Supplementary Data

For Age and Ageing paper *A foodservice approach to enhance energy intake of elderly subacute patients: A pilot study to assess impact on patient outcomes and cost.*

**Supplementary data Table 1 - Example of a standard and higher energy intervention hospital menu**

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| --- | --- | --- | --- | --- | --- | --- |
| **Meal** | **Standard menu (control)** | **Energy (kJ)** | **Protein (g)** | **Higher energy menu (intervention)** | **Energy (kJ)** | **Protein (g)** |
| Breakfast | CerealLow fat milk 1 x toast + margarine + jamTea or coffee  | 480290350450- | 363-- | Cereal Full cream milk2 x pikelets + margarine + jam2 x juice | 480410460450420 | 353-- |
| Morning tea | 2 sweet biscuits Tea or coffee  | 390- | 1- | Muffin/sHot chocolate | 800440 | 22 |
| Lunch | Soup of the day Sandwich of the dayDaily dessert Tea or coffee | 3001200700- | 3204- | Soup of the dayChef’s selection hot mealDaily dessertTea or coffee | 3001500700- | 3344- |
| Afternoon tea | Cheese and biscuitsTea or coffee | 440- | 5- | CakeHot chocolate | 900440 | 32 |
| Dinner | Chef’s selection hot mealDaily dessertTea or coffee | 1500700- | 344- | Chef’s selection hot mealDaily dessertTea or coffee | 1500700 - | 344- |
| Supper | Fruit cakeTea or coffee | 650- | 2- | 2 chocolate biscuitsFlavoured milk | 810820 | -10 |
| Daily total  |  | 7450 | 85 |  | 11130 | 109 |

The default menu options provided when patients have not made their own selection are displayed for breakfast, lunch and dinner. An anticipated selection of food and drink items are discplayed for morning tea, afternoon tea and supper.



**Supplementary data Figure 1 - Recruitment and retention of study participants**

HGS, hand grip strength; D/C, discharged; G/C, group change; W/D, withdrawn; I/C, significantly impaired cognition; NESB, Non-English speaking background

n=2 participants who were recruited went on to receive a combination of enteral and oral nutrition and were excluded

In total n=12 failed to complete the study by day 14 due to group change (n=4 intervention, n=4 control) or withdrawal (n=3 intervention, n=1 control).

A further 12 participants failed to complete the study before discharge after day 14 due to group change (n=3 intervention, n=3 control) or withdrawal (n=3 intervention, n=3 control).

On average (median), admission data for weight and HGS were collected on day 2 of admission and day 14 data for weight, HGS, plate waste and satisfaction were collected on the designated day.

**Supplementary data Table 2 - Comparison of demographic characteristics and outcome data at admission between intervention and control participants remaining in the pilot at day 14 of admission.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Characteristic** | **Control****n=39** | **Intervention****n=32** | **p value** |
| Age (years), median (IQR)  |  | 82 (78 – 87) | 86 (82 – 91) | 0.036 |
| Male, n (%) |  | 21 (53.8) | 15 (46.9) | 0.559 |
| Cognitive impairment, n (%) |  | 19 (48.7) | 16 (50.0) | 0.914 |
| Birthplace, n (%) | AustraliaOther | 21 (53.8)18 (46.2) | 20 (62.5)12 (37.5) | 0.463 |
| Language, n (%) | English Other | 33 (84.6)6 (15.4) | 32 (100.0) |  |
| Primary diagnosis, n (%) | Stroke/neurology OrthopaedicFunctional/cognitive declineOncologyAmputationRespiratory CardiologyGI/HepaticOther | 1 (2.6)14 (35.9)9 (23.1)1 (2.6)4 (10.3)2 (5.1)3 (7.7)5 (12.8) | 1 (4.3)11 (47.8)8 (34.8)2 (8.7)3 (13.0)2 (8.7)3 (13.0)2 (8.7) |  |
| Diet code, n (%) | Full ward dietSoftDiabetic | 21 (53.8)2 (5.1)16 (41.0) | 25 (78.1)2 (6.3)5 (15.6) |  |
| Nutritional status at admission, n (%) | Well nourishedMild/moderate malnutritionSevere malnutrition | 23 (59.0)12 (30.8)4 (10.3) | 20 (62.5)10 (31.3)2 (6.3) |  |
| FIM score at admission, mean (SD)  | 72 (19) | 69 (14) | 0.507 |
| HGS (kg) at admission, mean (SD) a  | 37.1 (17.4) | 34.9 (14.9) | 0.583 |
| Weight (kg) at admission, median (IQR) b | 71.15 (56.40-79.30 | 57.50 (57.50-68.85) | 0.005 |
| Well nourished, SGA=A,MST<2; mild/moderate malnutrition, SGA=B; severe malnutrition, SGA=C; FIM, Functional Independence Measure. a sample size n=38 control group, n=31 intervention groupb sample size n=37 control group, n=31 intervention group  |

**Supplementary data - Participants’ selection of intervention menu items**

At breakfast, 20 participants received pikelets (7 males, 12 females) and five received an omelette (2 males, 3 females). At morning tea muffins were the most popular (4 males, 5 females), followed by hot chocolate (2 males, 4 females), full cream yoghurt (2 males, 3 females) and cheese and biscuits x 2 (3 males, 1 female). At afternoon tea the items received were: cake (2 males, 5 females), hot chocolate (3 males, 2 females), cheese and biscuits x 2 (3 males, 2 females) and full cream yoghurt (1 male, 1 female). At supper 21/31 participants chose nothing from the menu while the remaining participants selected chocolate biscuits (1 male, 3 females), hot chocolate (3 females), mousse (1 male, 1 female) and yoghurt (1 male). Juice (n=3) and flavoured milk (n=3) were selected infrequently during the day. At breakfast seven participants requested toast and across all mid meals 21 participants received tea, coffee or milo despite these items not being included in the intervention menu.

**Supplementary data Table 3 - Linear regression model of factors predicting length of stay and change in Functional Independence Measure (FIM) during subacute care (n=95)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **B** | **SE** | **p value** |
| **Model 1 – Length of stay (days)**  |
| Group | 1.682 | 2.873 | 0.560 |
| Age (years)  | 0.298 | 0.140 | 0.036 |
| FIM score at admission  | -0.090 | 0.081 | 0.267 |
| Change in FIM score between admission and discharge | 0.221 | 0.107 | 0.042 |
| Impaired cognition  | 1.144 | 2.896 | 0.694 |
| **Model 2 – Change in FIM score between admission and discharge** |
| Group | 1.596 | 2.779 | 0.567 |
| Age (years)  | -0.006 | 0.139 | 0.963 |
| Length of stay (days)  | 0.207 | 0.100 | 0.042 |
| FIM score at admission | -0.124 | 0.078 | 0.114 |
| Impaired cognition | 0.626 | 2.803 | 0.824 |
| Model 1:R2=0.134, adjusted R2=0.086, SEE=13.844Model 2: R2=0.098, adjusted R2=0.047, SEE=13.391 Group, intervention (code 1) or control (code 0); FIM, functional independence measure; Impaired cognition, yes (code 1) or no (code 0); B, regression coefficient; SE, standard error of B; SEE, standard error of the estimate |