



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Food System Workers are the Unexpected but Under Protected COVID Heroes

Courtney A Parks,¹ Nadine Budd Nugent,¹ Sheila E Fleischhacker,² and Amy L Yaroch¹

¹Gretchen Swanson Center for Nutrition, Omaha, NE, USA; and ²Georgetown University Law Center, Washington, DC, USA

ABSTRACT

Coronavirus disease 2019 (COVID-19) poses an occupational health risk to food system workers including farmers/producers, grocery store workers, emergency food system staff and volunteers (e.g., food pantry workers), and others. These food system workers have been pushed to the front-line of this pandemic, providing essential services that support food consumption for all Americans. Food system workers are some of the most economically vulnerable populations and are at risk of further financial disparities and contraction of COVID-19 during this pandemic. As we continue to grapple with the best strategies to support the food system and mitigate concerns around the spread of COVID-19, appropriate measures must be considered to better protect and support front-line food system workers that safeguard food access for all Americans. *J Nutr* 2020;150:2006–2008.

Keywords: food insecurity, food systems, policy, vulnerable populations, COVID-19

Introduction

The coronavirus outbreak of SARS-CoV-2 and cases of coronavirus disease 2019 (COVID-19) that began in China in late December 2019 has spread worldwide (1). In the wake of this pandemic the USA should turn its attention to our most economically vulnerable populations. With shelter-in-place mandates and social distancing guidelines, day-to-day life across the USA has shifted quickly. Anxiety remains high with populations living below the federal poverty level disproportionately bearing the brunt of the pandemic and experiencing new levels of stress and accompanying negative consequences with workplace health and safety implications (2). Food insecurity impacted 11.1% of US households in 2018 (3), and with unprecedented job loss and economic downturn during and after this pandemic, this number has increased rapidly. Recent analyses from the COVID Impact Survey, Week 1 (20–26 April, 2020) have shown that 28% of all respondents and 42% of those with children reported worrying about food running out (4).

Health care practitioners have surfaced as front-line workers addressing the urgent needs of the COVID-19 pandemic, and there remains much ground to gain in terms of providing adequate support and protection for these groups (5). Although risks are potentially inherent in this line of work, the level of

risk has exponentially increased. Concurrently, other unlikely groups have now become tantamount to “essential” workers, including those working within multiple levels of our food system. The need to protect and support food system workers is paramount, given that these groups are unexpectedly, and in many cases, unpreparedly, being pushed to the front-line of this pandemic. Food system workers did not knowingly “sign-up” to be serving on the front-line of a pandemic and are often not prepared with adequate knowledge and safety measures to ensure their health and wellbeing, and are not compensated accordingly. To date, there have been ~12,000 COVID-19 cases and ≥48 deaths among workers in meat and poultry processing facilities (6). Factors that affect risk of infection include difficulties with workplace physical distancing and hygiene, and crowded living and transportation conditions (6).

In terms of production, fruit and vegetable (FV) producers are subject to negative externalities of the pandemic, including a drastic drop in demand for food service (e.g., restaurants), accompanied by a simultaneous spike in demand for food retail (e.g., grocery, emergency food). This pendulating demand is already wreaking havoc on the food supply chain (7). For instance, farmers are currently being forced to throw out entire fields of crops as they are not equipped with the resources to make this shift from food service to food retail (7). This applies to smaller FV producers that typically sell direct to consumers [e.g., farmers’ markets, community supported agriculture (CSA) boxes] and larger commodity crop producers. Many communities across the USA are advocating for farmers’ markets to remain open and be categorized as essential since they distribute fresh FVs, which are often limited in grocery stores located in low-income communities (8). However, some producers are finding innovative ways to distribute FVs that

This work was supported by Gus Schumacher Nutrition Incentive Grant Program grant no. 2019-70030-30415/project accession no. 1020863 from the USDA National Institute of Food and Agriculture.

Author disclosures: The authors report no conflicts of interest.

Address correspondence to CAP (e-mail: cparks@centerfornutrition.org).

