

Ethical Allocation of Scarce Food Resources During Public Health Emergencies

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Abstract: Escalating demands for limited food supplies at America's food banks and pantries during the COVID-19 pandemic have raised ethical concerns underlying "first-come, first-served" distributions strategies. A series of model ethical principles are designed to guide ethical allocations of these resources to assure greater access among persons facing food insecurity.

Over the course of the COVID-19 pandemic from 2020-2021, scarcities have emerged as a unifying threat to the public's health. Scarcities of tests, protective equipment, masks, hospital beds, ventilators, medical personnel, and vaccinations have all contributed significantly to excess morbidity and mortality.¹

Deleterious impacts of scarcities tied to the pandemic extend well beyond medical settings. Tens of millions of Americans have lost their jobs, business interests, health insurance, financial support, and livelihoods.² Resulting poverty coupled with homelessness and other spiraling, economic trends have found millions of persons experiencing limited or uncertain access to food.³ At the

initial height of the pandemic in late April 2020, greater than 50 million Americans were food insecure, many for the first time.⁴ More than 20% of all U.S. households reported insufficient resources to buy food.⁵

Significant physical and mental health outcomes extend across affected populations.⁶ As households stretch budgets to provide basic food needs, failures to assure other necessities (e.g., medications, safe childcare, stable housing) exacerbate public health impacts.⁷ Older adults with chronic health conditions (e.g., diabetes, heart disease) experience heightened health risks when specific nutritional needs are unmet.⁸ Food insecure children face higher rates of hospitalizations, behavioral issues, and developmental impairments.⁹

Immediate assistance to remedy food scarcities arose through multiple public and private sector sources,¹⁰ including laudable efforts from America's network of food banks/pantries (FBPs). In response to significant spikes in demand and diminishing supplies,¹¹ many FBPs resorted to "first-come, first-served" distribution strategies. Though efficient in serving long lines of recipients in vehicles or on foot, hundreds of thousands of Americans were turned away or otherwise lacked access to FBP resources for multifarious reasons. Escalating cases of COVID-19 in 2021 prolong food distribution challenges.

Profound and unique ethical implications underlie FBPs' emergency distributions impacting the health of at-risk Americans. As presented in Figure 1 and elucidated below, consideration and utilization of a model

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series of ethical principles guiding FBP distributions may help assure greater access to essential food and sustenance among vulnerable populations during public health emergencies (PHEs).

Food Demands and Distributions During COVID-19

Americans' demand for food assistance rose at an extraordinary rate during the COVID-19 pandemic.¹² Despite infusions of federal and state emergency funds supporting multiple food access programs (e.g., SNAP

gap of 10 billion pounds of food estimated across FBPs between September 2020 to June 2021.¹⁶ Whenever FBP supplies cannot meet demand, some persons seeking emergency food resources may leave empty-handed. Recognizing the exigencies, FBPs adjusted their normal practices and modified distribution strategies to rapidly distribute food to as many persons as possible.¹⁷ In lieu of usual on site, grocery-store style services, many pantries hosted mobile food pantry events to bring goods directly to consumers.¹⁸ Pre-pandemic eligi-

food distribution approaches during the pandemic profoundly affected at-risk individuals and families seeking assistance. Hundreds of thousands of Americans "lost out" either because (1) they were at the end of the line when supplies ran dry; (2) distinct access barriers kept them from lining up at all; or (3) the supplies they received were insufficient in providing sustenance.

FBPs across multiple states (e.g., California, Illinois, Michigan, Ohio, Pennsylvania, Texas) reported turning people away in the Spring 2020 due to insufficient food supplies.²⁴ Many in-need of food were unable to travel to FBPs or wait in lines due to their health (e.g., seniors, disabled persons), care-taking needs (e.g., mothers with infants), or transportation barriers (e.g., homeless persons). Fear of stigma or discrimination, especially among immigrant populations, posed additional barriers. Rumors of federal Immigration and Customs Enforcement (ICE) raids thwarted undocumented immigrants from seeking food assistance in Texas even prior to the pandemic.²⁵ Others arriving at FBP drive throughs did not acquire foods necessary to fulfill their health needs (e.g., persons with diabetes, allergies, or who are pregnant), or aligned with their cultural/religious practices due to FBP limitations on pre-boxed food selections.²⁶

Persons at highest risk of food insecurity and related health consequences likely faced the greatest hurdles to accessing FBP resources, lending to significant disparities. Similar issues underscore the development of ethical plans for distributing other scarce resources, such as medical supplies, services,²⁷ and vaccines during PHEs.²⁸ Ethical allocations of these limited resources during the pandemic accommodate populations most in-need and likely to benefit. As an essential resource for health and well-being, food distributions during periods of scarcity in PHEs should ensure vulnerable populations are not further disadvantaged.

