

had significantly more practice visits than individuals with a BMI 20.0 to  $\leq 24.9$  kg/m<sup>2</sup> (8.5 vs 8.3 visits respectively  $p=0.022$  Mann–Whitney U). Similar results were seen for hospital admissions, with a significantly greater proportion of individuals with a BMI  $\leq 19.9$  kg/m<sup>2</sup> being admitted to hospital (Abstract OC-038 table 1). Compared to individuals with a BMI 20.0 to  $\leq 24.9$  kg/m<sup>2</sup>, mean GP contact costs per person per year were increased by £29.54 and admissions by £34.62 per year.<sup>5</sup>

Abstract OC-038 Table 1

		1. BMI $\leq 19.9$ kg/m <sup>2</sup> (n2632)	2. BMI 20 to $\leq 24.9$ kg/m <sup>2</sup> (n2632)	p Value
Home visits	% $\geq 1$	11.4	7.4	0.000*
Out of hours visits	% $\geq 1$	4.8	3.4	0.006*
Telephone consultations	% $\geq 1$	50.6	46.2	0.001*
Hospital admissions	% $\geq 1$	4.6	3.6	0.026*

(Significance: \* $\chi^2$ ).

**Conclusion** This study using data from THIN shows that individuals registered with their GP, with a low BMI ( $\leq 19.9$  kg/m<sup>2</sup>) use significantly more healthcare resources than those with a normal BMI (20.0 to  $\leq 24.9$  kg/m<sup>2</sup>). The contribution of disease types and severity, social and nutrition-related factors needs to be further evaluated.

**Competing interests** K Ashman Employee of: Nutricia, A Cawood Employee of: Nutricia, R Stratton Employee of: Nutricia.

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#### OC-039 ORAL NUTRITIONAL SUPPLEMENTS ARE COST EFFECTIVE IN IMPROVING QUALITY ADJUSTED LIFE YEARS IN MALNOURISHED CARE HOME RESIDENTS

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E L Parsons,\* R J Stratton, J M Jackson, M Elia. *Institute of Human Nutrition, University of Southampton, Southampton, UK*

**Introduction** Malnutrition has a detrimental effect on quality of life (QOL) but the extent to which nutrition support can improve QOL in a cost effective manner is unclear. This study aimed to examine whether oral nutritional supplements are cost effective in improving quality adjusted life years (QALY's) (an index of quality and quantity of life) in malnourished care home residents.

**Methods** A randomised controlled trial (RCT) of 104 malnourished residents (medium + high risk according to Malnutrition Universal Screening Tool ("MUST")) (mean age 88.3 $\pm$ 7.7 y, 86% female) in residential and nursing homes in Hampshire received either oral nutritional supplements (ONS) with guidance on how to use them (Nutricia range; mean intake 333 $\pm$ 237 kcal/d; n=53) or written and verbal dietary advice (DA) for 12 weeks. QALY's were calculated using quality of life, measured with EuroQol Time Trade Off (EQ-5D TTO) and information on mortality. Expenditure on healthcare use (healthcare professional visits and hospital admissions (for the 3 months prior to and during the RCT)) and the interventions were calculated using unit costs.<sup>1 2</sup> The expenditure and QALY's were used to establish the Incremental Cost Effectiveness Ratio (ICER).

**Results** QALY TTO was significantly higher in the ONS group than the DA group (0.14 $\pm$ 0.04 vs 0.12 $\pm$ 0.03,  $p=0.023$ , total n=70). Total expenditure was greater in the ONS group than the DA group

(ONS: £375.70 $\pm$ 213.78, DA: £173.85 $\pm$ 240.15,  $p<0.0001$ ) due to the cost of the intervention (ONS: £173.71 $\pm$ 126.06, DA: £39.75 $\pm$ 32.25,  $p<0.0001$ ). Healthcare use costs were not significantly different between groups (ONS: £153.62 $\pm$ 208.44, DA: £127.27 $\pm$ 250.03,  $p=0.639$ ). The mean ICER (cost/QALY TTO) was £10 698 (95% CI £3793 to £76 932), which is well below the typically considered threshold of £25 000/QALY indicative of cost effectiveness.

**Conclusion** This RCT indicates that compared to simple dietary advice, oral nutritional supplements are cost effective in improving the quality adjusted life years of malnourished care home residents.

**Competing interests** None declared.

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#### OC-040 REGULAR NUTRITIONAL BLOOD TEST MONITORING IN CHILDREN ON HOME ENTERAL TUBE FEEDING—IS THIS NECESSARY?

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<sup>1</sup>Y Lim,\* <sup>1</sup>C Paxton, <sup>2</sup>D Wilson. <sup>1</sup>Paediatric Gastroenterology and Nutrition, NHS Lothian; <sup>2</sup>Child Health and Life, University of Edinburgh, Edinburgh, UK

**Introduction** The use of home enteral tube feeding (HETF) in children with chronic illness is increasing. 6-monthly nutritional blood test monitoring (NBTM) while on HETF is recommended by BAPEN for adults; there is minimal evidence to inform guidelines regarding the biochemical monitoring of children on long-term HETF.

**Aim** To provide evidence for or against the practice of 6-monthly NBTM in children receiving HETF.

**Methods** We performed a retrospective review of all children age <18 years, who were started on HETF from 01 January 2005 to 30 June 2010 by the nutrition support team (NST) in the Royal Hospital for Sick Children, Edinburgh. Patients who received <2 months of HETF, or failed to receive more than one set of NBTM within the 1st year of starting HETF were excluded. Comparison of baseline NBTM results with results at 6–12 months after the start of HETF were made. Our NBTM profile includes full blood count, renal profile, bone profile, liver function tests, folate, ferritin, vitamin B<sub>12</sub>, fat-soluble vitamins and trace elements (Se, Cu, Zn).

**Results** 42 children were included in the study; none developed refeeding syndrome. 37 (88%) had NBTM performed within 6 months of commencing HETF, 19 (45%) at 6 months after commencing HETF, and 21 (50%) at 1 year after commencing HETF. Significant abnormal parameters identified prior to commencing HETF included low Hb levels (32%), low ferritin levels (31%) and low folate levels (25%). Small groups of between 8% and 10% had low levels of trace elements (Se and Cu) and vitamin D levels. At 6 months and 1 year after start of HETF, there was a small increase of children with low Hb levels (40%) but an improvement in those with low ferritin (14%) and low folate levels (6%). 4% of the study had low vitamin D, and/or trace element (Zn, Cu, Se) levels. There were no toxic levels of vitamins or trace elements within 12 months of start of HETF. Trend comparison was performed in 25 children who had NBTM both before and within a year of commencing HETF. None of the children developed toxic levels of trace elements, one child developed high trace element levels (Se) and another continued to have high Se levels after starting HETF. None of the children developed toxic or high levels of fat soluble vitamins. There were no worryingly low micronutrient levels in any of the 25 children after the start of HETF.