Assessment of the UWKC-DoorDash Food Delivery Program

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Introduction

While food insecurity has long been a concern in King County, food insecurity substantially increased early in the COVID-19 pandemic, rising from 10.7% in February 2020 to 14.2% in June 2020.[1] By some estimates, food insecurity was as high as 30% in Washington State in June 2020.[2] However, the strong federal and local response helped to mitigate rising food insecurity levels. As of October 2021, food insecurity had fallen to 11.9% in King County.[1] The increased levels of food insecurity King County residents experienced during the COVID-19 pandemic would likely have been even more pronounced and prolonged without federal and local intervention through food assistance programs and food banks.

Food bank demand rose in tandem with food insecurity during the COVID-19 pandemic, shedding light on the role food banks have played in moderating the impacts of food insecurity. Even prior to the COVID-19 pandemic Seattle and King County Public Health researchers found that local food banks were experiencing an increase in demand, with 60% of food bank respondents reporting an increase in the frequency of their food bank visits from 2017 to 2018.[3] With rising food insecurity as a result of the pandemic, the demand at food banks has reached even higher levels. Food banks across the entire US are serving on average 55% more people now than before the pandemic.[4]

These increases in both food insecurity and food bank demand prompted aid not only from the government, but also from non-governmental organizations such as United Way of King County (UWKC). See appendices A & B for a full discussion of federal aid programs in response to the COVID-19 pandemic. This report presents details about the response from UWKC.

UWKC is a non-profit organization that focuses on listening to community needs to then scale high-impact interventions. It seeks "to help people in need and solve the community's toughest challenges" by improving the well-being of community members and helping people rise out of poverty.[5] To achieve this, UWKC helps provide access to nutritious food through programs such as the Fuel Your Future/No Hungry Kid program and the Community Food program. The latter consists of emergency food grants, the Emergency Food and Shelter Program, Seattle and King County Food Funds, and the UWKC-DoorDash Food Delivery Program. UWKC believes that people shouldn't have to wait in line at a food bank and aims to reimagine the current emergency food system needs by considering individual, cultural, dietary, and taste preferences when providing food.[5]

To address the rising food insecurity caused by the COVID-19 pandemic and in line with its objectives and beliefs, UWKC launched a food delivery service in partnership with DoorDash.[6] UWKC also started this program in response to the shortcomings of traditional emergency food systems, such as limited delivery options, transportation and scheduling difficulties, and other barriers to accessing federal resources.[5] This free food delivery service provides food boxes or bags to households in need. After a client signs up for the program, UWKC matches them with their area food bank, which packs them a weekly food box for delivery. A DoorDash driver then delivers the box or bag to the household. While the service is free for participants, DoorDash

Inc. compensates their drivers for the deliveries. UWKC has an ongoing contract with DoorDash Inc. under which DoorDash Inc. has agreed to donate the cost of the trip.[6] This program does not have any eligibility requirements; individuals can participate regardless of income, participation in other government programs, or citizenship.

UWKC created the UWKC-DoorDash Program because access to healthy meals is important for every family. To help UWKC better serve the community and address food insecurity through this program, second-year graduate students in the Nutritional Sciences Program at the University of Washington conducted an evaluation of their current food delivery service. This project was completed as part of a Public Health Nutrition class and with the supervision of two instructors. Our team compared key demographic data from local food banks and the UWKC-DoorDash Program, analyzed 2021 UWKC-DoorDash client survey data, and conducted client interviews with the aim of understanding six key focus areas:

1. UWKC-DoorDash Program client demographics:
   ⇒ How do UWKC-DoorDash Program clients differ—and how are they similar—to the clients traditionally served by the food banks participating in the program?
2. Food bank usage among UWKC-DoorDash Program clients:
   ⇒ What did/does food bank usage look like among UWKC-DoorDash clients?
   ⇒ What are the characteristics of program clients who had never used a food bank prior to enrolling in the UWKC-DoorDash Program?
3. Client reasons for participating in UWKC-DoorDash Program:
   ⇒ Why do clients choose to get food through the UWKC-DoorDash Program over visiting a food bank in-person?
   ⇒ How has the motivation for using the UWKC-DoorDash Program changed throughout the pandemic?
4. Client satisfaction with the current UWKC-DoorDash Program:
   ⇒ Are clients satisfied with the food they currently receive through the program?
   ⇒ What are the characteristics of people who are more or less satisfied with the program?
5. Potential UWKC-DoorDash Program improvements:
   ⇒ What would make the program better for current clients?
   ⇒ What specific foods would clients like to see added to or included in their deliveries?
   ⇒ What program improvements do seniors and households with children want?
6. Other services used by UWKC-DoorDash Program clients:
   ⇒ What other programs and services do the UWKC-DoorDash Program clients use (e.g., SNAP, WIC, school meals, etc.)?
   ⇒ What are the characteristics of program clients not currently enrolled in SNAP, and what does SNAP eligibility look like among program clients?

In addition to answering the research questions described above, nine students completed capstone projects for UWKC on related food access research questions. These final products from the capstone projects are cited throughout this report and appended to the end as appendices. See the List of Appendices for the list of all capstone projects.

Methods

To answer the above research questions, we analyzed both quantitative and qualitative data. Below, we present a description of each data source and our data analysis methods.

Quantitative methods

Data sources

We analyzed quantitative program data from three sources:
1. The 2020-2021 UWKC-DoorDash Program Intake Form
2. The 2021 UWKC-DoorDash Program Survey
3. 2020 King County Food Bank Intake Forms

The UWKC-DoorDash Program Intake Form and the King County Food Bank Intake Forms included only client demographic data. The UWKC-DoorDash Survey included both client demographic data as well as descriptive data provided by clients about the program.

