

# Food Access and Food Delivery Service: An Exploratory Study for the Role of Public Transportation During the COVID-19 Pandemic in 2020-2021— Executive Summary

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## Abstract

Transit ridership decreased dramatically due to the COVID-19 pandemic. In response, many agencies started a food delivery service. This study conducted two national surveys of transit agencies to evaluate food access before, during, and after the COVID-19 pandemic and the negative impact of the pandemic on transit operations and service. Results indicated transit agencies are highly interested in enhancing food access by providing food delivery and are eager to support the local food system. Several transit agencies provided food delivery years before the pandemic as one of their operational services to meet certain people's needs, and many began providing food delivery during the pandemic.

## Introduction

People with disabilities, seniors, low-income people, and other transit-dependent populations may have greater difficulty accessing fresh, nutritious food. This food access problem was exacerbated by the adverse events of the COVID-19 pandemic. In addition, the COVID-19 pandemic resulted in economic fallout that caused a significant hardship on individuals seeking food and placed many people in food insecurity in urban, rural, and tribal areas.

Transportation and transit agencies' service operations play a role in addressing the food access and food desert situations impacting Americans. To help increase food access for transit-dependent and other people affected by COVID-19 hardships, many transit agency providers connected with local organizations to deliver food. This kind of community engagement benefits transit-dependent people who have food delivered to their homes and helps to keep transit agencies stable during a drastic reduction in passengers and a general disruption of public transportation. Therefore, this study was conducted to evaluate the existing condition of food access in areas where public transit operates and to detect and assess the new food access provided by the public transportation agencies through food delivery.

## Research Questions and Objectives

Two questions drove this research:

1. What is the role of U.S. public transit agencies in increasing food access before, during, and after the COVID-19 pandemic?
2. How did public transit agencies in the United States respond to the COVID-19 pandemic, and what roles did they play in increasing food access by providing food delivery?

These two research questions allowed the study to fulfill its four objectives:

- Detect transit agencies' roles in reducing food deserts and increasing food access in the United States.
- Identify transit agencies' abilities for food delivery to customers' homes.
- Measure the transit agencies' willingness to collaborate with food banks, local food entities, and other food suppliers in their areas.
- Document the best practices of transit agencies during the pandemic.

## Methods

Two surveys were conducted of transit agencies across the country. The first survey was sent to 1,968 public transit agencies in December 2020. A

**Table 1. Transit Agencies’ Strategies for Operation and Service During the COVID-19 Pandemic (n=362)**

Response Options	Percentage	Count
We kept our service the same	38%	136
We reduced the number of vehicles in service	35%	128
We reduced the number of drivers	31%	112
We reduced fares	33%	118
We reduced our service hours	30%	107
We reduced some of the geographic coverage of our service	12%	44
We eliminated or reduced service on one or more routes	30%	107
Other, please specify	25%	91

decreased their service hours, and the same number of agencies had to eliminate or reduce service on one or more routes (Table 1). On the other hand, 38% (136) of the surveyed transit agencies did not change their service and continued offering the same operations and services they provided before the pandemic.

follow-up survey was sent in June 2021 to 148 agencies that agreed to provide additional information about their service.

State departments of transportation (DOTs) sent emails to local transit agencies to encourage them to participate in this study, which increased the number of responses from some states. The first survey collected 392 responses with a 22.2% response rate. The highest response rates were from Nebraska, Oregon, and Wyoming, with 30, 29, and 20 replies, respectively. Nineteen transit agencies from Montana responded to the survey, 18 from California and 18 from Michigan. Of the respondents, 67% (248 of 269) were rural transit agencies, 30% (110) were urban transit agencies, and 3% (11) were tribal transit agencies.

The second survey received 63 responses with a 43% response rate. The highest response rates were from Oregon, Nebraska, and Washington, with six, five, and five replies, respectively. Four replies came from Wyoming, as well as from Michigan. Of the respondents, 85% (50 of 63) were rural transit agencies, 14% were urban transit agencies, and 2% were tribal transit agencies.

