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

| | medical | complete medical | | R35/day | | | | used | used |
|-------------------|-------------------------------------|----------------------|-----------------------|------------------------------|-------------------------------|---------------------------|-----------------------|--------------------------|----------------------|
| | purposes)# | nutrition | | | | | | | |
| | AND | supplement (food | | | | | | | |
| | An L-glutamine | for special | | | | | | | |
| | supplement may | medical | | | | | | | |
| | be added to any | purposes)# | | | | | | | |
| | abovementioned | AND | | | | | | | |
| | product | An L-glutamine | | | | | | | |
| | Costs (incl | supplement may | | | | | | | |
| | VAT) | be added to any | | | | | | | |
| | Approximately | abovementioned | | | | | | | |
| | R25-65 per unit | product | | | | | | | |
| | depending on | Costs (incl VAT) | | | | | | | |
| | specific product | Approximately | | | | | | | |
| | used | R110-200 per | | | | | | | |
| | uscu | 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 | | | | | | | |
| * a unit is equiv | valent to 1 ready-to | , | 0ml of equivalent rec | onsitituted powdered product | delivering similar nutritiona | l value | | | |
| a arm to oqui | valorit to 1 roady to | annik paok or 120 20 | om or oquivalone roo | onomicatou porraorou product | donvoring chrimai mathaona | · value | | | |
| PMB Out- | 1-2 per | month | 3-monthly (up to | 1-2 per month | 1-2 per month | 1-2 per month | 1-2 per month | 1-2 per month | 1-2 per month |
| patient | (management of nutrition support, | | 4 visits per year) | (management of nutrition | (management of | (review for | (management of | (management of | (management of |
| and | review for continued indication for | | for the purpose of | support, review for | nutrition support, | (management of | nutrition support, | nutrition support, | nutrition support, |
| follow-up | and risk-benefit assessment of | | symptom | continued indication for | review for continued | nutrition support, review | review for continued | review for continued | review for continued |
| consults | nutrition support and symptom | | management, | and risk-benefit | indication for and risk- | for continued indication | indication for and | indication for and risk- | indication for and |
| with | management, and to provide relevant | | nutritional status | assessment of nutrition | benefit assessment of | for and risk-benefit | risk-benefit | benefit assessment of | risk-benefit |
| dietitian | information to global care plan) | | assessment and | support and symptom | nutrition support and | assessment of nutrition | assessment of | nutrition support and | assessment of |
| | j , | | carer | management, and to | symptom | support and symptom | nutrition support and | symptom | nutrition support |

| | | support/education (protected mealtimes, food enrichment, consistency modification, | 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) |
|---|--|---|--|---|---|--|---|--|
| | | hydration etc) | | | | | | |
| | | • | E | nd-of-life Care | | ı | ı | |
| Nutrition Support PMB | On a case basis, enteral nutrition (tube-feeding) <u>already previously in place</u> may be continued until the end of life according to patient wishes and symptoms | None | On a case basis, enteral nutrition (tube-feeding) <u>already previously in place</u> may be continued until the end of life according to patient wishes and symptoms | | 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.