Samples

We analyzed data for approximately 3,940 clients from the UWKC-DoorDash Program Intake Form. From the UWKC-DoorDash Survey, there were 468 respondents, and final analysis of the food bank data included approximately 135,165 clients. The total number of clients analyzed for each variable varied slightly based on data completion and availability for each variable. We include a detailed description of sample limitations below.

Food bank sample limitations

Data from the King County Food Bank Intake Forms originally included thirteen King County food banks, but four reported no data, with "unknowns" for all clients across all variables (with the exception of total client count). We excluded the following four food banks from the data: Ballard Food Bank (66,045 clients), North Helpline (77,874 clients), Pike Market Senior Center (4,308 clients), and Tukwila Pantry (7,650). Excluding these food banks resulted in the exclusion of 155,877 food bank clients, which was 54% of the original dataset (n= 291,042). Additionally, two food banks, Maple Valley Food Bank and Emergency Services (2,027 clients) and White Center Food Bank (9,657 clients), had 20-50% "unknowns" across all variables. As a result, the overall King County food bank demographic dataset had a large number of unknowns, and we excluded all unknowns from the data analysis. We included the known data from Maple Valley Food Bank and Emergency Services and White Center Food Bank in the analysis.

Program sample limitations

The UWKC-DoorDash Program Intake Form differed from the UWKC-DoorDash Survey in that UWKC did not start using the intake form until later in the program, and thus it may be missing information about clients who joined when the program initially launched. For this reason, we considered the UWKC-DoorDash Survey to be the most appropriately comparable to the food

bank demographics. Therefore, when testing for statistical significance, we only compared the UWKC-DoorDash Survey data and data from the King County Food Bank Intake Forms.

Statistical analysis of demographic variables

Race/ethnicity

Race and ethnicity were collected differently across data sources, with Hispanic/Latinx listed as a racial group on the UWKC-DoorDash Survey and UWKC-DoorDash Program Intake Form, while listed as an ethnicity on the food bank intake forms. This could have led to many Hispanic/Latinx clients selecting "other," "multiracial", or "White" for their race on the food bank intake forms.

Because data sources collected race/ethnicity data differently, we did not compare these variables for statistical significance and interpret differences with caution.

Income

The UWKC-DoorDash Survey income data included 10 response options (less than $10,000, $10,000 to $14,999, $15,000 to $24,999, $25,000 to $34,999, $35,000 to $49,999, $50,000 to $74,999, $75,000 to $99,999, $100,000 to $149,999, $150,000 to $199,999, and $200,000 or more). The King County food bank income data included four classifications based on the U.S. Department of Housing and Urban Development (HUD) Income Categories as a percentage of King County Area Median Income (AMI) (Under 30%, Under 50%, Under 80%, or Equal or Above 80%). To compare client income across the two datasets, we calculated income expressed as a percentage of AMI for each UWKC-DoorDash Program client using their income category and household size. To do this, we assigned each household the income midpoint from the income range they selected. We then assigned each respondent to the corresponding HUD category based on income and household size. Finally, we compared the UWKC-DoorDash Survey respondents and King County food bank clients. Comparisons are not exact given the need to calculate and use the midpoint of the income classifications from the UWKC-DoorDash Survey.

To test for statistically significant differences in income levels between UWKC-DoorDash Program clients and food bank clients, we used a two-proportion z-test with R Statistical Software (v4.1.2; R Core Team 2021).

Children served

To understand the age composition of clients served, we compared the proportion of all UWKC-DoorDash Program clients that were children, to the proportion of all food bank clients that were children. Because the food bank demographic data do not include household level data, we were unable to calculate the percentage of all households with a child. For this reason, we are presenting client age composition as a proportion of all clients served that were children. To calculate the proportion of clients served that were children, in each dataset we summed the total number of children served, and divided it by the total number of clients served. We calculate total clients served by adding together the sum of all children served, and the sum of

all adults served. We define children as all individuals under the age of 17; we define adults as all individuals ages 18 and over.

To test for statistically significant differences in household composition, we used a two-proportion z-test with R Statistical Software (v4.1.2; R Core Team 2021).

Other demographic variables

We analyzed other demographic variables including household size, household disability, and veteran/military status for the UWKC-DoorDash Survey data and King County Food Bank data sets. However, because questions were asked differently, or due to missing data, we could not compare these variables for statistical significance. See Table 1 footnotes for more information.

Statistical analysis of other variables

Food bank vs. UWKC-DoorDash Program use

To answer the research question "Why do clients choose to get food through the UWKC-DoorDash Program over visiting a food bank in-person?," we analyzed results from the 2021 UWKC-DoorDash Survey. Variables in this dataset included:
   a) month and year of signup (July 2020 - November 2021),
   b) reasons ("All Reasons") for participation (multiple answers per respondent),
   c) top reason ("Top Reason") for participation (one answer per respondent), and
   d) reason for participating in the UWKC-DoorDash Program vs. a traditional food bank (open-ended response).

To determine whether motivation to participate in the UWKC-DoorDash Program changed over time, we compared "All Reasons" and "Top Reasons" of early signups (Spring 2020 - Fall 2020) to later signups (Winter 2021 - Fall 2021) using descriptive statistics and a chi-square test in Microsoft Excel. We then re-coded each month of signups as a continuous variable (1-17) and tested for significance ($p < 0.05$) using an ANOVA single-factor analysis and Tukey HSD.

