Reviewer’s report

Title: Targeted Full Energy and Protein Delivery in Critically Ill Patients: A study protocol for a pilot randomised control trial (FEED Trial)

Version: 0 Date: 02 Nov 2017

Reviewer: Liesl Wandrag

Reviewer's report:

This is an excellent protocol, well-written and well thought through. This study should help to answer some important questions for nutrition provision in the critically ill. I only have some minor comments, which the authors may wish to ignore if they do not feel it is relevant.

Background:

Line 67, first paragraph, last sentence ....'(1.5g/kg/d) was associated with a reduction in mortality....' would need to be referenced.

Line 91-93. Sentence absolutely fine as it is, or you could consider writing: '…to quantify starting muscle mass and characterise muscle loss in the critically ill.'

Line 115, typo: 'including a of lack' should be including a lack of...

Baseline data collection:

Line 172, 'baseline measures to reflect status of patient at or prior to randomisation'. My question relates to the Katz Index: do you ask a proxy to complete this for pre-ICU admission? Or if interested at the point of randomisation I imagine the score will always be zero as the Katz Index has a substantial floor effect?

Would the investigator performing the SGA be trained in the technique?

Would the independent dietitian be using predictive equations, if so which one(s)?

Table 3 data collection: We used some similar outcome measures in a fairly recent study (publication in progress). Our planned outcome measures (including muscle ultrasound) around the day 14 mark were minimal, N=17 from 80 recruited patients due to deaths/discharges/drop-outs. If you haven't started your data collection yet, could some of your time points be brought forward, e.g. days 1, 5, 7, 10 or as per Puthucheary et al (JAMA) days 1, 7, 10 whilst still
keeping the ICU discharge time point? For our study mean ICU LOS was much lower than anticipated, 5 days. Please ignore this comment if already recruiting.

Standard Care group:

Line 205, this is just a point of interest. Why would one of your feeds be sourced from China and the other the Netherlands if both are from Nutricia?

Primary Outcomes:

Line 279, do you use citrate regional anti-coagulation in CRRT at all? If you do then calorie contribution from the citrate would have to be incorporated too.

Secondary outcomes:

Would it be worth adding plasma urea as an outcome measure, particularly as one of the groups will be receiving a higher protein dose? The recent EAT-ICU study incorporated this outcome measure (including reducing protein load if plasma urea > 20mmol/L.)

With your muscle ultrasound protocol, would it be worth stating what you would do to ensure that the exact same landmark on the leg is measured for repeated measures of each patient? We used permanent marker and Tegaderm to ensure that we measure over the exact same place and that our markers weren't washed off in-between measurement days. Will you be reporting intra-rater reliability for the investigator using the muscle ultrasound technique?

Power calculation and randomisation

If your study is powered for 29 participants per group, would it be best to recruit and randomise more than 60 patients in order to account for deaths, drop outs etc?

I look forward to reading about the study in future!

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An article of importance in its field
Quality of written English
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Acceptable

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