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A double-duty food systems stimulus package to build back better nutrition from COVID-19

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Author Contributions

Corinna Hawkes planned, structured and wrote the comment

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Standfirst *Emerging evidence indicates that the changes brought about by COVID-19 have raised the risk of unhealthy weight gain, food insecurity and undernutrition. Building back better demands a double duty approach where actions to aid recovery synergistically reduce the risk of both obesity and undernutrition.*

Emerging evidence suggests the economic, social and food system impacts of the COVID-19 pandemic have increase the risk of weight gain in adults and children. Studies from Latin America (Reyes-Olacarria et al., 2020), Asia (Chopra et al., 2020), the Middle East (Radwan et al, 2021), Europe (Fernandez-Rio et al., 2020), and North America (Zachary et al., 2020), have found that around one quarter of adults report gaining weight during lockdown. Compared to their behaviour prior to the lockdown adults and young people report less healthy eating practices, including increased snacking and higher consumption of foods high in refined carbohydrates, salt, sugar and saturated fats (Ammar et al., 2020; Deschasaux-Tanguy et al., 2021; Radwan et al, 2021; Ruiz-Roso et al., 2020; Zupo et al 2020). Self-reported reasons for these changes include reduced access to healthy foods, having less time to plan healthy meals,

difficulties with controlling food intake and using food to cope with low mood or anxiety associated with the pandemic (Ammar et al., 2020; Di Renzo et al., 2020; Robinson et al., 2020).

It's been reported, too, that some large food companies have been using the COVID-19 lockdowns as an opportunity to make pre-packaged "ultra-processed" foods high in fats, sugars and salt more appealing (NCD Alliance/Spectrum, 2020). In Mexico, for example, sugary snacks have been promoted with messages that they alleviate boredom, can be eaten during video calls and are supportive of social distancing and health professionals (White et al., 2020). Reports show that large food companies have donated food boxes containing ultra-processed, branded products to people in need (NCD Alliance/Spectrum, 2020). These reports are especially concerning given people affected by obesity and non-communicable diseases are at greater risk of complications, hospitalisation and death from COVID-19 (Popkin et al, 2020).

At the same time, studies have reported certain population groups cooking meals at home more often and eating more fruit and vegetables (e.g. Zupo et al., 2020). This may reflect a tendency to consume more of all types of foods (e.g. Radwan et al, 2021) and/or trends playing out differently among socioeconomic groups. For example, Chopra et al (2020) observed a greater shift toward healthy eating practices amongst higher socioeconomic groups in India, reasoning this was likely due to this group having more time, resources and capacity to procure and prepare such foods. A shift toward favourable dietary practices in France was more common amongst those on a higher-income, working from home and without dependent children (Deschasaux-Tanguy et al., 2021). Those whose work habits have been unchanged by the pandemic are less likely to report any changes to their dietary practices (Di Renzo et al., 2020; Deschasaux-Tanguy, 2021).

Concomitant growth of undernutrition and food insecurity

The economic crisis brought about by COVID-19 has also led to increased food insecurity among lower-income households across countries, as shown by the examples of Mexico (Gaitan-Rossi et al, 2020), Bangladesh (Hamadani et al., 2020) and Ethiopia (Abate et al, 2020). In Addis Ababa, Ethiopia, spending less on food was the second most commonly reported means of coping with income loss associated with the pandemic (Abate et al 2020). Adolescents in Côte d'Ivoire report skipping meals to cope with income losses associated with the pandemic (Banati, Jones & Youssef, 2020). In South Africa, 41% of families in a nationally-representative panel survey reported running out of money for food and 16% that their children had gone hungry the previous week (van der Berg et al, 2021). Likewise, growing levels of food insecurity have been found in high-income countries including the UK (Loopstra, 2020), USA (Wolfson & Leung, 2020) and Australia (Kent et al., 2020). This has also been associated with eating cheaper and less healthy foods. In Brazil, for example, families with drastic or total loss of income report eating cheaper foods to cope (Campagnaro et al., 2020) and food insecurity resulting from

COVID-19 in Australia is associated with consuming less fresh foods (Kent et al., 2020). Modelling simulations suggest that COVID-19 will exacerbate undernutrition, with additional deaths due to child wasting and stunting and increased anaemia among women (Headey et al., 2020; Osendarp et al, 2020).