Profound and unique ethical implications underlie FBPs' emergency distributions impacting the health of at-risk Americans. As presented in Figure 1 and elucidated below, consideration and utilization of a model series of ethical principles guiding FBP distributions may help assure greater access to essential food and sustenance among vulnerable populations during public health emergencies (PHEs).

benefits, school lunches) Americans' needs were insatiable.¹³ Unprecedented levels of hunger presented unique challenges for FBPs faced with depleted supplies, receding volunteers, and extensive public health infection control requirements during the pandemic. Feeding America, the nation's largest network of food banks, reported in November 2020 that over 80% of FBPs across the country were serving more people than they did a year ago, yielding a 50% increase in food distributed nationally.¹⁴

Spikes in demand were compounded by supply-side limitations. FBPs experienced significant supply shortages. Private sector grocers, normally a reliable source for substantial inventories among FBPs, donated fewer food items as consumers depleted their shelves.¹⁵ Direct food acquisition costs from manufacturers increased substantially for FBPs as well, lending to a national supply

bility requirements, typically used to vet need-based recipients, were eased or waived.¹⁹

Many FBPs also began distributing food via pre-determined drive through sites (e.g., fairgrounds, stadiums, parking lots) allowing contactless service consistent with social distancing requirements.²⁰ Persons with means of transportation arrived early to receive pre-assembled boxes of food placed in their vehicles. In places like San Antonio in April 2020, persons waited for hours in lines over 6 miles long and 10,000 cars deep.²¹ Those first in line were first to receive food.²² In some case, FBPs rationed supplies further by limiting the number of food boxes distributed per vehicle, even if a vehicle contained members of several families.²³

Food Access Barriers and Ethical Conundrums

Access limitations and other challenges related to FBPs use of rapid

Ethical Norms Underlying the Distribution of Scarce Food Resources

Specific ethics principles may help guide FBP's distribution of limited food resources to quell rates of food insecurity in emergencies. With contributions from our project advisory group, we developed a series of *Model Ethics Principles: Food Bank/Pantry Distributions in Public Health Emergencies* ("Model Principles") (see Figure 1). These principles were derived from initial research and applications focused on prevailing ethics approaches to emergency distributions of scarce health/medical resources (e.g. ventilators, ICU beds, vaccines). From these analyses arose multiple precepts with input from experts in health and food/nutrition policy, emergency preparedness, FBP operations, and ethics.

The resulting Model Principles set forth core ethics statements (e.g., 1, 2, 3) underlying the distribution of scarce food resources supplemented by correlated, practical guidance (e.g., 1.1, 1.2, 1.3) for their implementation. The principles are not intended to create legal standards or set affirmative duties or obligations. Rather they guide FBP decision-makers and personnel at all levels toward more equitable food distribution policies and practices during periods of scarcity in PHEs.

Acknowledging the complex, laudable objectives of FBP's seeking to mete out food supplies in exigencies, the Model Principles proffer alternatives to typical distribution strategies that can unfairly disadvantage vulnerable populations facing barriers to accessing limited FBP resources. Assuring the health and safety of all persons involved in distributions, including FBP staff, volunteers, and recipients, is preeminent (Principle 1). FBP decision-makers must create a safe and healthy environment at distribution sites and ameliorate diverse risks ranging from infection spread to stigma and discrimination. This includes implementing evidence-based practices and protec-

tions for FBP personnel and recipients through line safety management (Principle 1) and personnel trainings on anti-discrimination and anti-stigmatization (Principle 5).

Advance planning and stewardship of food resources (Principles 2, 3) facilitate expedited, flexible distributions amid changing environments. Mechanisms for building public trust interwoven in the Model Principles strike an intricate balance between promoting individuals' needs for adequate food and FBP efficiencies in serving the greatest number of persons. Data collection and record keeping enable FBP's to calculate and better predict recipients' demands and promote public accountability through dissemination of progress reports and opportunities for stakeholder input (Principles 9, 10).

Equitable allocation of FBP resources during scarcity is also key (Principles 4, 5). Needs-based prioritization schemes should promote equity and social justice by serving populations at heightened risk of food insecurity and those facing specific food access barriers such as lack of transportation. Use of pre-packaged food boxes may be efficient during periods of scarcity, but individuals' dietary needs and cultural/religious preferences should also be respected where possible (Principle 7).