Program client satisfaction

To describe respondents' satisfaction with the program, we used Microsoft Excel to tabulate the frequency of participant responses to the UWKC-DoorDash Survey question, "How satisfied are you with the food you receive in your food delivery boxes?" We further tabulated response frequencies based on demographic characteristics (i.e., race, household composition, age group, annual household income, disability status, and language) to illustrate the differences in satisfaction between these groups.

Program client interest in specific foods

We used the same method of tabulating response frequencies to measure the number and percent of participants who expressed interest in receiving more of certain foods suggested by the survey question, "What foods, if any, would you like to see more of in your delivery box? Please check all that you're interested in."

Use of SNAP among program clients

To describe UWKC-DoorDash clients' utilization of the Supplemental Nutrition Assistance Program (SNAP), we used Microsoft Excel to tabulate the frequency of participant responses to the UWKC-DoorDash Survey question, "What other programs, if any, do you or someone in your household participate in?" For participants who indicated that they do not receive SNAP, we tabulated the frequency of responses to the question, "Have you ever applied for SNAP/EBT benefits?" For participants who indicated that they have not applied for SNAP, we tabulated the frequency of responses to the question "Why have you not applied for SNAP benefits?" We also tabulated the following characteristics among SNAP non-recipients: race, household size, age group, disability status, and income.

SNAP eligibility among program clients

In addition to current SNAP use, we used the client survey data to estimate SNAP eligibility. We created a new variable called "household size" by adding together the reported number of adults and children in each client household. We then compared reported annual income and household size with the thresholds for Basic Food program (Washington State's SNAP) to determine whether a client was or was not eligible for SNAP.[7] Because income was reported categorically, and SNAP eligibility criteria are continuous, a portion of households with income near the upper limit for SNAP eligibility could not be categorized as eligible or not. This portion of households was categorized as "may be eligible" for SNAP.

Use of other programs among program clients with children

To describe UWKC-DoorDash Program clients' utilization of programs available to households with children, we used Microsoft Excel to tabulate the frequency of responses among participants with children to the UWKC-DoorDash Survey question, "What other programs, if any, do you or someone in your household participate in?" The programs we tabulated frequencies for are the Pandemic EBT Program, WIC, the National School Lunch Program, the Free Summer Meals for Kids program, and SNAP.

Qualitative methods

Data sources

We analyzed qualitative program data from two sources:
1. The 2021 UWKC-DoorDash Program Survey, and
2. Phone interviews with program clients

The UWKC-DoorDash Survey included descriptive data provided by clients about the program. We collected additional data in interviews with 46 program clients; we describe how we collected the interview data in the following section.

Samples

In the UWKC-DoorDash Survey, respondents indicated whether they would be interested in participating in a follow-up interview. From this list, we then randomly selected individuals to contact for an interview. We contacted selected respondents through email, phone call or text message for scheduling the interview and followed up via phone calls. We contacted possible respondents five times before randomly selecting a different participant. We conducted a total of 46 phone interviews. There was a total of seven interviewers, all graduate students at the University of Washington. The team collected the data through semi-structured phone interviews consisting of 25 open-ended questions and 22 guided prompts. Due to time constraints, we only analyzed 36 interviews for this report (note that all 46 interviews will be included in a separate analysis being conducted by a UW Health Services PhD student and will be available in 2022).

The team recorded 45 of the 46 interviews after obtaining verbal consent from participants. Interviews lasted between 15 to 60 minutes. To ensure anonymity, we assigned all participants a unique number prior to analysis. We transcribed recordings verbatim for analysis, with the exception of one interview for which the interviewer took notes while the interview was taking place. Of the total of 46 interviews, bilingual students conducted 10 in Spanish; the team conducted the rest of the interviews in English. The bilingual students translated the Spanish interviews into English prior to the analysis.

Qualitative analysis of UWKC-DoorDash Survey data

To better understand what changes clients would like to see from the UWKC-DoorDash Program, we analyzed open-ended response data from the UWKC-DoorDash Survey. The survey included three open-ended questions:
   a) "What changes, if any, should we make so this program best meets your needs?"
   b) "What are the top 2 food items you would most like to see more of in your delivery box?"
   c) "Is there anything else you would like to tell us about the foods that you get in your boxes?"

We used an inductive-coding approach to analyze the responses to all three open-ended questions. First, we read each respondents' answer to each open-ended question and created a code to capture the theme of each response. Second, we consolidated our initial list of codes into main categories, which we applied in a second read-through of the responses.

To capture the differences in changes requested by respondents with children in the household and participants who are seniors, we calculated the number and percentage of each code for the entire sample, the sample of participants with children, and the sample of seniors. To visualize the data coded regarding the foods that respondents would like to receive more of, we totaled the coded items from each category and developed a TreeMap to display this information.

We created the codebook under the supervision of the instructors. We followed a combined deductive and inductive method, whereby we created the majority of codes a-priori based on our research questions, and added additional codes later in an effort to best capture emergent themes. After creating the themes, we assigned each theme to the most relevant research focus area. Prior to analyzing the entire dataset, we triple-coded one interview and double-coded three other interviews to resolve any discrepancies in code applications and thereby ensure inter-coder reliability. We manually coded the interviews with Microsoft Excel by highlighting quotes and categorizing them into emergent themes and subthemes.