Tackling malnutrition in all its forms through food systems

Eating practices are shaped by the circumstances of everyday life and COVID-19 changed those circumstances for many, giving rise to risks for both obesity and undernutrition. This creates an imperative for a response that takes a holistic approach to considering obesity and undernutrition in the same frame if the world is to build back better nutrition in the wake of COVID-19.

There have been multiple responses to the economic, social and food systems impacts of COVID-19. International entities and governments have provided large stimulus packages and national governments have allocated budgetary resources to social safety nets for households experiencing loss of income, in part to protect against food insecurity and undernutrition. According to the World Bank, 173 countries had enacted 621 new social protection measures by June 2020, including cash transfers and in-kind food and voucher schemes (Gentilini et al., 2020).

However, national budgets are under tremendous strain and the full impact of COVID-19 on existing programmes designed to tackle undernutrition remains unclear. Despite the evidence on the link with COVID-19, the World Obesity Federation report that governments around the world are paying inadequate attention to obesity prevention and management (WOF, 2020a).

At the same time, there has been significant social, community and business innovation across low-, middle and high-income countries to provide and sell nutritious, healthy foods. Examples include novel programmes to distribute seeds for home gardens, new forms of transportation networks to get perishable foods to markets, e-commerce, innovations in sales channels from urban agriculture, and community kitchens (Hawkes, 2020). The impacts of COVID-19 on food systems globally, nationally and locally has also led to greater attention on how to improve their resilience and maximise their potential to improve a range of different outcomes, as articulated in the UN Food Systems Summit to be held in September 2021.

Double duty actions for double burden

In this context, double duty actions emerge as one way to step up the food system response to risks of food insecurity, undernutrition and obesity. Double duty actions are “interventions, programmes, and policies that simultaneously prevent or reduce the risk of both nutritional deficiencies leading to underweight, wasting, stunting and micronutrient deficiencies, and problems of obesity, and diet-related non-communicable diseases” (Hawkes et al, 2020). They

offer an effective way to address malnutrition in all its forms; with action targeting one form of nutrition also working to benefit another. Given the evidence of increasing undernutrition and obesity in the wake of the COVID-19 pandemic, paired with renewed attention on food systems, now is the time for a clear package to stimulate food systems to work double duty and address all forms of malnutrition.

Social protection and other programmes targeted to low-income groups. Spending on social safety nets has increased during COVID-19. While social protection programmes are proven to have positive outcomes for nutrition, evidence suggests that they are not designed to take into account the increasingly obesogenic nature of food systems, and thus can lead to increase risks of obesity (Hawkes et al, 2020). More could be done to leverage them to incentivise food systems actors to make healthier foods more available and affordable. Cash provision could be coupled with incentives for recipients to participate in well-targeted, culturally-sensitive food literacy programmes based on an understanding of barriers to consumption of nutritious foods. Subsidies and food vouchers could also be directly linked to retailers providing nutritious foods, provide rewards for expenditure on healthier foods, and exclude foods, snacks, and beverages high in fats, sugars and salt thus stimulating retailers to change their food offer. In addition, public distribution programmes, state-managed stores, public restaurants, and other forms of subsidy programmes could focus on providing diverse nutritious foods and meals and minimising less healthy foods. Likewise, mandatory guidance is needed for voluntary food donations from food companies to vulnerable groups to stimulate them to provide only food that will actively address malnutrition in all its forms (ATNI, 2020).