**COVID-19 Impact on Transit Agencies’ Operations and Services**

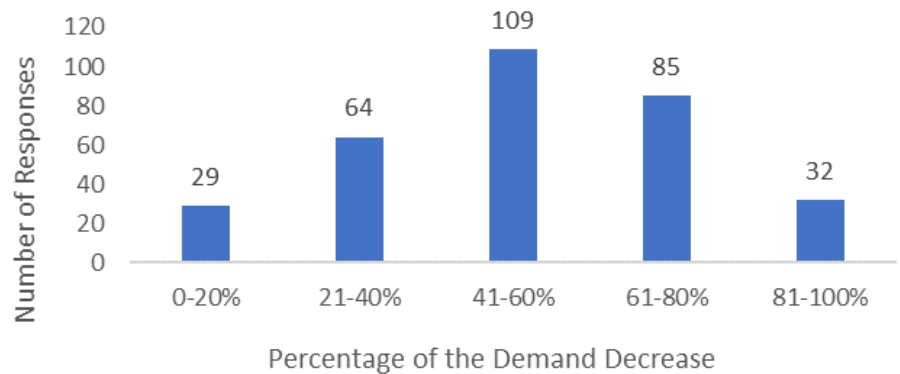
The pandemic forced many transit agencies to reduce or alter service. Among the agencies responding to the first survey, 35% (128) reduced the number of vehicles in service and 31% (112) reduced the number of drivers. Additionally, 33% (118) of the surveyed agencies reduced fares, nearly 30% (107)

Ninety percent (325 of 363) of the surveyed transit agencies experienced a decrease in the demand for their services. The decrease in ridership varied considerably among transit agencies, as shown in Figure 1. Many agencies experienced ridership declines of about 40-60%, while several had even greater drops in use.

**Food Delivery Service**

Many transit agencies responded to disrupted food access by providing food delivery service. The quantitative survey results reported 57 out of 392 responding transit agencies offered a food delivery service before the pandemic, 128 began providing food delivery during the first wave of the pandemic (after March 2020), and eight additional agencies during the second wave (after October 2020).

Table 2 shows the positive correlation between the period when the transit agencies started the food delivery service and their level of interest in providing food delivery. Eighty-one percent of the transit agencies that started the food delivery service before the pandemic were very interested



**Figure 1. The Average Decrease in Ridership Due to COVID-19 (n=319)**

**Table 2. Transit agencies provided food delivery service to their customers before and during the COVID-19 pandemic**

		Total	Before the pandemic	During the first wave of the	During the second wave of the	Does not provide a food delivery service
<b>Agency's level of interest in providing food delivery service</b>	Total Count (Answering)	392	57	128	7	198
	Not Interested 1	10%	0%	1%	0%	19%
	2	4%	0%	1%	0%	8%
	3	2%	0%	2%	0%	2%
	4	21%	5%	12%	0%	32%
	5	9%	2%	14%	13%	8%
	6	14%	9%	16%	13%	13%
	Very Interested 7	39%	81%	54%	63%	16%

in delivering food. Those that did not provide food delivery were shown to have a lower level of interest.

Table 3 represents the positive correlation between the transit agencies' willingness to continue the service in 2021 and their level of interest in providing food delivery service. Eighty-two percent of the transit agencies willing to continue the food delivery service in 2021 were highly interested in offering food delivery service, compared with 29% of transit agencies that were not willing to continue the service in 2021.

However, three main obstacles may hinder a transit agency's ability to provide food delivery: vehicle capacity, staff availability, and funding. Fifty-seven percent (209 of 364) of transit agencies have the vehicle capacity to provide food delivery service, while 27% (97) do not, and 16% (58) of the agencies were unsure of their vehicle capacity. Also, only 38% (135 of 362) of the transit agencies reported they have enough staff to provide the service, 36% (133) reported they did not, and 26% (94) of agencies were unsure of their staff capacity.

