### **COVID-19 Taskforce Monthly Statement**

#### June 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.

Each month the NNEdPro COVID-19 microsites are updated with new resources related to both public health and nutrition in the context of the COVID-19 pandemic. These evidence collections are linked closely with our research focussed '<u>Evidence Tracker</u>' as well as the <u>International Knowledge Application Network Hub in</u> <u>Nutrition (iKANN)</u>.

Alongside this, we will endeavour to produce a monthly statement reflecting on these updates to the evidence base as well as inviting thoughts from taskforce members involved in these areas of work.

#### **Public Health Updates**

During May, there has been a prominent global focus on COVID-19 vaccination. The WHO have updated their COVID-19 vaccine tracker and landscape to allow close monitoring of countries' vaccine progression (3). An observational study has described the public health impacts of COVID-19 vaccine programmes in the US, providing insights into the effects experienced in a high-income country with a private healthcare system (4). There are vast inequalities in vaccine uptake, in particular between high- and lower-income countries. A recent 'Call to Action' has increased awareness in these disparities and has sparked interesting discussion (5). The authors describe the low COVID-19 vaccine coverage in Africa due to vaccine nationalism and vaccine diplomacy and call for committed leadership for universal immunisation.

Additionally, a research study has found that a fourth dose of the BNT162b2 vaccine provided additional protection against both SARS-CoV-2 infection and severe covid-19 disease for people aged 60 years and over, compared to three doses (6). These findings support the use of multiple vaccines for COVID-19 prevention. Long-covid continues to be a large area of focus, with the NHS updating their information on the long-term effects of COVID-19 (7). An observational cohort study found that the likelihood of long covid symptoms was observed to decrease after covid-19 vaccination and evidence suggested sustained improvement after a second dose (8). These conclusions reinforce the importance of vaccination in COVID-19 recovery.

Two interesting studies have been published this month looking into the effects of food consumption and physical activity and COVID-19 during home isolation. A cross-sectional study conducted during the first months of lockdowns in Peru found that during confinement, weight gain was mostly associated with food consumption and personal food system factors, whilst weight loss was associated with external food system factors (9). The pandemic – infection and lockdown restrictions - has resulted in a significant decrease in physical activity. One study observed that activity reduced for both infected personas and close contacts over the course of quarantine (10). Additionally, those who were physically active felt less exhausted during their quarantine periods and were less likely to report prolonged physical and psychological symptoms than those who were inactive. These findings stress the significance of exercise in COVID-19 recovery and rehabilitation.

## **Nutrition Updates**

During May we have identified further useful additions to the literature related to COVID-19 and nutritional status.

An interesting study from the UK - The Phyto-V Study – describes a randomised controlled trial (RCT) comparing placebo vs. a phytochemical-rich and pre/probiotic lactobacillus food supplement in patients with symptomatic COVID-19 infection (11). The study found notable outcomes on GI symptoms as well as subjective scores relating to fatigue and overall wellbeing. Related to this, we have seen a narrative review published from experts in the field of micronutrients and omega-3 fatty acids, providing a call to action in considering these nutrients to play an important role in immune function of older adults, with particular reference to the COVID-19 pandemic (12).

In the clinical nutrition space a paper from the ASPEN journal of parenteral and enteral nutrition compares the effectiveness of predictive energy equations vs. indirect calorimetry when estimating energy requirements for mechanically ventilated patients with COVID-19 (13). This has been notoriously difficult to accurately measure given a high degree of fluctuation in energy expenditure during the course of critical illness with COVID, as the taskforce have published on in the past (14). Another recently published study from JPEN compares the calculated risk and exposure to infection of patients with short bowel syndrome with the general population in Germany during the pandemic – a group who have been considered at high risk throughout (15).

Considering food security, a recent paper from the US examines the influence of food insecurity on changes in eating habits during the pandemic (16). This work identifies notable disparities in eating behaviour across the spectrum of food security in this population, with potentially negative nutrition related consequences at both ends of the scale. On a similar note, a new addition to the <u>BMJ-Nutrition Prevention and Health Special</u>. <u>Collection</u> on <u>Nutrition Interactions with COVID-19</u> looks at food system factors influencing changes in body weight in Peruvian adults during first wave lockdowns (17).

Lastly, in the nutrition and long-COVID space, a new Cambridge University Press article explores food consumption and behavioural changes associated with taste and smell changes in those recovering from COVID-

19 infection (18). We have also added two BDA resources in this area, the first on Long COVID and Diet (19) and a further resource on the evidence for Low histamine diets and Long-COVID (20).