Comprehensive school food policies. According to the World Food Programme, 161 countries closed schools during lockdowns, leaving 346 million children without access to school feeding programmes (WFP, 2020). Their re-opening presents an opportunity to ensure that guidelines for school feeding programmes and food provided by the commercial sector in day care, preschools, and schools act double duty by not just meeting basic meet energy and nutrient needs but also restrict nutrient-poor yet calorie rich foods, snacks, and beverages. This also presents an opportunity to prioritise procurement from farmers and other producers and retailers of nutritious foods, providing structured demand to stimulate jobs and generation in the nutritious foods sector. For a full double duty approach, the widespread availability of snacks and fried foods around schools should be replaced with more nutritious foods and schools used as an opportunity to build knowledge and skills to create awareness, shape tastes, and motivate consumption of healthy diets through education, school gardens, and mainstreaming food throughout the curriculum.

Food system financing. Government-financed economic stimulus packages in the wake of COVID-19 present an opportunity to allocate new investment to nutritious foods as a boost to employment, such as stimulating agri-food entrepreneurship, providing credit on fair terms to family farmers, investing in cooperatives and food hubs for distribution of healthy foods, providing financing for small- and medium-sized enterprises (SMEs) to innovate new nutritious products, and providing technical and financial support to street vendors to switch to healthier offers. These investments could build on the aforementioned innovations during COVID-19 lockdowns. For example, SME e-commerce initiatives are growing in the wake of COVID-19 in many lower income countries and could be provided with marketing support to boost demand for healthier nutritious foods (it is notable that e-commerce initiatives by some large companies during COVID-19 are reported *not* have focused on improving access to nutritious healthy foods (ATNI, 2020)). At the same time, existing public and private sector investment could be re-allocated from refined starchy foods and ingredients used in “ultra-processed” snacks and convenience foods towards nutritious foods. According to McKinsey, global food and agriculture investments tripled between 2004- 2013 to >\$100 billion; the investment advisory firm Valoral estimates an increase in the number of investment funds specialized in food and agriculture from 38 to 446 between 2005-2017 (albeit with only 6% in Asia/Africa). The potential for focusing such investments on the production, storage, distribution, processing and retail of nutritious foods rather than ingredients used in unhealthy products is enormous, supporting livelihoods while also supplying healthier foods at more affordable prices. Agricultural subsidies, infrastructure and research investments could also be re-allocated to more nutritious foods (GLOPAN, 2020), as could public procurement spend.

Competition through taxes and marketing restrictions. The disruption to economic systems and stretched governments budgets as a result of the pandemic makes this an optimal time to consider implementing policies on taxation of sugary drinks as a means of adding fiscal space to constrained national economies and stimulating new resources for interventions to address all forms of malnutrition. Over 42 countries have now adopted sugary drinks taxes and evidence shows have the intended effects (Shekar and Popkin, 2020). Existing sugary drinks taxes could be increased and new taxes introduced to not just provide revenue but also stimulate sugar reduction by the companies who produce them and stimulate consumers to switch to healthier drinks. Tougher regulation is also needed to reign in marketing of unhealthy foods so prevalent during the pandemic (WOF, 2020b). This could stimulate businesses to replace find ways to generate aspiration for nutritious foods that benefit all form of malnutrition, and to compete to a greater degree on growing long term markets for healthier foods rather than focusing on pre-packaged foods high in fats, sugars and salt and ultra-processed snacks and drinks.

A window of opportunity

In the context of the link between obesity and COVID-19, the estimated increases of undernutrition, and the changes in food systems, a window of opportunity has opened to stimulate change in food systems to act double duty to address malnutrition in all its forms. We proposed a short but potentially powerful package of actions to effect change - what is now required is the political commitment to put it into action.