In addition to these obstacles, transit agencies mentioned other challenges in providing food delivery, including

advertising and informing people of the service; communication between suppliers, customers, and the agency; long travel distances in rural areas; and the logistics involved in transporting hot food, organizing orders, meeting food safety requirements, and accepting payment for groceries, while at the same time maintaining scheduled rides for passengers. Still, most agencies were satisfied with the approach they used. Those who would have done something different focused on implementing better marketing, using software to track and improve the service, and improving communications with food suppliers and all service entities.

Some agencies were uncertain about whether they would continue their food delivery service because they were unsure if regulations and funding would allow them to continue the service, they did not know if the need would remain after the pandemic, and they lacked the necessary staff or vehicles.

**Food Access and Local Food Support**

Ninety-nine percent (387 of 392) of transit agencies have a grocery store or supermarket within their service area, and 95% (372) of transit agencies provide rides to the grocery

**Table 3. Transit agencies were planning to continue the service after the COVID-19 pandemic**

		Total	Yes	No	Uncertain	store or supermarket within their service area.
<b>Agency's level of interest in providing food delivery service</b>	Total Count	187	82	28	77	Nearly 70% (246 of 362) of surveyed transit agencies were willing to collaborate with
	Not Interested 1	1%	0%	4%	0%	
	2	1%	0%	0%	1%	
	3	1%	0%	7%	0%	
	4	10%	3%	14%	16%	
	5	11%	4%	29%	12%	
	6	14%	11%	18%	16%	
	Very Interested 7	63%	82%	29%	56%	

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conducted the research.

For more details about  
this study, contact  
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other organizations to improve food access, only 7% (27) were unwilling, and 25% (89) were uncertain.

The interruption of global/regional food supply chains due to the COVID-19 pandemic in 2020 confirmed the importance of empowering and improving the local food system supply chains. Seventy-six percent (42 of 55) of transit agencies responding to the second survey were interested in playing a role in increasing access to local food in their service area. Thirty-eight percent (21 of 56) provide trips to local food venues. The agencies that provided these trips were classified into three groups:

- Transit agencies that provided trips to farmer's markets, either upon request or with a fixed schedule.
- Transit agencies that offered trips to a food bank or grocery stores where local foods were available.
- Transit agencies that picked up local produce from a local farmer and delivered it to their customers in the senior center.

In addition to the provided trips to local food sites, 71% (40 of 56) of transit agencies were interested in cooperating with local food system entities to create a business partnership that promoted local food and increased food access.

### **Conclusions**

U.S. transit agencies showed great concern about maintaining food access during the pandemic and meeting their customers' demand for food delivery service. The way they responded to the pandemic with delivery services was outstanding. Additionally, some agencies were already

meeting the demand before the pandemic. Others were willing to meet the demand regardless of whether it was identified during or after the pandemic. These actions indirectly helped control food insecurity and unemployment rates during the pandemic.

However, there is a need to review and revise current policies and regulations at all levels (federal, state, and local) to develop new standards that will allow public transportation to deliver food and other essentials such as prescriptions to those who need delivery service. In addition to modifying old grants and assigning new funds to motivate and engage transit agencies to increase access to healthy, affordable food and support local food initiatives, there is a need to identify the additional costs of modifying transit policy in transit to allow delivery of food and other essential items.

Additionally, this study determined three possible types of organizational visions for U.S. transit agencies: traditional, supply-demand, and societal. These three visions might influence agencies' missions and operations. Societal-focused agencies consider public transportation a community service. They seek opportunities to initiate services and play different roles to offer the best for their community needs. One respondent said that the agency was motivated to launch and provide food delivery because of the agency's vision and mission. "Our Vision and Mission are all about seeing a need and being innovative with solving issues in communities."