Serving the greatest numbers of persons possible in emergencies entails identification, communication, and prioritization of vulnerable populations for FBP distributions (Principle 10). FBP partners and other stakeholders should devise distribution policies and communicate them transparently leading up to and during periods of food scarcity. Communication systems should include alternatives to reach at-risk individuals, including those lacking regular access to electronic media (Principle 8).

Active engagement in diverse community partnerships allows FBP's to connect with additional persons or supplies that can help obviate shortages (Principle 3). While decision-makers are accountable to donors and

recipients to implement distribution policies fairly (Principle 9), they must also adapt to shifting circumstances through diverse distribution strategies that maximize resources and avoid waste (Principle 6). Following food distribution events where supplies are insufficient to meet community needs, for example, FBP's should identify and advocate for underserved persons, prioritizing them for future distributions (Principle 10).

Collectively the Model Principles are crafted to guide emergency distributions of scarce food resources through FBP's to assure equitable allocations and limit deleterious impacts specifically among vulnerable populations. How these principles are operationalized in the field among FBP's may vary significantly depending on (a) existing policies and available resources, (b) extent, type, and duration of the emergency, (c) size of the community, and (d) scope of needs experienced among community members. Irrespective of the unique settings or invocations of these principles, the goal remains the same: *assuring equitable access on expedited bases to as many food insecure Americans as possible to limit or prevent correlated public health harms.*

Figure 1

Model Ethics Principles: Food Bank/Pantry Distributions in Public Health Emergencies

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OVERVIEW. Profound ethical dilemmas arise for FBPs whose scarce food supplies are insufficient to meet heightened demands during sustained PHEs. Use of rapid distribution strategies during exigencies are efficient but may negatively impact the health of persons in need who cannot access limited supplies. Equitable distributions of scarce food resources may be guided by specific principles incorporating the following definitions:

Decision-maker: Person tasked with key roles and responsibilities in food distribution operations within FBPs.

Distribution: No-cost allocations of FBP food resources to recipients.

Donors: Individuals and entities donating food, money, or other resources to facilitate distributions among FBPs.

Food bank/pantry (FBP): A non-profit or charitable organization storing food in bulk quantities to allocate largely to specific agencies or programs, including pantries where recipients access resources directly.

Food insecurity: The inability to provide sufficient food over time to support healthy lifestyles.

Food producers: Grocers, restaurants, caterers, or other entities that produce and potentially distribute food to FBPs.

Food sovereignty: One's ability to obtain food resources in furtherance of nutrition, special dietary needs, and cultural/religious beliefs and practices.

Personnel: Regular or temporary employees or volunteers who further FBPs' mission, management, or operations.

Public health emergency (PHE): An occurrence or imminent threat of illness or adverse health outcome posing a substantial risk of death or disability to significant numbers of persons.

Recipient: One determined by FBPs as eligible for food distributions.

Scarcity: The limited availability of FBP food and other sustenance such that supplies are insufficient to meet immediate or long-term demands among recipients.

Stakeholder: An individual or entity interested in or affected by FBPs' food distribution strategies, including personnel, donors, other suppliers, recipients, and community partners.

Vulnerable populations: Communities or persons at greatest risk of food insecurity leading to deleterious health impacts.

MODEL PRINCIPLES. The following ethics principles and subsidiary practice-based applications are listed below in no order of priority.

1. PROTECTING FBP PERSONNEL & RECIPIENTS. Decision-makers are responsible for ensuring a safe and healthy work environment for FBP personnel and recipients.

1.1. Risk assessment. Decision-makers must regularly re-assess the health risks to personnel distributing food to recipients under evolving circumstances.

1.2. Evidence-based practices. Emergency food distribution policies, sanitation procedures, and social distancing requirements should be based on "best practices" to avoid harmful impacts among personnel and recipients during PHEs.

1.3. Personnel protections. Personnel should be provided appropriate protective equipment and services (e.g., paid sick leave, workers' compensation) during PHEs.

2. STEWARDSHIP OF FOOD RESOURCES. Decision-makers must anticipate food shortages during PHEs and strategize to ethically distribute food resources to mitigate scarcity.

2.1. Identify community needs. Prior to impending PHEs, personnel should ascertain the composition and needs of the community served and identify vulnerable populations.