Results

UWKC-DoorDash Program client demographics
Race/ethnicity
As shown in Table 1, UWKC-DoorDash Program clients are racially and ethnically diverse. Based on UWKC-DoorDash Survey data, 24% of clients are Latinx, 23% are White, 18% are Asian/South Asian, 12% are African/American American/Black, 3% are Indigenous/Native American and 2% are Native Hawaiian/Pacific Islander.

Income
We compared income based on the U.S. Department of Housing & Urban Development (HUD) Income Categories as a percentage of King County Area Median Income (AMI). For reference, the average income for a household of four that corresponds with 30% AMI is less than $34,700. Data analysis showed that 70% of survey respondents had incomes under 30% of AMI, 17% of survey respondents had incomes under 50% of AMI, 12% of survey respondents had incomes under 80% of AMI, and 1% of survey respondents had incomes equal or above 80% of AMI.

Children served
Four hundred and sixty-eight clients responded to the UWKC-DoorDash Survey. This represents a total number of 1,580 clients served. Of this total, 36% were children (N=567).

Disability
Nearly half of survey respondents had someone in the household with a disability. Data analysis showed that 42% of UWKC-DoorDash Program clients had someone in the household with a disability.

Proportion of households served with college students
From the UWKC-DoorDash Intake Form, 2,199 responded to the question of whether someone in their household was enrolled in a community or technical college. Of these respondents, 29% indicated that there was someone in their household who was enrolled (N=641). For a

literature review and detailed discussion of program participation among college students and food insecurity, see Appendix C.

UWKC-DoorDash Program clients and food bank client similarities & differences

There are several differences between UWKC-DoorDash Program clients and traditional food bank clients. The UWKC-DoorDash Program served a significantly greater proportion of children and a greater proportion of clients with disabilities as compared to King County food banks. Additionally, UWKC-DoorDash served more Asian/South Asian clients than food banks, while food banks served more very low-income households compared to UWKC-DoorDash Program.

Race/ethnicity

Compared to food banks, the UWKC-DoorDash Program serves a greater proportion of people who identify as Asian/South Asian (18% vs. 9%, respectively). For additional context, in King County, 20% of individuals who have incomes below the federal poverty line identify as Asian. This shows that the UWKC-DoorDash Program is serving this population in a way that food banks are not, given that only 9% of food banks clients are Asian, compared to 20% of Asian individuals who are low-income in King County, and 18% of clients served by UWKC-DoorDash Program who are Asian/South Asian (Appendixes D & E). Lower food bank usage among Asian communities could potentially be due to racism against Asian communities during the COVID-19 pandemic, with more Asian/South Asian individuals possibly choosing home delivery to avoid attending food banks in person due to fear of discrimination.

Differences in data collection for racial demographics methods may have also influenced some of the results displayed in the results tables. For example, race and ethnicity were collected differently across data sources, with Hispanic/Latinx listed as a racial group on the UWKC-DoorDash Program Intake Form and listed as an ethnicity on the food bank intake forms. This could have led to many Latinx clients selecting the "other," "multiracial" or "White" for race on the Food Bank Intake Forms. Thus, while the demographics table shows that food banks serve a higher percentage of "other" and "multiracial" populations, this is potentially not the case given the differences in data collection methods.

Income

Significantly more food bank clients have very-low income as compared to UWKC-DoorDash Program clients (Table 1). Results showed that 80% of food bank clients were under 30% AMI compared to 70% of program clients (p<0.001). This means that while a high percentage of both UWKC-DoorDash Program and food bank clients have very-low income, food bank clients serve a greater proportion of very-low income clients than the UWKC-DoorDash Program. However, it is possible this difference could be due to reporting differences. About 10% of UWKC-DoorDash Program clients reported "Don't Know" or "Prefer Not to Answer" when asked about their household income, and it is possible that these clients are part of the very-low income classification. This is supported by previous research which suggests that missing income data tends to be non-random, with people who have lower incomes more frequently not reporting income compared to sample means.[8]

Children served

As shown in Table 1, UWKC-DoorDash Program serves a significantly greater proportion of children compared to food banks (36% of program clients were children vs. 32% of food bank clients were children [p<0.001]). This was similarly reflected in the comparison to total lower-income King County residents, in which program clients had a higher number of children in the household (mean= 0.7 vs. 0.31) (Appendix E). During the phone interviews, clients with children stated that it was easier to acquire food through the UWKC-DoorDash Program than to bring their children to the food bank or to find someone to watch their children while they went to the food bank.

"It wasn't really ideal with young children. At the time I only had one child, now I have four, it's not something I would want to have to do." - #20

"I was going almost daily to the food bank in Auburn. I have 2 kids, a 3yo and a 4yo and the foodbank is really small, so they only let a few people in at a time so it was impossible for me to take the kids with me." - #33

"With children it is very difficult to get to the food bank before they close. So when the food is delivered to your home it is much better and easier." - #17

Disability

As shown in Table 1, the percentage of clients with a disability in the household was higher among UWKC-DoorDash Program clients compared with food bank clients. Data analysis showed that 42% of UWKC-DoorDash Program clients had someone in the household with a disability, and 9% of food bank clients reported a disability among the head of household. Clients with a disability or clients with a household member with disability who were interviewed expressed that receiving food from the UWKC-DoorDash Program was substantially easier than going to a food bank in person.