Abbreviations used: CSA, community supported agriculture; FV, fruit and vegetable; GusNIP, Gus Schumacher Nutrition Incentive Program; SNAP, Supplemental Nutrition Assistance Program.

limit social contact, such as CSA boxes and preordering. For example, a group of university students have started an online site, FarmLink, seeking to connect farmers with food banks (9).

In brick and mortar retail, grocers are struggling to meet sudden increases in consumer demand, while simultaneously experiencing unprecedented disruptions in distribution systems due to COVID-19. Food retailers strain to keep up, as many consumers buy in bulk and stockpile food and supplies, leading to empty shelves. Grocers are currently limiting bulk purchases of more than a dozen popular food items (10), and although these measures may address panic buying and unnecessary stockpiling, these restrictions may also pose a threat to food-insecure households that may not have transportation for food shopping on a more regular basis and may be limited to purchases of specific lower cost items that also tend to be less nutritious. In addition, grocery store employees have become front-line workers during COVID-19, often working with limited personal protective equipment, interacting with the public on a regular basis, and putting their lives at risk. Recent newspaper articles reported that ≥ 68 front-line grocery workers have already succumbed to the virus, while many others have tested positive (11). Increasingly, grocery chains have introduced measures to protect their employees, such as adopting more stringent customer capacity limits, adding plexiglass partitions at the register, and informational floor decals and 1-way aisles to promote social distancing. Some grocery chains have also pushed to have their employees considered as first responders, giving them access and priority to testing and protective gear.

Many municipalities have put in place executive orders to prohibit restaurants, cafes, food trucks, and other similar businesses to serve food and beverages for consumption on premises. Food service operations have also adapted. The FDA has relaxed rules on food labeling to allow restaurants and food manufacturers to sell food that may not be labeled for retail sale during this pandemic (12). Restaurants are slowly starting to open in many states, and many have transitioned to these types of sales and other “no contact” ways to help feed Americans while also trying to keep their business afloat. These no contact ways – often cash-free approaches – negatively impact low-income customers who might not have credit cards. Finally, as a result of new restaurant social distancing regulations, an estimated 5–7 million restaurant workers will be laid off by June (13), many of which already live paycheck to paycheck.

The working poor – including many that make up the front-lines of the food system – may lack the financial resources to meet basic nutritional needs or ability to buy food in bulk. Many individuals also have new added childcare responsibilities, further hindering lower income households’ ability to earn a living wage. This challenge is compounded when the nearly 35 million children participating in school and childcare-based federal food assistance no longer have access to these programs as many locations remain closed, and not all of these individuals will be eligible for federal nutrition assistance or want to risk applying due to the chilling effect of the Public Charge Rule [allowing immigration inadmissibility based on public benefits use including the USDA Department Supplemental Nutrition Assistance Program (SNAP)] (14). Food-insecure households often engage in tradeoff behaviors in order to put food on their tables (e.g., not paying bills like utilities in order to buy food) (15). Thus far, the federal government has enacted 3.5 stimulus packages in response to COVID-19 (P.L. 116–123; P.L. 116–127; P.L. 116–136; P.L. 116–139). Some of these

stimulus funds are appropriated to various industries and individuals with ~\$23.5 billion to assist farmers, most of which is designated for soy and corn producers (e.g., commodity crops), leaving out producers of “specialty crops” which include FVs. These measures may widen the nutrition gap in the USA, further deteriorating a limited food system to support healthy eating. Other COVID-19 stimulus package nutrition provisions allow significant flexibilities and additional appropriations for certain federal nutrition assistance programs (16). This includes the suspension of the time limit for Able-Bodied Adults Without Dependents (ABAWD) participation in SNAP and gives states the flexibility to suspend work requirements during the pandemic (17).