2.2. Mitigation. Personnel should identify potential issues during PHEs (e.g., shortages of personnel or food) and align with entities (e.g., food producers) to acquire additional personnel and distribute excess supplies to recipients.

2.3. Allocation plan. A written distribution plan should clearly describe considerations for prioritizing recipients in PHEs when demands exceed supplies.

3. CIVIC ENGAGEMENT IN POLICIES. Developing food distribution plans or policies should incorporate input from diverse stakeholders to promote practicality and public trust.

3.1. Community partnerships. FBPs should establish diverse community partnerships with (a) food producers, (b) stakeholders, (c) government entities able to connect FBPs to persons at risk of food insecurity, and (d) entities that may assist with transporting persons or food during a PHE (e.g., USPS, ride share services).

3.2. Deliberative and inclusive process. Interested persons and entities should have an advance opportunity to participate in planning processes for distributing scarce food resources during PHEs via public meetings, advisory boards with diverse stakeholders, or other means.

3.3. Recognizing injustice. Community engagement should help (a) uncover historic or contemporary inequities that led to food insecurity and (b) justify prioritization plans.

4. EQUITY IN FOOD DISTRIBUTIONS. Scarce food resources must be managed during PHEs to prevent and mitigate food insecurity among vulnerable populations.

4.1. Needs-based prioritization. In prioritizing distributions, decision-makers may consider factors including household size/income, food access from other sources, health factors, other need-based indicators, and impacts on recipients.

4.2. Information collection. Where possible, personnel may ask recipients whose needs are unmet to provide contact information to be prioritized for future distributions.

4.3. Limited application and duration. Food supplies should be reserved for vulnerable populations only as needed. Prioritization of food resources should be limited in duration and discontinued when supplies sufficiently meet demand.

5. LIMITING FOOD ACCESS BARRIERS. Discrimination, stigmatization, or other access barriers to food among vulnerable populations during PHEs must be ameliorated to the extent possible.

5.1. Protections for recipients. FBPs must create an environment that is safe and respectful of all recipients through supportive policies (e.g., line safety management) and personnel trainings promoting recipients' dignity and privacy.

5.2. Enhancing access. Vulnerable populations may be provided distinct times or unique opportunities to access FBPs to receive food set aside for their immediate access.

5.3. Transportation barriers. Vulnerable populations lacking transportation to FBPs may be provided special access to transportation services.

6. AMELIORATING FOOD INSECURITY. FBPs must be prepared to diversify their allocation strategies to meet communal needs, especially among vulnerable populations.

6.1. Flexibility. As conditions shift rapidly during PHEs, decision-makers should regularly revisit and revise distribution strategies to ameliorate food insecurity.

6.2. Maximizing resources. Personnel must work to maximize available supplies through additional donations and coordination among other FBPs to direct supplies to specific locations in need.

6.3. Avoiding waste. To avoid waste, donated food items that do not conform to FBPs' specific packaging or other requirements may be provided to entities able to accept and safely distribute them.

7. RESPECT FOR FOOD SOVEREIGNTY. Even during periods of scarcity, personnel should acknowledge unique dietary needs and preferences of recipients where possible.

7.1. Amenable services. To maintain efficiency while promoting food sovereignty, personnel should devise strategies amenable to recipients with unique dietary needs or preferences, including separate lines, sequestered food resources, or delivery options.

7.2. Medical/health needs. FBPs may distribute food supplies tailored to unique dietary and nutritional needs due to health factors (e.g., food allergies, diabetes, pregnancy) of recipients.

7.3. Religious, cultural, and personal practices/preferences. To avoid waste, promote food sovereignty, and address limitations (e.g., lack of stable housing, refrigeration, or appliances), personnel should accommodate specific recipients' practices and preferences.

8. TRANSPARENT & ACCESSIBLE COMMUNICATIONS. Distribution policies in times of scarcity should be open, accessible, and publicized prior to and during implementation in PHEs.

8.1. Communication systems. FBPs should design communication strategies to reach vulnerable populations, including those lacking online access, through varied media (e.g., social media, email, websites, toll-free hotlines, broadcasts, and printed materials) circulated among stakeholders.

8.2. Openness. Public communications should clarify FBP distribution policies, including prioritized populations, documentation to receive scarce food resources, and service methods. Two-way communication systems allowing potential recipients to share concerns are preferred.

8.3. Shifts in policies. The public must be regularly informed of shifting distribution policies in PHEs through established communication channels.