"I am caring for my blind, disabled brother. And so that is why I signed up for the home delivery program, because he actually cannot make it to the food bank." - #15

"I don't have a job because I have a disability and I live on my pension. This helps a little." - #11

"I have, like, some disability stuff and, you know, not having to carry a big bag of groceries, or two bags, on a bus, or, you know, public transportation. So, it's like there's benefits of having it brought right to the building." - #22

Table 1. Food bank and UWKC-DoorDash Program client demographics, as measured by the UWKC-DoorDash Survey, UWKC-DoorDash Program Intake Form, and food bank intake forms.

	UWKC-DoorDash Survey	King County Food Bank Intake Forms	UWKC-DoorDash Intake Form	
	n (%)	n (%)	n (%)	p-value[1]
Race/ethnicity[2,3]	**n=467**	**n=111,625**	**n=4,084**	
Hispanic / Latino Ethnicity	110 (24%)	*31,448 (31%)[2]*	856 (21%)	
African / African American / Black, Non-Hispanic	54 (12%)	14,073 (13%)	662 (16%)	
Asian / South Asian, Non-Hispanic	86 (18%)	9,648 (9%)	272 (7%)	
White / Caucasian, Non-Hispanic	109 (23%)	43,216 (39%)	732 (18%)	
Indigenous / Native American / Alaska Native, Non-Hispanic	15 (3%)	1,588 (1%)	61 (1%)	
Native Hawaiian / Pacific Islander, Non-Hispanic	8 (2%)	3,975 (4%)	86 (2%)	
Other, Non-Hispanic	15 (3%)	23,404 (21%)	172 (4%)	
Multiracial, Non-Hispanic	36 (8%)	15,721 (14%)	167 (4%)	
Prefer not to answer	19 (4%)	n.d.	111 (3%)	
No Response	15 (3%)	n.d.	965 (24%)	
Household size[4]	**n=409**	**n.d.**	**n=1,887**	
1-2	139 (34%)		656 (35%)	
3-4	145 (35%)		624 (33%)	
5-6	87 (21%)		423 (22%)	
7-8	27 (7%)		133 (7%)	
>8	11 (3%)		51 (3%)	
Household disability[5]	**n=454**	**n=94821**	**n=1,337**	
Yes	192 (42%)	8,201 (9%)	505 (38%)	
Prefer not to disclose	32 (7%)	n.d.	72 (5%)	
Veteran / military status[6]	**n.d.**	**n=68,720**	**n=1,334**	
Yes		2,660 (4%)	95 (7%)	
Prefer not to disclose		n.d.	51 (4%)	
Household college student[7]	**n.d.**	**n.d.**	**n=2,199**	
Yes			641 (29%)	
Income[8]	**n=408**	**n=117,488**	**n.d.**	
Under 30% AMI	287 (70%)	94,420 (80%)		<0.001*
Under 50% AMI	68 (17%)	19,153 (16%)		0.895
Under 80% AMI	12 (3%)	3,650 (3%)		0.961
Equal or Above 80% AMI	1 (0%)	265 (0%)		1
Don't Know	20 (5%)	n.d.		
Prefer Not to Answer	20 (5%)	n.d.		
Client age composition[9]	**n=1,580**	**n=106,880**	**n=6,942**	
Children (0-17)	567 (36%)	34,075 (32%)	2,752 (40%)	<.001*
Adults (18+)	1,013 (64%)	72,805 (68%)	4,190 (60%)	<.001*

* Indicates a significantly different p-value of less than 0.05.

1: p-values are comparing the difference between the UWKC-DoorDash Survey group and the food bank intake form group.

2: The Hispanic /Latino ethnicity category was collected separately from race in the food bank intake form group, whereas it was asked as a race in the other groups. Because of this, the food bank intake form group Hispanic/Latino number uses a separate denominator of 100,334 based on the Latino ethnicity question. The other two groups consist of only non-Hispanic racial categories.

3: The "Other" row includes both those who selected "Other" or Middle Eastern races for the UWKC-DoorDash Survey and Intake groups, while it includes only the "Other" selection for the food bank intake form group.

4: Household size was calculated by adding together the total number of adults and children in the household, including the respondent.

5: For the Food Bank Intake Form group, the values are based on head of household disability status, whereas the other groups were based on having at least one member of the household with a disability.

6: Data reflects if someone in the household is a veteran in the UWKC-DoorDash Intake Form group or whether the head of household has veteran or military status in the food bank intake form group.

7: Data reflects if anyone in the household is enrolled in a King County community or technical college.

8: Using U.S. Department of Housing and Urban Development (HUD) Income Categories as a percentage of Area Median Income (AMI) Income data from the UWKC-DoorDash Survey data included ten income ranges (Less than $10,000, $10,000 to $14,999, $15,000 to $24,999, $25,000 to $34,999, $35,000 to $49,999, $50,000 to $74,999, $75,000 to $99,999, $100,000 to $149,999, $150,000 to $199,999, $200,000 or more). Income data from the King County food bank intake forms included four income ranges based on U.S. Department of Housing and Urban Development (HUD) Income Categories as a percentage of King County AMI (Under 30%, Under 50%, Under 80%, or Equal or Above 80%). UWKC-DoorDash Survey range midpoints were calculated for each respondent and assigned to the corresponding HUD category based on income and household size. Data was then compared between the UWKC-DoorDash Survey respondents and King County food bank clients. Please note comparisons are not exact given the need to calculate and use the midpoint of the income range from the UWKC-DoorDash Survey.

9: The proportion of households that were designated as having either children or adults.

