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**Disclosure of Interest:** None declared

#### LB-091

### ARE NURSING HOME RESIDENTS ON ENTERAL FEEDING IN NORTH DUBLIN RECEIVING ADEQUATE VITAMIN D DURING THE COVID-19 PANDEMIC?

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**Rationale:** Vitamin D may be protective during the Covid-19 pandemic<sup>1</sup> but levels in the Irish population are typically low<sup>2</sup>. Daily supplementation of 20µg Vitamin D is recommended<sup>3</sup>. Our aim was to assess if vitamin D content in enteral feeding regimens of nursing home residents were adequate.

**Methods:** Vitamin D intake were assessed by calculating the content of enteral feeding regimens and additional vitamin D supplements prescribed. It was not feasible to measure serum vitamin D levels.

**Results:** Forty-two tube fed residents were reviewed. Average age 58 years (range 25–94 years), 52% male, average duration on enteral feeding 46 months (range 1–102 months). Less than half (43%) ate oral diet. Enteral feeding provided average 18.7µg daily (range 6.2–50µg), 3 residents received <10 µg/d and 14 receiving >20 µg/d. There was no significant difference in intakes between those on oral diet or nil per oral (18.6µg versus 18.9µg). Eleven residents (26%), were taking additional vitamin D supplements.

**Conclusion:** The majority of nursing home residents on longterm tube feeding reviewed were receiving adequate intakes of vitamin D. Enteral feeding provides a reliable source of vitamin D in comparison to usual dietary intakes of nursing home residents. The vitamin D content of the enteral feeding regimen should be discussed with the dietitian before additional supplements are prescribed to avoid excessive intakes. Specific recommendations on vitamin D requirements for adults on tube feeding, particularly in residential settings are required.

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#### LB-092

### ASSOCIATION BETWEEN VITAMIN-D AND ANEMIA IN WOMEN AT REPRODUCTIVE AGE IN TURKEY. A CASE-CONTROL STUDY TO EXAMINE THE RELATIONSHIP

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**Rationale:** The prevalence of anemia among reproductive women is around 33% according to WHO study.(1) Deficiency of vitamin D as an essential prohormone nutrient is a public health issue with emerging rates of prevalence worldwide. It is estimated that %50 of population is suffering from insufficiency and deficiency.(2) Although the exact mechanism not understood, various studies focused on links between anemia and vitamin D status where findings indicate a positive correlation between vitamin D and erythroid precursors in the bone marrow. Literature review of anemia and vit-D status in various countries with different UV-radiation exposures offered that there might be an association between Vit-D levels and

anemia. This finding grounds our study to explore any mutual associations between these two conditions.

**Methods:** A case-control study was conducted(n=70). The study group(n=26) took vit-d supplements, and a control group (n=44). Cases were randomly selected from GP registers. 25-hydroxy vitamin D serum levels and hemoglobin levels were compared between groups. Descriptive analysis, Independent t-tests and yates corrected Chi-square test were used to analyze the data. Reference range for Serum vitamin-d levels were taken from Espen Guidelines as deficient (<25 ng/ml) and insufficient <50 ng/ml.

**Results:** The study includes women between (18–45y.o) with average of 28,4±7,2. 37,1% took vit-d3 supplements and 48,6% had anemia(Hgb<120g/L). Serum 25-Hydroxy-vitamin D levels of cases were 21,4% deficient and 32,9% were insufficient,(p>0,05). The difference between anemia and vitamin D levels amongst the cases who took Vitamin D-3 supplements, was statistically significant. 34,6% of subjects taking Vit-d3 supplements were anemic while 65,4% were normal. According to this, the frequency of having normal serum hemoglobin and 25-Hydroxy-vitamin D was higher among the cases who took Vit-D3 supplements.

**Conclusion:** Despite the limitations of the study, the difference regarding anemia frequency between the subjects took vit-D3 supplements and controls was 22,2%. This sole finding cannot suggest whether the association is due to developed anemia or vitamin-D insufficiency but suggests further studies focused on the topic ought to be conducted.

**References:** 1-Worldwide prevalence of Anemia(WHO 2008) 2-<https://doi.org/10.4103/0976-500X.95506>

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#### LB-093

### MULTIPLE MICRONUTRIENT DEFICIENCIES IN PREGNANCY

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**Rationale:** Many studies have focussed on maternal anaemia and iron deficiency and limited studies are available on multiple micronutrient deficiencies and the factors associated with them.

**Methods:** A community based nationally representative cross-sectional study was conducted in Sri Lanka, during August to December 2015. 100 clusters (antenatal clinics) were selected using PPS technique and 10 pregnant women were randomly selected from each cluster. Interviewer administered questionnaire was used collect the relevant information. Serum ferritin, vitamin A and urine iodine levels were estimated. Serum ferritin, vitamin A and iodine levels less than 15 µg/dl, 20 µg/dl, and 150 µg/dl respectively, were considered as indicative of deficiency for respective micronutrients. Ministry of health provided iron, folate and calcium supplements for all pregnant women (PW) freely. Supplementation coverage is over 90%.

**Results:** A total of 957 PW was recruited. The prevalence of iron, vitamin A and iodine deficiency was 14.1% (CI 11.9–16.3), 3.3% (CI 2.3–4.5) and 46.9% (CI 44.0–50.4) respectively. The concurrent prevalence of two micronutrient deficiency was of vitamin A and iron ( 0.7 %); vitamin A and iodine (1.2%), iron and iodine (6.1%). No PW was found to have concomitant deficiencies of all the three micronutrients.

**Conclusion:** There is a high prevalence of iodine deficiency and low prevalence of concurrent micronutrient deficiencies among PWs in Sri Lanka, despite with the universal iodisation programme. It is recommended to review supplementation programmes to benefit PWs. Since micronutrient deficiencies can affect maternal morbidity and mortality, and are also essential for foetal development, it is difficult to separate the effect of a deficiency between mother and child. Therefore need an urgent attention.

**References:** 1.Adair LS & Pollit E (1985). Outcome of maternal nutritional supplementation: a comprehensive review of the Bacon-Chow study. *American Journal of Clinical Nutrition* 41,948–978. Allen LH (2000b).

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