9. ACCOUNTABILITY. Decision-makers are publicly accountable for assuring that personnel apply distribution policies fairly and appropriately.

9.1. Consistency. Allocation procedures must be standardized and applied consistently to promote equality and achieve best outcomes across vulnerable populations.

9.2. Progress reports. Decision-makers should monitor and report progress on a timely basis in meeting community needs, identifying successes, and rectifying failures of distribution practices.

9.3. Publication. Progress reports should be shared with donors and made publicly accessible with opportunities for input.

10. PRIORITIZATIONS. Following distribution events during scarcity, personnel should seek to identify persons with unmet needs and prioritize them for additional available supplies.

10.1. Assessing unmet needs. Personnel should conduct post-distribution efforts and data gathering to assess and record unmet needs.

10.2. Obviating needs. Persons identified as having unmet needs should be prioritized for future available supplies via advance invitations or direct deliveries.

10.3. Advocacy. Personnel should seek innovations in food distribution strategies to reduce food insecurity and enhance equity among vulnerable populations.

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References

- L.M. Rossen, A.M. Branum, F.B. Ahmad, P. Sutton, and R.N. Anderson, "Excess Deaths Associated with COVID-19, by Age and Race and Ethnicity — United States, January 26–October 3, 2020," *Morbidity and Mortality Weekly Report* 69 (2020): 1522–1527, available at <http://dx.doi.org/10.15585/mmwr.mm6942e2> (last visited January 28, 2021); S. Mervosh and M. Fernandez, "Months Into Virus Crisis, U.S. Cities Still Lack Testing Capacity," *New York Times*, July 15, 2020, available at <https://www.nytimes.com/2020/07/06/us/coronavirus-test-shortage.html> (last visited January 29, 2021).
- Tracking COVID-19 Unemployment and Job Losses, Georgetown University Center on Education and the Workforce website, available at <https://cew.georgetown.edu/cew-reports/jobtracker/> (last visited January 21, 2021).
- J.A. Wolfson and C.W. Leung, "Food Insecurity During COVID-19: An Acute Crisis With Long-Term Health Implications," *American Journal of Public Health* 110, no. 12 (2020): 1763–1765, available at <https://doi.org/10.2105/AJPH.2020.305953> (last visited January 28, 2021).
- "The Impact of Coronavirus on Food Insecurity in 2020," Feeding America website, available at <https://www.feedingamerica.org/sites/default/files/2020-10/Brief_Local%20Impact_10.2020_0.pdf> (last visited January 21, 2021).
- L. Bauer, "The COVID-19 Crisis Has Left Too Many Children Hungry," The Hamilton Project website, available at <https://www.hamiltonproject.org/blog/the_covid_19_crisis_has_already_left_too_many_children_hungry_in_america> (last visited January 28, 2021).
- "Importance of Nutrition on Health in America," Feeding America website, available at <https://www.feedingamerica.org/hunger-in-america/impact-of-hunger/hunger-and-nutrition> (last visited January 21, 2021).
- V.H. Murthy, "Food Insecurity: A Public Health Issue," *Public Health Report* 131, no. 5 (2016): 655–657, available at <https://doi.org/10.1177/0033354916664154> (last visited January 29, 2021).
- J.A. Wolfson and C.W. Leung, "Food Insecurity and COVID-19: Disparities in Early Effects for US Adults," *Nutrients* 12, no. 6 (2020): 1648, available at <https://doi.org/10.3390/nu12061648> (last visited January 29, 2021).
- A. Goger, "For Millions of Low-Income Seniors, Coronavirus is a Food-Security Issue," *Brookings Institute*, March 16, 2020, available at <https://www.brookings.edu/blog/the-avenue/2020/03/16/for-millions-of-low-income-seniors-coronavirus-is-a-food-security-issue/> (last visited January 21, 2021); Importance of Nutrition on Health in America, Feeding America website, available at <https://www.feedingamerica.org/hunger-in-america/impact-of-hunger/hunger-and-nutrition> (last visited January 21, 2021).
- Food and Nutrition Service, US Dept. of Agriculture, "FNS Responds to COVID-19," available at <https://www.fns.usda.gov/coronavirus> (last visited January 21, 2021).