Food bank usage among UWKC-DoorDash Program clients

Prior to COVID-19, 31% of UWKC-DoorDash Program clients had never used a food bank. During COVID-19 before the start of the UWKC-DoorDash Program, 54% did not use a food bank. This demonstrates that the program has reached clients who had not used a food bank previously (Table 2). During COVID-19, while using the UWKC-DoorDash Program, 75% did not use a food bank. It is important to note that while the program appears to be meeting a need, some program clients continued to use food banks while enrolled in the program, with 25% still accessing food banks. This could indicate that there is still a need among households for a greater quantity or variety of food, despite participation in the UWKC-DoorDash Program. It could also indicate that clients are going to food banks to procure items not available through the program (e.g., toiletries and other household items).

"It would be nice if we could get household stuff... I would just like the program to look like how the food bank is, how our pantries are set up." - #19

"I think if I could pick like two things to receive, like with each delivery, like cat litter or toilet paper, like I can always use." - #35

"I would also suggest that they should give away free soap for washing clothes, for washing dishes...Soap, like for clothes, for washing dishes is what I would say would be a big support." - #15

"I noticed the difference when I was able to go to the food bank. I was able to get ground beef, chicken, you know, whole chickens. I was able to get lunch meat, you know, before COVID hit, you know. I was going there for quite a while, so before COVID hit, they would allow you to go in, so I was able to pick 3 meats. And since COVID hit, with the DoorDash, they send canned meat." - #24

"I think at [the] food bank they do give a lot more, they give like a cart full. With DoorDash delivery they just give like a box and then sometimes a little box with vegetables and then meat. Food bank you go, and they give like a whole… I think now they give a little less food… but before they gave like a full cart and then they have like a whole bunch of other stuff." - #36

Table 2. Food bank usage by UWKC-DoorDash Program clients before and during COVID-19.

Food bank use before COVID-19, prior to signing-up for the UWKC-DoorDash Program (n=452)	
Never	**138 (31%)**
2-3 times per week	66 (15%)
Once per week	72 (16%)
Once a month	40 (9%)
2-3 times per year	81 (18%)
Once per year	13 (3%)
One time only	42 (9%)
Food bank use during COVID-19, prior to signing-up for the UWKC-DoorDash Program (n=448)	
Never during COVID	**240 (54%)**
2-3 times per week	46 (10%)
Once per week	52 (12%)
Once a month	31 (7%)
2-3 times per year	36 (8%)
Once per year	0 (0%)
One time only	43 (10%)
Food bank use during COVID-19, after signing-up for UWKC-DoorDash Program (n=450)	
Never during COVID	**338 (75%)**
2-3 times per week	20 (4%)
Once per week	28 (6%)
Once a month	20 (4%)
2-3 times per year	20 (4%)
Once per year	0 (0%)
One time only	24 (5%)

[Demographic characteristics of UWKC-DoorDash Program clients who had never used a food bank prior to the COVID-19 pandemic](#)

Of the UWKC-DoorDash Program clients who had not used a food bank prior to the COVID-19 pandemic, 38% identified as Asian/South Asian. This demonstrates that a large number of Asian/South Asian clients using the UWKC-DoorDash Program had never used a food bank prior to using the program. This trend is also reflected in the food bank demographic data, which showed that only 9% of food bank clients were Asian/South Asian (Appendixes D & E). As

previously mentioned, this could potentially be due to racism against Asian communities during the COVID-19 pandemic (Chen 2020), with Asian communities potentially being hesitant to use food banks during the pandemic for fear of discrimination. Additionally, this points to the fact that the UWKC-DoorDash program is meeting a unique need for this specific community compared to food banks, as mentioned previously.

Other demographic comparisons between UWKC-DoorDash Program clients who had never used a food bank and food bank clients are shown in Table 3, but these comparisons do not find statistically significant differences. It is also important to note that while some differences appear in regard to Hispanic/Latino and White clients, these are potentially due to the differences in data collection methods across sources (see Methods for more information).

Table 3. Demographics of food bank clients and UWKC-DoorDash Program clients who had never visited a food bank before enrolling in the UWKC-DoorDash Program.

	King County Food Bank Intake Forms	Prior non-users of food banks (UWKC-DoorDash Survey)[1]
	n (%)	n (%)
Race[2,3]	**n=111,625**	**n=109**
Hispanic / Latino Ethnicity	*31,448 (31%)[2]*	20 (18%)
African / African American / Black, Non-Hispanic	14,073 (13%)	15 (14%)
Asian / South Asian, Non-Hispanic	9,648 (9%)	41 (38%)
White / Caucasian, Non-Hispanic	43,216 (39%)	17 (16%)
Indigenous / Native American / Alaska Native, Non-Hispanic	1,588 (1%)	0 (0%)
Native Hawaiian / Pacific Islander, Non-Hispanic	3,975 (4%)	0 (0%)
Other, Non-Hispanic	23,404 (21%)	3 (3%)
Multiracial, Non-Hispanic	15,721 (14%)	3 (3%)
Prefer not to answer	n.d.	6 (6%)
No Response	n.d.	4 (4%)
Household size[4]	**n.d.**	**n=107**
1-2		28 (30%)
3-4		40 (43%)
5-6		22 (23%)
7-8		4 (4%)
>8		0 (0%)
Respondent age	**n.d.**	**n=107**
18-30		29 (27%)
31-54		41 (38%)
55-64		17 (16%)
65+		20 (19%)
Household age composition[5]	**n=106,880**	**n=367**
Children (0-17)	34,075 (32%)	111 (40%)
Adults (18+)	72,805 (68%)	256 (60%)

1: This group includes those of the UWKC-DoorDash Survey who indicated that they had not used a food bank prior to enrolling in the UWKC-DoorDash Program.