References

- Ammar, A., Brach, M., Trabelsi, K., Chtourou, H., Boukhris, O., Masmoudi, L., ... Hoekelmann, A. (2020). Effects of COVID-19 Home Confinement on Eating Behaviour and Physical Activity: Results of the ECLB-COVID19 International Online Survey. *Nutrients*, 12(6), 1583. <https://doi.org/10.3390/nu12061583>
- ATNI (Access to Nutrition Index). Nutrition responses from food and beverage companies to the Covid-19 pandemic. Report 2: An acute response October 2020. <https://acesstonutrition.org/app/uploads/2020/10/Second-Covid-19-Quarterly-Report-Final-Version.pdf>
- Chopra, S., Ranjan, P., Singh, V., Kumar, S., Arora, M., Hasan, M. S., ... & Kumari, A. (2020). Impact of COVID-19 on lifestyle-related behaviours-a cross-sectional audit of responses from nine hundred and ninety-five participants from India. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 14(6), 2021-2030. <https://doi.org/10.1016/j.dsx.2020.09.034>
- Deschasaux-Tanguy, M., Druesne-Pecollo, N., Esseddik, Y., Szabo de Edelenyi, F., Alles, B., Andreeva, V. A., ... Touvier, M. (2021). Diet and physical activity during the COVID-19 lockdown period (March-May 2020): results from the French NutriNet-Sante cohort study. 2021 Mar 1; nqaa336. doi: 10.1093/ajcn/nqaa336. Online ahead of print.
- Di Renzo, L., Gualtieri, P., Cinelli, G., Bigioni, G., Soldati, L., Attinà, A., ... & Ferraro, S. (2020). Psychological aspects and eating habits during COVID-19 home confinement: Results of EHLC-COVID-19 Italian Online Survey. *Nutrients*, 12(7), 2152.
- Gaitán-Rossi, P., Vilar-Compte, M., Teruel, G., & Pérez-Escamilla, R. (2020). Food insecurity measurement and prevalence estimates during the COVID-19 pandemic in a repeated cross-sectional survey in Mexico. *Public health nutrition*, 1-10.
- Gentilini, U., Almenfi, M., Dale, P., Lopz, A.N., Mujica I.V., Quintana, R., Zafar, U. (2020). Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures. “Living paper” version 11 (June 12, 2020). World Bank: Washington DC. <http://documents1.worldbank.org/curated/en/590531592231143435/pdf/Social-Protection-and-Jobs-Responses-to-COVID-19-A-Real-Time-Review-of-Country-Measures-June-12-2020.pdf>
- Glopan (2020). *Future Food Systems: For people, our planet, and prosperity*. London, 2020
- Hamadani, J. D., Hasan, M. I., Baldi, A. J., Hossain, S. J., Shiraji, S., Bhuiyan, M. S. A., ... & Grantham-McGregor, S. (2020). Immediate impact of stay-at-home orders to control COVID-19 transmission on socioeconomic conditions, food insecurity, mental health, and intimate partner violence in Bangladeshi women and their families: an interrupted time series. *The Lancet Global Health*, 8(11), e1380-e1389.
- Hawkes C. COVID-19 and the promise of food system innovation. 372 In: J. Swinnen & J. McDermott (eds), *COVID-19 and Global Food Security* (pp. 129–131). Washington DC: IFPRI, 2020.
- Hawkes C, Ruel MT, Salm L, Sinclair B, Branca F. Double-duty actions: seizing programme and policy opportunities to address malnutrition in all its forms. *The Lancet*. 2020 Jan 11;395(10218):142-55. [https://doi.org/10.1016/S0140-6736\(19\)32506-1](https://doi.org/10.1016/S0140-6736(19)32506-1)

