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Madeline Mae A. Ong

Ateneo School of Medicine and Public Health, Ateneo de Manila University, mmong@ateneo.edu

Ronnah Marie Ong

LifeScience Center for Health and Wellness, Philippines

Gladys Kaye Reyes

Centro Holistico, Philippines

Lourdes S. Tanchanco

Ateneo School of Medicine and Public Health, Ateneo de Manila University, ltanchanco@ateneo.edu

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Addressing the COVID-19 Nutrition Crisis in Vulnerable Communities: Applying a Primary Care Perspective

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Madeline Mae Ong¹ , Ronnah Marie Ong²,
Gladys Kaye Reyes³, and Lourdes Bernadette Sumpaico-Tanchanco¹

Abstract

The coronavirus disease (COVID-19) pandemic and subsequent public health interventions have disrupted food systems all over the world. In the Philippines, where stringent lockdown rules have been implemented, households living in poverty have had to rely largely on food aid in the form of food packs distributed by local governments and private donors. An evaluation of the commonly distributed food items reveals a diet that addresses acute hunger but does not contain sufficient nutrients to promote and maintain health. Such a diet puts low-income households at a greater risk of acute and chronic disease. The negative health impact of commonly distributed food packs on food aid-dependent households shine a light on how the COVID-19 pandemic and public health policies exacerbate health inequities. A primary care perspective is essential in creating food security policies that can effectively address acute hunger and malnutrition without contributing to the long-term deleterious effects of inadequate nutrition on the health of indigent communities.

Keywords

COVID-19, nutrition, primary care, health equity, community health

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The Impact of the COVID-19 Pandemic on Food Systems

The COVID-19 pandemic has led to the disruption of food systems, impacting both the supply and demand of food. Public health interventions, especially social distancing measures and community quarantines, have posed significant logistical challenges, which hold up many food supply chains.¹

Rules around mobility during lockdowns and quarantines vary globally. In the enhanced community quarantine (ECQ) in the Philippines, all forms of public transportation were shut down. Private transport was limited to essential workers (ie, health workers, food vendors, logistics for essential goods) and to one person per household to purchase food and basic commodities.² While these rules were intended as social distancing strategies, they seem to have been poorly targeted, unintentionally favoring large food suppliers with company owned vehicles or those that can afford to hire logistical services. Small-scale food sellers and distributors can still opt to take private tricycles, motorcycles, or bicycles, but that is if they own any. Since the implementation of these rules, there have been reported

cases of individual and small-scale food sellers, desperate for livelihood, walking for hours just to carry heavy loads of food supplies from larger markets to their food stalls.³

The irony of the COVID-19 food crisis is not that there is a scarcity of staple commodities. According to the Food and Agriculture Organization (FAO) food supply is not the problem, but the slowdowns and hurdles in transporting supplies from farmers and ports to consumers.⁴ Stocks in food retail stores and markets have declined, while large quantities of fresh produce harvested in farms have spoiled and have been wasted.

On the side of the consumers, food purchasing habits have changed in order to adjust to the logistical challenges

¹Ateneo School of Medicine and Public Health, Pasig City, Philippines

²LifeScience Center for Health and Wellness, Taguig City, Philippines

³Centro Holistico, Quezon City, Philippines

Corresponding Author:

Madeline Mae Ong, 2/F Ateneo Center for Research and Innovation, Ateneo School of Medicine and Public Health, Don Eugenio Lopez Sr. Medical Complex, Ortigas Avenue, Pasig City, 1604 Metro Manila, Philippines.

Email: mmong@ateneo.edu



of city-wide lockdowns. However, because the population has varying capacities to adapt to these challenges, access to food and optimal nutrition has become even more inequitable. For instance, due to the ban of public transportation, travel to wet markets and retail stores has been difficult especially for those who do not own any form of private transport. Many people have shifted from physical shopping to online shopping, but this can only be said for populations with access to the internet, smart mobile phones, and a steady income to purchase food.

The closure of many industries has resulted to the loss of income and low purchasing power of many households. Since the pandemic began, 7.3 million Filipinos have become jobless.⁵⁻⁷ This does not include the 38% of the population belonging to the informal sector which is even more vulnerable to poverty and hunger due to lack of social protection.⁸ This population may have to rely largely on food relief packs distributed by the government and private donors, the amount and contents of which they have no control over. The Department of Social Welfare and Development has since identified around 21 million low-income Filipino families to be in urgent need of monetary and food assistance from the government during this pandemic.^{9,10}

A Review of the COVID-19 Diet of Food Aid-Dependent Households

Food security is defined by the FAO as the state when people “have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.”¹¹ The national and local governments and private donors have distributed food packs as emergency food assistance to indigent communities all over the country. This is a worthwhile effort because it provides relief from acute hunger. However, the quality of the food packs needs to be evaluated as they may be inadequate to meet long-term nutritional requirements, and thus pose long-term negative health effects on households who rely solely or largely on them. This is in contrast to the other households who have the capacity to supplement the food packs they receive with more nutritious and preferred food items.

To properly address food insecurity, distributed foods ideally should be nutritious, provided at the recommended amount, and promote health. We reviewed the contents of relief food packs distributed by local governments and private donors, and then scrutinized the nutritional value of the most common food items found in these packs. The ten most common items include white rice, instant noodles, plain biscuits, white bread, canned corned beef, canned sardines, canned tuna, canned beef loaf, powdered sweetened coffee, and powdered milk.