2: The Hispanic/Latino Ethnicity category was collected separately from race in the food bank intake form group, whereas it was asked as a race in the UWKC-DoorDash Survey. Because of this, the food bank intake form group Hispanic/Latino number uses a separate denominator of 100,334 based on the Latino ethnicity question. The other group consists of only non-Hispanic racial categories.

3: The "Other" row includes both those who selected "Other" or Middle Eastern races on the UWKC-DoorDash Survey, while it includes only the "Other" selection for the food bank intake form group.

4: Household size was calculated by adding together the total number of adults and children in the household, including the respondent.

5: The proportion of client respondents' households that were either designated as children or adults. No significant differences were found.

Client reasons for participating in the UWKC-DoorDash-Program

UWKC-DoorDash Program clients had clear motivations for using the program. Both quantitative and qualitative data showed that the UWKC-DoorDash Program clients primarily chose this program over food banks because of COVID-19 risk, physical limitations, lack of transportation, and time.

Top reasons

Of all the top reasons for participating in the program, 25% of survey respondents cited food bank COVID-19 risk, 24% cited physical limitations, 17% cited transportation, and a combined 13% cited lack of time for both COVID-19 and non-COVID-19 related reasons (Figure 1). In our phone interviews, clear themes around preference arose for using the UWKC-DoorDash Program due to time constraints and convenience that support these findings. The frequent mention of lack of transportation and physical limitations also points to the value of the UWKC-DoorDash Program even outside of the context of the COVID-19 pandemic.

"The issue with the food bank is that since it has established hours, sometimes it is difficult to reach the times to be able to go for food." - #17

"I feel like I was always rushing from work, to my car, to get to the pantry in time, but it was hard with traffic and stuff so I didn't always get there when I needed to. So that was hard, making the time and driving and getting there in time." - #16

"I also don't have a car so it's not easy to get to the pantry. I usually take the bus everywhere, which is annoying but yeah, kind of gets in the way sometimes." - 31

Figure 1. UWKC-DoorDash clients' top reason for program participation (n=406).
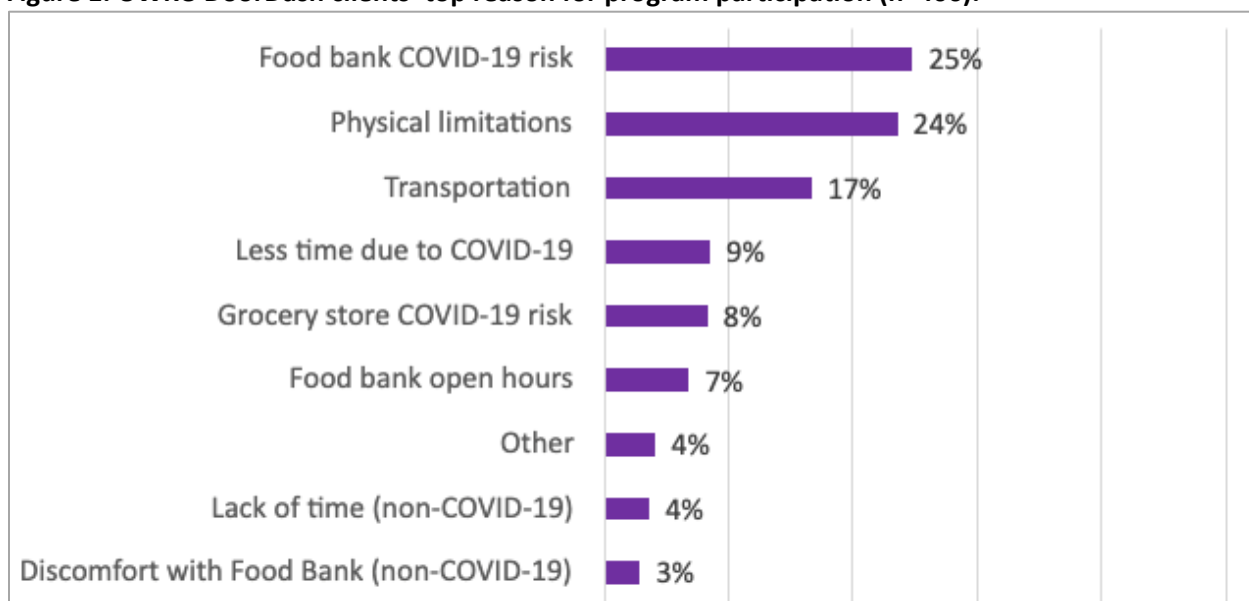
Figure 2 displays the reasons cited by UWKC-DoorDash Survey respondents for using the program. Respondents' most-cited reason for using the UWKC-DoorDash Program was COVID-19 risk at food banks, with 54% of respondents citing this reason. Other top reasons for participating (in order of most- to least-cited) included physical limitations (47%), transportation (43%), COVID-19 risk at grocery stores (29%), food bank open hours (26%), less time due to COVID-19 (22%), lack of time (non-COVID-19 related) (17%), discomfort with food banks (non-COVID related) (15%), and other reasons (12%).