- C. Friedersdor, "Food Banks Can't Go on Like This," *The Atlantic*, May 6, 2020, available at <https://www.theatlantic.com/ideas/archive/2020/05/food-banks-cant-go-like/611206/> (last visited January 29, 2021).
- N. Kulish, "Never Seen Anything Like It': Cars Line Up for Miles at Food Banks," *New York Times*, May 6, 2020, available at <https://www.nytimes.com/2020/04/08/business/economy/coronavirus-food-banks.html> (last visited January 29, 2021).
- S.A. Wetter, J.G. Hodge, E.A. Carey, and E.N. White, *Ethical Allocations of Scarce Food Resources in Emergencies: Project Briefing Book* (The Greenwall Foundation, 2021); 5 (on file with authors).
- P. Morello, "The Food Bank Response to COVID, By the Numbers," *Feeding America*, November 25, 2020, available at <https://www.feedingamerica.org/hunger-blog/food-bank-response-covid-numbers> (last visited January 29, 2021).
- Kulish, *supra* note 12.
- "America is Facing an 8 Billion Meal Shortfall in Charitable Food," *Feeding America* website, July 2020, available at <https://www.feedingamerica.org/sites/default/files/2020-09/FA_Supply_Demand_One-pager_FINAL.pdf> (last visited January 29, 2021).
- L. Winkie, "Food Banks have had a Record Year. Here's What it's Like to Run One," *Vox*, December 24, 2020, available at <https://www.vox.com/22195543/food-bank-coronavirus-texas-donate> (last visited January 29, 2021).
- Mobile Food Pantry Program, Feeding America website, available at <https://www.feedingamerica.org/our-work/hunger-relief-programs/mobile-food-pantry-program> (last visited January 21, 2021).
- J. Smith, "Pandemic, Growing Need Strain U.S. Food Bank Operations," *Wall Street Journal*, July 16, 2020, available at <https://www.wsj.com/articles/pandemic-growing-need-strain-u-s-food-bank-operations-11594891802> (last visited January 21, 2021).
- P. Morello, "How Do Drive-Thru Pantries Work?" Feeding America website, September 10, 2020, available at <https://www.feedingamerica.org/hunger-blog/how-do-drive-thru-food-pantries-work> (last visited January 21, 2021).
- N. Lakhani, M. Singh, and E. Salam, "We May have to Ration': US Food Banks Face Shortages as Demand Surges," *The Guardian*, April 17, 2020, available at <https://www.theguardian.com/us-news/2020/apr/17/us-food-banks-over-budget-demand-coronavirus> (last visited January 21, 2021).
- J. Mehta and A. Chang, "For Hungry Americans Across the Country, Food Insecurity Crisis Deepens," *NPR*, December 14, 2020, available at <https://www.npr.org/sections/coronavirus-live-updates/2020/12/14/946420784/u-s-faces-food-insecurity-crisis-as-several-federal-aid-programs-set-to-run-out-> (last visited January 21, 2021).
- C. Carlson, "A Food Bank Gave Out 1,200 Boxes in an Hour, but Even More People were in Line to Get One," *The Ventura County Star*, April 3, 2020, available at <https://www.vcstar.com/story/news/local/2020/04/03/coronavirus-update-long-lines-food-bank-pop-up-pantry-ventura-0jai/5113602002/> (last visited January 21, 2021).
- S.A. Wetter and J.G. Hodge, "What Should Food Banks do When Demand Outpaces Supply in Emergencies?" *The O'Neill Institute*, December 3, 2020, available at <https://oneill.law.georgetown.edu/what-should-food-banks-do-when-demand-outpaces-supply-in-emergencies/> (last visited January 21, 2021).
- J. Wilson, "Food Banks Struggle to Keep Pace with Immigrant Communities Hit Hard by Pandemic," *The Guardian*, May 4, 2020, available at <https://www.theguardian.com/>

- world/2020/may/04/food-banks-problems-immigrants-coronavirus-texas> (last visited January 21, 2021).
26. A.P. Flores, "Burien Food Bank Keeps Latinx Community Fed with Traditional Ingredients," *Crosscut*, August 19, 2020, available at <<https://crosscut.com/culture/2020/08/burien-food-bank-keeps-latinx-community-fed-traditional-ingredients>> (last visited January 21, 2021).
27. Institute of Medicine, *Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response* (Washington, DC: National Academies Press (US), 2012), doi:10.17226/13351.
28. E. Toner, A. Barnill, C. Krubiner, et al., *Interim Framework for COVID-19 Vaccine Allocation and Distribution in the United States* (Baltimore, MD: Johns Hopkins Center for Health Security, 2020), available at <https://www.centerforhealthsecurity.org/our-work/pubs_archive/pubs-pdfs/2020/200819-vaccine-allocation.pdf> (last visited January 29, 2021).