intake possible** **Oral Nutrition supplements for patients with:** Disease-related malnutrition together with anorexia, early satiety, or symptoms reducing oral intake despite dietary management by dietitian	**Oral intake not possible** **Enteral Nutrition for selected patient subgroup:** Head and neck CA with severe dysphagia, oesophageal obstruction or tracheo-oesophageal fistula (via nasogastric, pharyngostomy or PEG/PIG/PEJ tube per care plan)	Consultation with dietitian only (see below).	**Enteral Nutrition for selected patient subgroup:** Progressive neurological disease or severe stroke with severe dysphagia (via nasogastric, pharyngostomy or PEG/PIG/PEJ tube per care plan)	**Oral Nutrition supplements for patients with:** Disease-related malnutrition together with significant meal-related dyspnoea and distress negatively impacting on oral intake	**Oral Nutrition supplements for patients with:** Disease-related malnutrition together with significant meal-related dyspnoea and distress negatively impacting on oral intake.	**Oral Nutrition Supplementation for:** Patients with disease-related malnutrition who cannot maintain adequate nutritional status within the context of necessary fluid, protein and electrolyte restrictions or uraemic symptoms	**Oral Nutrition Supplementation for patients with:** Disease-related malnutrition together with metabolic disturbances, anorexia, early satiety, or other symptoms reducing oral intake despite dietary management by dietitian	**Oral Nutrition Supplementation for patients with:** Disease-related malnutrition together with anorexia, early satiety, or symptoms reducing oral intake despite dietary management by dietitian

Nutrition Products to be provided as part of PMB **NOTE for all:** **1. For In- or Out-of-hospital use** **2. Product choice will depend on GIT and other associated symptoms**	Typically, 2-3 units*per day of: A fat-free, high energy sip feed OR A high energy or energy dense sip feed (with or without fibre) OR A high energy or energy dense, moderate or high protein sip feed OR A semi-elemental sip drink OR other product as prescribed for specific indications (such as glucose control, gastrointestinal symptoms or other organ dysfunction) by a dietitian OR An equivalent powdered nutritionally complete medical nutrition supplement (food for special	Typically 1-2 litres per day of: A standard lactose-free enteral feed (with or without fibre) OR A high energy enteral feed (with or without fibre) OR A high energy or energy dense, moderate or high protein enteral feed (with or without fibre) OR An immune-modulatory feed OR A feed for oncology patients OR other product as prescribed for specific indications (such as glucose control, gastrointestinal symptoms or other organ dysfunction) by a dietitian OR An equivalent powdered nutritionally	None	Typically 1-2 litres per day of: A standard, lactose free enteral feed (with or without fibre) OR A high energy enteral feed (with or without fibre) OR A high energy or energy dense, moderate or high protein enteral feed (with or without fibre) OR other product as prescribed for specific indications (such as glucose control, gastrointestinal symptoms or other organ dysfunction) by a dietitian OR An equivalent powdered nutritionally complete medical nutrition supplement (food for special medical purposes)# **Costs (incl VAT)** Approximately R110-200 per litre for enteral feed Approximately R100 per day for enteral feed giving set. Enteral feeds can be administered using a gravity set or via pump. Enteral feeding pump cost (out-of-hospital) rental	Typically, 2-3 units* per day of: A fat-free, high energy sip feed OR A high energy or energy dense sip feed (with or without fibre) OR A high, energy, moderate or high protein sip feed OR A low electrolyte sip feed OR other product as prescribed for specific indications (such as glucose control, gastrointestinal symptoms or other organ dysfunction) by a dietitian OR An equivalent powdered nutritionally complete medical nutrition supplement (food for special medical purposes)# **Costs (incl VAT)** Approximately R25-65 per unit depending on specific product used	Typically, 2-3 units* per day of: A high fat, high energy sip feed OR A high protein sip feed (with or without fibre) OR A low electrolyte sip feed OR other product as prescribed for specific indications (such as glucose control, gastrointestinal symptoms or other organ dysfunction) by a dietitian OR An equivalent powdered nutritionally complete medical nutrition supplement (food for special medical purposes)# **Costs (incl VAT)** Approximately R25-65 per unit depending on specific product used	Typically, 2-3 units* per day of: A high energy or energy dense sip feed (with or without fibre) OR A low electrolyte. low mineral sip feed OR A protein-restricted sip feed OR other product as prescribed for specific indications (such as glucose control, gastrointestinal symptoms or other organ dysfunction) by a dietitian OR An equivalent powdered nutritionally complete medical nutrition supplement (food for special medical purposes)# **Costs (incl VAT)** Approximately R25-65 per unit depending on specific product used	Typically, 2-3 units* per day of: A fat-free, high energy sip feed OR A high energy or energy dense sip feed OR A high energy, moderate or high protein sip feed (with or without fibre) OR A low electrolyte sip feed OR A semi-elemental sip drink OR other product as prescribed for specific indications (such as glucose control, gastrointestinal symptoms or other organ dysfunction) by a dietitian OR An equivalent powdered nutritionally complete medical nutrition supplement (food for special medical purposes)# **Costs (incl VAT)** Approximately R25-65 per unit depending on specific product	Typically, 2-3 units* per day of: A fat-free, high energy sip feed OR A high energy or energy dense sip feed (with or without fibre) OR A high energy, moderate or high protein sip feed OR A semi-elemental sip drink OR other product as prescribed for specific indications (such as glucose control, gastrointestinal symptoms or other organ dysfunction) by a dietitian OR An equivalent powdered nutritionally complete medical nutrition supplement (food for special medical purposes)# **Costs (incl VAT)** Approximately R25-65 per unit depending on specific product

