COVID-19 Taskforce Monthly Statement

April 2022

Since its inception, NNEdPro's COVID-19 Taskforce has worked to improve health during the COVID-19 pandemic, by focusing on nutrition research, clinical practice and public health. As a global organisation, our dedicated microsites contain a repository of generic and region specific public health resources to highlight up-to-date policy and practice across our regional networks(1). Additionally, the taskforce has identified areas for research and evidence synthesis relating to the nutritional aspects of COVID-19 prevention and treatment, including issues of food and nutrition security(2). Our aim has been to coordinate and share resources with NNEdPro's global and regional networks, and the public, to highlight key challenges, policy updates and best guidance on good nutrition and health practices in the context of COVID-19.

Public Health Updates

This month, the UK government have published updated guidance on living safely with respiratory conditions including COVID-19 (3). A COVID-19 rapid guideline has been published by NICE, outlining the management of the long-term effects of COVID-19 (4). The European Medicines Agency (EMA) has also updated their COVID-19 page and released new guidelines describing COVID-19 vaccine safety, authorised vaccines and authorised treatments (5-8). Firstly, the EMA published clinical data for the COVID-19 vaccine Janssen, supporting the use of a booster dose of the vaccine (5). The EMA started evaluating an application to extend the use of Novavax's COVID-19 vaccine, Nuvaxovid, to adolescents aged 12 to 17. EMA's CHMP also approved changes to increase manufacturing capacity of Comirnaty, and to extend the vaccine's shelf life. EMA recommends the authorisation of booster doses of Comirnaty from 12 years of age (7). Additionally, the European Commission has authorised the COVID-19 treatment Evusheld (8). Research continues into the long-lasting effects of COVID-19, where a recent qualitative study investigated the safety implications resulting from remotely assessing suspected COVID-19 patients in the UK (9).

Nutrition highlights

The literature examining the links between COVID-19 and nutritional status continues to grow and this month we have added resources on clinical nutrition, telemedicine, food security and micronutrients.

Adding to the strength of evidence that points towards malnutrition as a predictor of poor outcomes from COVID-19, a retrospective cohort study across 5 Johns Hopkins-affiliated hospitals in the US found that malnutrition was associated with a higher likelihood of mortality and increased hospital length of stay – particularly in elderly patient cohorts (10). This effect has likely been exacerbated by the fact that delivering adequate nutrition support in the clinical setting during the pandemic has been extremely difficult, especially in patients with severe illness requiring ICU admission. Our second paper this month compares the accuracy of predictive equations used to estimate nutritional requirements in COVID-19 patients compared with the gold standard of indirect calorimetry (11). Their conclusions are in line with others, suggesting a prolonged hypermetabolic response associated with severe COVID-19, which alongside multiple other issues provide a barrier to adequate nutrition delivery and risk of further malnutrition – which has been subject of a Taskforce case study published in BMJ-NPH during the first wave of the pandemic (12). A further study added this month looks the effectiveness of enteral nutrition in ICU patients with COVID-19 (13).

Two new papers on Telehealth delivery during the pandemic have been added to the nutrition site evidence collection. The first study from the USA founds similar effectiveness of weight loss interventions between in-person visits only, in-person and video visits, and video visits only (14). The second paper examines tele-nutrition lead changes in professional practice and in the nutritional assessments of Italian Dietitian Nutritionists (15).

On the global nutrition stage, we have added interesting insights from India which found central obesity to be a risk factor for COVID-19 severity, even at lower BMI cut offs (16). This reinforces the importance of considering cultural and region-specific differences in assessment and intervention in the context of COVID-19. Further to this, two papers examining the impact of COVID-19 on food security across multiple African countries and in Myanmar have been added (17,18). These papers examine the impact of lockdown measures, household income as well as urban and rural dwelling on food security in these regions.

On the topic of micronutrients, a newly added review examines the potential benefits of phenolic compounds of cardiovascular disease in the context of COVID-19, although acknowledges that some promising early mechanistic evidence in this area is not strong enough to determine if these compounds can yield benefits in treating CVD in COVID-19 patients (19). On the topic of Vitamin D, a newly published systematic review and meta-analysis suggests a high prevalence of vitamin D deficiency in people with COVID-19, especially in elderly populations and that this should be a target of supplementation when identified (20). The authors do acknowledge limitations in the quality of included studies as well as numerous uncontrolled confounders which may have influenced results or contributed to lower status. Importantly, they identify no support for supplementation among groups with normal blood vitamin D values with the aim of prevention, prophylaxis or reducing the severity of the disease.