We looked into the nutritional density of each of them by quantifying the amount of macro- and micronutrients per 100 g of edible portions. This audit revealed that canned meats and fishes provide a substantial amount of fat and protein, while rice and bread provide significant amounts of carbohydrates. However, all the food items contain from zero to only up to 10% of the recommended dietary fiber intake per day. Further, the amount of sodium in the canned meats and fishes and of sugar in powdered drinks are alarmingly high. As for micronutrients, the amounts of minerals and vitamins in all the food items except for filled milk are insignificant. Thus, these foods may provide the feeling of fullness, but do not actually adequately provide the recommended amount of nutrients needed to remain healthy.

Aside from nutrient density, the total amount of food consumed is also a cause for concern. We take as an example the standard food pack which the country’s Department of Social Welfare and Development distributes to targeted households nationwide. Each pack is intended for 2 days for a family of five, and contains six (6) kilograms of rice, four (4) cans of corned beef, four (4) cans of sardines, and six (6) packs of energy drink or coffee.¹² This amount of food provides only approximately 1335 kcal of per person per day—not nearly enough to meet the recommended 1900 and 2500 kcal intake per day for a female and male Filipino adult respectively.

Further, the schedule of distribution of food relief packs vary per local government, and private donations are erratic and may slowly dwindle over time. In reality, there is little certainty as to when the next food pack will be distributed. Because of this, households may resort to rationing the food so that it can feed them for more days than intended, further reducing their nutritional intake.

Poorer Nutrition and Poorer Health for the Food Aid-Dependent Households

Evidence shows that dietary risk factors have more bearing on global mortality in comparison to other risks such as tobacco smoking. A systemic analysis on suboptimal diet across 195 countries shows that increased death rates have been linked to “diets high in sodium, low in whole grains, low in fruit, low in nuts and seeds, low in vegetables, and low in omega-3 fatty acids.”¹³

Given the limited amounts of macro- and micronutrients available in relief food packs, households dependent on them are especially exposed to the risk of malnutrition. This bears numerous consequences, the most urgent one being the increased susceptibility to communicable diseases like COVID-19.

On top of COVID-19 deaths, both malnutrition and infection could drive the rates of preventable deaths even higher.

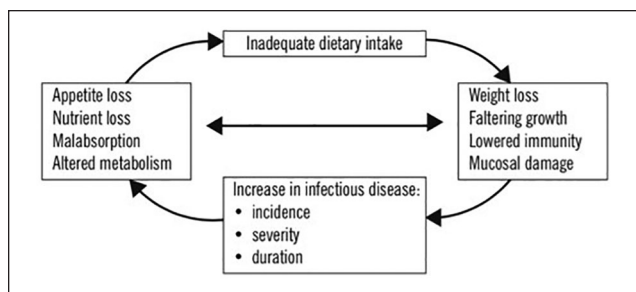


Figure 1. The malnutrition-infection cycle.¹⁴

Immunity to disease and nutrition are closely connected; when the immune system is fighting an infection, nutritional needs are higher and when there is suboptimal nutrition, the immune system is compromised. The Figure 1, sourced from the World Health Organization, demonstrates the vicious cycle between malnutrition and infection.

Further, as much of the focus of the health care system has recently been on COVID-19 response, we should not be remiss of maintaining care for pre-existing chronic conditions like hypertension and diabetes, both of which are endemic in Philippines and many other countries all over the world.^{15,16} These chronic diseases can be debilitating, and thus should still be given due attention while we battle the pandemic.

These chronic diseases are impacted by diet and lifestyle factors. Unhealthy dietary patterns include high energy intake from total fats, excessive use of cooking oil with high saturated fat (including indigenous oils such as palm oil and coconut oil), high consumption of sugars and sweetened beverages, high intake of dietary salt, and low consumption of fruit and vegetables.¹⁷ This high-sodium, low-fiber, and high-sugar content in food relief packs certainly do not help control diabetes and hypertension. Life-threatening complications are likely to occur if these types of foods are consumed consistently for long periods.

This is particularly relevant in the Philippines, where a triple burden of disease exists and has more devastating effects on the indigent subpopulations.¹⁸ In the context of weak financial risk protection, these medical complications can have massive financial and social impacts on poor households which could lead them further into poverty. This perpetuates the vicious cycle of poverty and non-communicable disease where impoverished families are faced with having to choose between accessing health services or avoiding further impoverishment.¹⁹

Applying a Primary Care Lens to Strengthen Food Security

It should be stressed that the issue of food security is an issue borne by entire communities, and that nutrition is a major contributor to health outcomes. These considerations

play critical roles in health promotion, and can be significantly aided by a primary care perspective. Primary care providers also provide first-contact care, and are in the best position to understand the health needs of communities, particularly the prevalent acute and chronic conditions that are easily impacted by poor diet and malnutrition.

Therefore, primary care experts must critique food security policies using their robust understanding of nutrition and its health impacts. For instance, they can help target and tailor food security policies for populations particularly at risk of hunger and malnutrition. They can identify foods that are nutritious, sturdy, and affordable at the same time, which can be feasibly distributed as food aid without incurring donors significantly more cost. In the case of the Philippines, primary care physicians in the public sector can directly influence policy because they work closely with local governments in formulating health promotion strategies, including local nutrition programs.

Inequity in our food systems and nutrition is not a new issue, but the long-term negative health impacts of distributed food packs on food aid-dependent households shine a spotlight on it. Primary care providers and researchers alike can play a key role in reducing this inequity by working with policymakers to push for sustainable improvements in our food policies and systems so that healthy foods can be accessible especially to vulnerable households not only during the COVID-19 pandemic, but even after it.

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ORCID iD

Madeline Mae Ong  <https://orcid.org/0000-0002-4092-2152>

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