- Headey D, Heidkamp R, Osendarp S, Ruel M, Scott N, Black R, Shekar M, Bouis H, Flory A, Haddad L, Walker N; Standing Together for Nutrition consortium. Impacts of COVID-19 on childhood malnutrition and nutrition-related mortality. *Lancet*. 2020 Aug 22;396(10250):519-521. doi: 10.1016/S0140-6736(20)31647-0. Epub 2020 Jul 27. PMID: 32730743; PMCID: PMC7384798.
- Kent, K., Murray, S., Penrose, B., Auckland, S., Visentin, D., Godrich, S., & Lester, E. (2020). Prevalence and socio-demographic predictors of food insecurity in Australia during the COVID-19 pandemic. *Nutrients*, 12(9), 2682. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7551067/>
- Loopstra, R. (2020). Vulnerability to food insecurity since the COVID-19 lockdown. Food Foundation. https://foodfoundation.org.uk/wp-content/uploads/2020/04/Report_COVID19FoodInsecurity-final.pdf
- NCD Alliance/Spectrum. Signalling Virtue, Promoting Harm - Unhealthy commodity industries and COVID-19. 2020. <https://ncdalliance.org/resources/signalling-virtue-promoting-harm>
- Osendarp, S., Akuoku, J., Black, R., Headey, D., Ruel, M., Scott, N., ... & Heidkamp, R. (2020). The potential impacts of the COVID-19 crisis on maternal and child undernutrition in low and middle income countries. Preprint at <https://doi.org/10.21203/rs.3.rs-123716/v1>
- Popkin, B. M., Du, S., Green, W. D., Beck, M. A., Algaith, T., Herbst, C. H., Alsukait, R. F., Alluhidan, M., Alazemi, N., & Shekar, M. (2020). Individuals with obesity and COVID-19: A global perspective on the epidemiology and biological relationships. *Obesity Reviews* 2020;21(11):e13128. doi:10.1111/obr.13128
- Radwan H, Al Kitbi M, Hasan H, Al Hilali M, Abbas N, Hamadeh R, Saif ER, Naja F. Indirect Health Effects of COVID-19: Unhealthy Lifestyle Behaviors during the Lockdown in the United Arab Emirates. *Int J Environ Res Public Health*. 2021 Feb 18;18(4):1964. doi: 10.3390/ijerph18041964. PMID: 33670510; PMCID: PMC7922937.
- Reyes-Olavarria, D.; Latorre-Roman, P.Á.; Guzmán-Guzmán, I.P.; Jerez-Mayorga, D.; Caamaño-Navarrete, F.; Delgado-Floody, P. Positive and Negative Changes in Food Habits, Physical Activity Patterns, and Weight Status during COVID-19 Confinement: Associated Factors in the Chilean Population. *Int. J. Environ. Res. Public Health* 2020 Jul 28;17(15):5431. doi: 10.3390/ijerph17155431.
- Ruiz-Roso, M. B., de Carvalho Padilha, P., Mantilla-Escalante, D. C., Ulloa, N., Brun, P., Acevedo-Correa, D., ... Dávalos, A. (2020). Covid-19 Confinement and Changes of Adolescent's Dietary Trends in Italy, Spain, Chile, Colombia and Brazil. *Nutrients*, 12(6), 1807. <https://doi.org/10.3390/nu12061807>
- Shekar, Meera, and Barry Popkin, eds. 2020. *Obesity: Health and Economic Consequences of an Impending Global Challenge*. Human Development Perspectives series. Washington, DC: World Bank. doi:10.1596/978-1-4648-1491-4. License: Creative Commons Attribution CC BY 3.0 IGO
- van der Berg S, Patel L, Bridgman G. Hunger in South Africa during 2020: Results from Wave 3 of NIDS-CRAM. University of Stellenbosch, 17 February 2021
- Wolfson, J. A., & Leung, C. W. (2020). Food Insecurity and COVID-19: Disparities in Early Effects for US Adults. *Nutrients*, 12(6), 1648.

WFP. Global Monitoring of School Meals During COVID-19 School Closures.
<https://cdn.wfp.org/2020/school-feeding-map/index.html>

White M, Nieto C, Barquera S. Good deeds and cheap marketing—The food industry in the times of COVID-19. *Obesity*. 2020 May 22.

World Obesity Federation. Obesity and COVID-19 Policy Briefing. London: WOF, 2020.

Zupo, R., Castellana, F., Sardone, R., Sila, A., Giagulli, V. A., Triggiani, V., ... & De Pergola, G. (2020). Preliminary Trajectories in Dietary Behaviors during the COVID-19 Pandemic: A Public Health Call to Action to Face Obesity. *International Journal of Environmental Research and Public Health*, 17(19), 7073. <https://doi.org/10.3390/ijerph17197073>