Our final addition this month is a review of the available evidence relating to nutrition and post-covid-19 syndrome or 'Long-COVID', which aims to provide practical guidance on tailored dietary interventions for patients recovering from COVID-19 infection (21).

References

1. COVID-19: Useful Resources: https://www.nnedpro.org.uk/coronavirus
2. COVID-19: Nutrition Resources: https://www.nnedpro.org.uk/covid-19nutrition-resources
3. Living safely with respiratory conditions, including Covid-19 https://www.gov.uk/guidance/living-safely-with-respiratory-infections-including-covid-19
4. NICE - COVID-19 rapid guideline: managing the long- term effects of COVID-19 https://www.nice.org.uk/guidance/ng188/resources/covid19-rapid-guideline-managing-the-longterm-effects-of-covid19-pdf-51035515742
5. EMA COVID-19 page https://www.ema.europa.eu/en/human-regulatory/overview/public-health-threats/coronavirus-disease-covid-19
6. EMA COVID-19 vaccine Safety https://www.ema.europa.eu/en/human-regulatory/overview/public-health-threats/coronavirus-disease-covid-19/treatments-vaccines/vaccines-covid-19/safety-covid-19-vaccines
7. EMA COVID-19 authorised vaccines https://www.ema.europa.eu/en/human-regulatory/overview/public-health-threats/coronavirus-disease-covid-19/treatments-vaccines/vaccines-covid-19/covid-19-vaccines-authorised

8. EMA COVID-19 authorised treatments https://www.ema.europa.eu/en/human-regulatory/overview/public-health-threats/coronavirus-disease-covid-19/treatments-vaccines/treatments-covid-19/covid-19-treatments-authorised
9. Safety implications of remote assessments for suspected COVID-19: qualitative study in UK primary care https://qualitysafety.bmj.com/content/early/2022/03/07/bmjqs-2021-013305
10. Malnutrition Increases Hospital Length of Stay and Mortality among Adult Inpatients with COVID-19 https://pubmed.ncbi.nlm.nih.gov/35334967/
11. Central obesity in low BMI as a risk factor for COVID-19 severity in South Indians https://pubmed.ncbi.nlm.nih.gov/35357112/
12. Energy requirements for critically ill patients with COVID-19 https://aspenjournals.onlinelibrary.wiley.com/doi/10.1002/ncp.10852
13. Critical care nutrition and COVID-19: a cause of malnutrition not to be underestimated https://nutrition.bmj.com/content/4/1/342
14. The Effects of Enteral Nutrition in Critically Ill Patients with COVID-19: A Systematic Review and Meta-Analysis https://www.mdpi.com/2072-6643/14/5/1120
15. Weight Loss Outcomes With Telemedicine During COVID-19 https://pubmed.ncbi.nlm.nih.gov/35360066/
16. Telenutrition: Changes in Professional Practice and in the Nutritional Assessments of Italian Dietitian Nutritionists in the COVID-19 Era https://www.mdpi.com/2072-6643/14/7/1359
17. COVID-19's impacts on incomes and food consumption in urban and rural areas are surprisingly similar: Evidence from five African countries https://www.sciencedirect.com/science/article/pii/S2211912422000244
18. Poverty and food insecurity during COVID-19: Phone-survey evidence from rural and urban Myanmar in 2020 https://www.sciencedirect.com/science/article/pii/S2211912422000177
19. The Antioxidant, Anti-Platelet and Anti-Coagulant Properties of Phenolic Compounds, Associated with Modulation of Haemostasis and Cardiovascular Disease, and Their Possible Effect on COVID-19 https://www.mdpi.com/2072-6643/14/7/1390/htm
20. Vitamin D deficiency aggravates COVID-19: systematic review and meta-analysis https://www.tandfonline.com/doi/full/10.1080/10408398.2020.1841090
21. Dietary Recommendations for Post-COVID-19 Syndrome https://pubmed.ncbi.nlm.nih.gov/35334962/