Emergency food systems (e.g., food banks, pantries) are also experiencing a rapid increase in demand and are attempting to provide services for existing clients, as well as new families not previously food insecure and who are now seeking services due to COVID-19. Many food banks/pantries rely on older adult volunteers, which is not safe or viable during this crisis, creating a demand for assistance from younger individuals in good health. A recent solution-oriented partnership between the Farm Bureau and Feeding America seeks to allow farmers to work directly with food banks to shorten the supply chain and find a much-needed home for the American-grown food that would otherwise be wasted (18). In conjunction with emergency food systems, there will be extra stressors put on federal nutrition assistance programs, as Americans apply to receive needed benefits. It is imperative to continue to protect these programs and consider additional approaches, such as SNAP benefit adequacy, to better leverage federal nutrition assistance to reduce food insecurity and stimulate the economy by subsidizing food consumption (19). Nutrition incentive programs, as authorized through the 2008 Farm Bill and operationalized through the Gus Schumacher Nutrition Incentive Program (GusNIP) grants includes SNAP incentive and produce prescription programs. These innovative programs aim to increase FV purchases through point-of-sale incentives, including farmers’ markets and grocery stores (20). GusNIP programs are now able to leverage Pandemic-SNAP and Disaster-SNAP and could potentially reallocate FV incentives from 1 site to another to better assist the food-insecure population affected by COVID-19 and as outlined by USDA’s National Institute of Food and Agriculture (NIFA).

As Congress considers additional COVID stimulus packages, appropriate workplace health and safety measures must be considered to better protect and support front-line food system workers; otherwise, there most likely will be long-lasting, adverse effects on our food system and nation’s health. Communities, public authorities, and organizations are working to curb the crisis and plug the gaps in food systems to be more resilient in an accelerated fashion. Perhaps Americans will surface at the end of this pandemic with a greater appreciation for local foods and will have rediscovered home cooking and healthier food habits (21). Some high-level considerations for action are outlined below.

Call to Action

- Develop system-wide strategies to respond appropriately to food insecurity during COVID-19, considering multiple levels of the food system, such as mobilizing innovative direct-to-consumer federal nutrition assistance approaches to support adequate nutrition for all.

- Develop and disseminate innovative consumer education about food procurement, safety, storage, and consumption to promote high dietary quality, particularly among vulnerable populations.
- Mobilize allied health and workplace health and safety professionals and other social services to monitor food insecurity and the impact on existing, as well as newly affected groups. Food insecurity is an important threat to supporting nutrition among low-income populations, a group that has seen recent spikes with COVID-19.
- Provide support and protection for front-line workers, including COVID-19 protective resources, paid leave, and targeted outreach regarding nutrition assistance. These front-line food system workers are vital for everyone to access safe, nutritious foods and beverages during this pandemic, and adequate protection and support should be provided.
- Develop strategies to assist working parents with childcare given school/childcare facility closures.
- Offer paid sick time and paid family and medical leave for all workers.

Acknowledgments

The authors' contributions were as follows—all authors: conceptualized the manuscript; CP: developed the first draft; CP had primary responsibility for final content; and all authors: have provided edits, and read and approved the final manuscript.