# References

1. COVID-19: Useful Resources: <u>https://www.nnedpro.org.uk/coronavirus</u>

2. COVID-19: Nutrition Resources: <u>https://www.nnedpro.org.uk/covid-19nutrition-resources</u>

3. The COVID-19 vaccine tracker and landscape compiles detailed information of each COVID-19 vaccine candidate in development by closely monitoring their progress through the

pipeline: https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines

4. Public health impact of covid-19 vaccines in the US: observational

study: https://www.bmj.com/content/377/bmj-2021-069317

5. COVID-19 vaccine hesitancy in Africa: a call to action

: https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(21)00563-5/fulltext

6. Short term, relative effectiveness of four doses versus three doses of BNT162b2 vaccine in people aged
60 years and older in Israel: retrospective, test negative, case-control

study: https://www.bmj.com/content/377/bmj-2022-071113

7. Long-term effects of coronavirus (long COVID): <u>https://www.nhs.uk/conditions/coronavirus-covid-</u> 19/long-term-effects-of-coronavirus-long-covid/

8. Trajectory of long covid symptoms after covid-19 vaccination: community based cohort study: <u>https://www.bmj.com/content/377/bmj-2021-069676</u>

9. COVID-19, body weight and the neighbourhood: food system dimensions and consumption associated with changes in body weight of Peruvian adults during first wave

lockdowns: https://nutrition.bmj.com/content/early/2022/05/04/bmjnph-2021-000416

10. Impact of physical activity on COVID-19-related symptoms and perception of physical performance, fatigue and exhaustion during stay-at-home orders: <u>https://bmjopensem.bmj.com/content/8/2/e001319</u>

11. A Randomised, Double-Blind, Placebo-Controlled Trial Evaluating Concentrated Phytochemical-Rich Nutritional Capsule in Addition to a Probiotic Capsule on Clinical Outcomes among Individuals with COVID-19— The UK Phyto-V Study <u>https://www.mdpi.com/2673-8112/2/4/31</u>

12. Perspective: Role of Micronutrients and Omega-3 Long-chain polyunsaturated Fatty Acids for Immune Outcomes of Relevance to Infections in Older Adults - a Narrative Review and Call for Action <a href="https://pubmed.ncbi.nlm.nih.gov/35587877/">https://pubmed.ncbi.nlm.nih.gov/35587877/</a>

13. Energy expenditure in Covid 19 mechanical ventilated patients: A comparison of three methods of energy estimation <u>https://aspenjournals.onlinelibrary.wiley.com/doi/10.1002/jpen.2393</u>

14. Critical care nutrition and COVID-19: a cause of malnutrition not to be underestimated. BMJ Nutrition, Prevention & Health 2021;4:doi: 10.1136/bmjnph-2021-000271

15. SARS-CoV-2 Antibody Prevalence in Adult Patients with Short Bowel Syndrome – A German Multicenter Cross-Sectional Study <u>https://aspenjournals.onlinelibrary.wiley.com/doi/10.1002/jpen.2410</u>

16. Disparities in dietary practices during the COVID-19 pandemic by food security status <a href="https://pubmed.ncbi.nlm.nih.gov/35601457/">https://pubmed.ncbi.nlm.nih.gov/35601457/</a>

17. COVID-19, body weight and the neighbourhood: food system dimensions and consumption associated with changes in body weight of Peruvian adults during first wave

lockdowns <a href="https://nutrition.bmj.com/content/early/2022/05/04/bmjnph-2021-000416">https://nutrition.bmj.com/content/early/2022/05/04/bmjnph-2021-000416</a>

18. Alterations in taste and smell associated with SARS-CoV-2: an exploratory study investigating food consumption and subsequent behavioural changes for those suffering from post-acute sequelae of COVID-19 <u>https://www.cambridge.org/core/journals/journal-of-nutritional-science/article/alterations-in-taste-and-smell-associated-with-sarscov2-an-exploratory-study-investigating-food-consumption-and-subsequent-behavioural-changes-for-those-suffering-from-postacute-sequelae-of-covid19/998A4E0AC9FC010B4B7494E053FB61BE#</u>

19. BDA: Long Covid and Diet: Food Fact Sheet <u>https://www.bda.uk.com/resource/long-covid-and-diet.html</u>

20. BDA: Low histamine diets and Long Covid <u>https://www.bda.uk.com/resource/low-histamine-diets-and-long-covid.html</u>