	medical purposes)# AND An L-glutamine supplement may be added to any abovementioned product **Costs (incl VAT)** Approximately R25-65 per unit depending on specific product used	complete medical nutrition supplement (food for special medical purposes)# AND An L-glutamine supplement may be added to any abovementioned product **Costs (incl VAT)** Approximately R110-200 per litre for enteral feed Approximately R100 per day for enteral feed giving set Enteral feeds can be administered using a gravity set or via pump. Enteral feeding pump cost (out-of-hospital) rental R35/day		R35/day				used	used
* a unit is equivalent to 1 ready-to-drink pack or 125-250ml of equivalent reconsitituted powdered product delivering similar nutritional value									
PMB Out-patient and follow-up consults with dietitian	1-2 per month (management of nutrition support, review for continued indication for and risk-benefit assessment of nutrition support and symptom management, and to provide relevant information to global care plan)	3-monthly (up to 4 visits per year) for the purpose of symptom management, nutritional status assessment and carer	1-2 per month (management of nutrition support, review for continued indication for and risk-benefit assessment of nutrition support and symptom management, and to	1-2 per month (management of nutrition support, review for continued indication for and risk-benefit assessment of nutrition support and symptom	1-2 per month (review for (management of nutrition support, review for continued indication for and risk-benefit assessment of nutrition support and symptom	1-2 per month (management of nutrition support, review for continued indication for and risk-benefit assessment of nutrition support and	1-2 per month (management of nutrition support, review for continued indication for and risk-benefit assessment of nutrition support and symptom	1-2 per month (management of nutrition support, review for continued indication for and risk-benefit assessment of nutrition support

		support/education (protected mealtimes, food enrichment, consistency modification, hydration etc)	provide relevant information to global care plan)	management, and to provide relevant information to global care plan)	management, and to provide relevant information to global care plan)	symptom management, and to provide relevant information to global care plan)	management, and to provide relevant information to global care plan)	and symptom management, and to provide relevant information to global care plan)
End-of-life Care								
Nutrition Support PMB	On a case basis, enteral nutrition (tube-feeding) *already previously in place* may be continued until the end of life according to patient wishes and symptoms	None	On a case basis, enteral nutrition (tube-feeding) *already previously in place* may be continued until the end of life according to patient wishes and symptoms	None	None	None	None	None
Nutrition Products to be provided as part of PMB	None, unless above applies to selected cases	None	None, unless above applies to selected cases	None	None	None	None	None
PMB out-patient consults with dietitian	1	None	1	1				

where commercial, ready-to-use sip or enteral feeds are substituted for powdered commercial oral supplements, it is essential that the powdered substitute be a nutritionally complete medical nutrition supplement (food for special medical purposes or food for special dietary purposes) containing a full range of micronutrients prescribed by a dietitian.