References

1. Sohrabi C, Alsafi Z, O'Neill N, Khan M, Kerwan A, Al-Jabir A, Iosifidis C, Agha R. World Health Organization declares global emergency: a review of the 2019 novel coronavirus (COVID-19). *Int J Surg* 2020;76:71–6.
2. Ahmed F, Ahmed N, Pissarides C, Stiglitz J. Why inequality could spread COVID-19. *Lancet Public Health* 2020;5(5):e240.
3. Coleman-Jensen A, Rabbitt MP, Gregory CA, Singh A. Household Food Security in the United States in 2018 [Internet]. [cited 2 April, 2020]. Available from: <http://www.ers.usda.gov/publications/pub-details?pubid=94848>.
4. Schanzenbach D, Pitts A. Estimates of Food Insecurity During the COVID-19 Crisis: Results from the COVID Impact Survey, Week 1 (April 20–26, 2020). [cited 20 May, 2020] [Internet]; Available from: https://www.ipr.northwestern.edu/documents/reports/food-insecurity-COVID_week1_report-13-may-2020.pdf.
5. Adams JG, Walls RM. Supporting the health care workforce during the COVID-19 global epidemic. *JAMA* 2020;323(15):1439–40.
6. Scher I. Almost 12,000 Meatpacking and Food Plant Workers Have Reportedly Contracted COVID-19. At Least 48 have Died. [cited 20 May, 2020] [Internet]; Available from: <https://www.businessinsider.com/meatpacking-plants-12000-coronavirus-cases-48-deaths-2020-5>.
7. Behsudi A, McCrimmon R. Food Goes to Waste Amid Coronavirus crisis. *POLITICO* [Internet]. [cited 16 April, 2020]; Available from: <https://www.politico.com/news/2020/04/05/food-waste-coronavirus-pandemic-164557>.
8. Karpyn A, Young C, Weiss S. Reestablishing healthy food retail: changing the landscape of food deserts. *Child Obes* 2012;8(1):28–30.
9. Corkery M, Yaffe-Bellany D. 'We Had to Do Something': Trying to Prevent Massive Food Waste. *The New York Times*. [cited 20 May, 2020] [Internet]; Available from: <https://www.nytimes.com/2020/05/02/business/coronavirus-food-waste-destroyed.html?searchResultPosition=1>.
10. Repko M. Grocers limit food purchases, urge shoppers not to hoard as panic buying continues. *Kroger Ramps Up Hiring*. CNBC. [cited 20 May 2020] [Internet]; Available from: <https://www.cnbc.com/2020/03/14/grocers-limit-food-purchases-urge-shoppers-not-to-hoard-kroger-is-hiring.html>.
11. Bradley D. At Least 68 Grocery Store Workers have Died from COVID-19, Union President Says. [cited 20 May, 2020] [Internet]; Available from: <https://www.theindychannel.com/news/coronavirus/at-least-68-grocery-store-workers-have-died-from-COVID-19-union-president-says>.
12. U.S. Food & Drug Administration. FDA Provides Temporary Flexibility Regarding Nutrition Labeling of Certain Packaged Food in Response to the COVID-19 Pandemic. *FDA* [Internet]; 2020 [cited 3 April, 2020]; Available from: <https://www.fda.gov/food/cfsan-constituent-updates/fda-provides-temporary-flexibility-regarding-nutrition-labeling-certain-packaged-food-response-COVID>.
13. Warren K. 5 to 7 Million Restaurant Workers could Lose their Jobs by June - *Business Insider*. [cited 19 April, 2020] [Internet]; Available from: <https://www.businessinsider.com/restaurant-worker-layoffs-us-coronavirus-2020-3>.
14. Dunn CG, Kenney E, Fleischhacker SE, Bleich SN. Feeding low-income children during the COVID-19 pandemic. *N Engl J Med* 2020;382(18):e40.
15. Pinard C, Smith TM, Calloway EE, Fricke HE, Bertmann FM, Yaroch AL. Auxiliary measures to assess factors related to food insecurity: preliminary testing and baseline characteristics of newly designed hunger-coping scales. *Prev Med Rep* 2016;4:289–95.
16. Food Research & Action Center. COVID-19 Updates. [cited 20 May, 2020] [Internet]; Available from: <https://frac.org/COVID-19-updates>.
17. Bauer L, Parsons J, Shambaugh J. Who Stands to Lose if the Final SNAP Work Requirement Rule Takes Effect? *Brookings* [Internet] [cited 20 May, 2020]. Available from: <https://www.brookings.edu/research/who-stands-to-lose-if-the-final-snap-work-requirement-rule-takes-effect/>.
18. Babineaux-Fontenot C, Duvall Z. Joint letter from American Farm Bureau Federation and Feeding America: COVID emergency food response [Internet]. Available from: https://www.fb.org/files/Feeding_America_-_Farm_Bureau_Letter_to_USDA_4.13.2020.pdf.
19. Bleich S, Dunn C, Fleischhacker S. The Impact of Increasing SNAP Benefits on Stabilizing the Economy, Reducing Poverty and Food Insecurity amid COVID-19 Pandemic. *Durham, NC: Healthy Eating Research*; 2020 [Internet]. Available at: <http://healthyeatingresearch.org>.
20. An R. Effectiveness of subsidies in promoting healthy food purchases and consumption: a review of field experiments. *Public Health Nutr* 2013;16(7):1215.
21. Mills S, White M, Brown H, Wrieden W, Kwasnicka D, Halligan J, Robalino S, Adams J. Health and social determinants and outcomes of home cooking: a systematic review of observational studies. *Appetite* 2017;111:116–34.