Figure 2. UWKC-DoorDash clients' reasons for participating in the program (n=406).
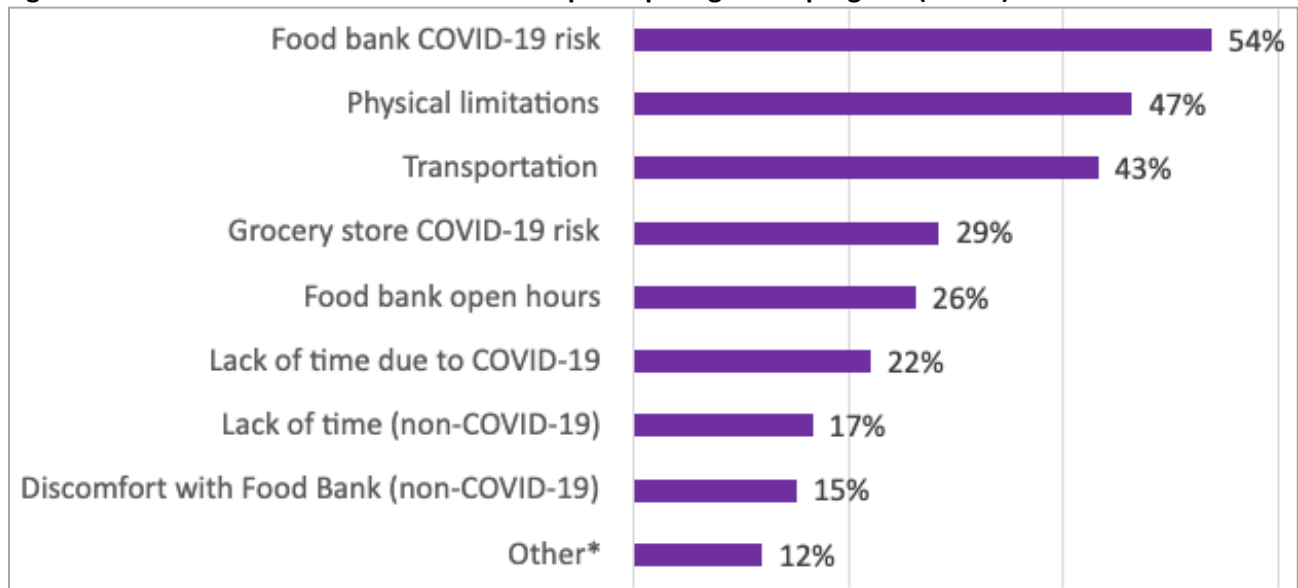
COVID-19 risk at food banks

The most commonly cited reason for using the UWKC-DoorDash Program was related to COVID-19 risk. In the UWKC-DoorDash Survey, over half (54%) of the respondents cited COVID-19 risk at food banks as a reason for using the program (Figure 2). Many also noted COVID-19-adjacent reasons, such as COVID-19 risk at a grocery store or lack of time due to the pandemic, as motivators for signing up for the UWKC-DoorDash Program as well (a combined total of 51% of clients cited these reasons). In our phone interviews, clients expressed the fear of going to food banks during the pandemic due to exposure to other people and risk of contracting COVID-19. Reducing the risk of exposure to the virus has been particularly important for clients with underlying health conditions and clients living with children and/or seniors. As highlighted in phone interviews, the UWKC-DoorDash Program offers an alternative for those households with vulnerable or immunocompromised members.

"I think it is definitely safer in light of… ever changing COVID… it is a bit more safer at this particular time." - #26

"We didn't know what was going on with COVID and so… I was just really, really scared to go outside. I was scared to get sick." - #02

"I didn't know what the safety precautions were for going to the food bank either… So it's a lot to like go and have to think about our health just to go get food." - #27

Physical limitations and transportation

In the UWKC-DoorDash Survey, respondents cited physical limitations (47%) and transportation (43%) as reasons for participating in the program. Many of the clients we interviewed reported that they do not have access to personal transportation, do not live close to a food bank, and/or find that getting to a food bank is both expensive and time-consuming. Clients stated that they liked that the UWKC-DoorDash Program is a delivery service and does not require transportation.

"I used to go to the food banks, but it was more work because I don't have a car. I lived far from the food bank, so it was difficult. Also having the food delivered to my house is better." - #23

"DoorDash was the best option because I didn't have a car, they were willing to deliver it to me. So, yes, the fact that they were going to deliver it was a plus." - #19

"I liked that they could deliver the food to my house and I didn't have to go far to buy everything." - #17

Convenience

Clients often used the word "convenient" during phone interviews to describe the UWKC-DoorDash Program. When comparing the experience of receiving food through this program with the experience of visiting a food bank in person, most clients indicated that having groceries delivered was easier compared to going to a food bank and reduced the burden of seeking food in the middle of the pandemic.

"It's more convenient, yeah the convenience since I don't drive was a big reason. And also during COVID it's been harder to get to the store as much." - #06

"The pantry is a good supplement, but this delivery is much more convenient and has saved me a lot of time." - #16

"It's more convenient. Not always does my husband make it home in time for me to go and get out of the house and I don't know, I have to see how the kids are situated to see if I can actually get out of the house. But, it's just more convenient." - #36

Among UWKC-DoorDash Survey respondents, sign-ups for the UWKC-DoorDash Program were highest in July 2020 and declined over the following year and a half (Figure 3). We asked clients, both in the survey and in phone interviews, if their motivation for using the UWKC-DoorDash Program changed throughout the pandemic.

Overall, the motivation for using the UWKC-DoorDash Program has not changed throughout the pandemic. Figure 3 and Figure 4 show that all reasons and top reasons for signing up for the UWKC-DoorDash Program were similar between those who signed up from Spring 2020 -to Fall 2020 versus Winter 2020 to Fall 2021. Top reasons across both groups included COVID-19 risk at food banks, physical limitations, transportation and time. Additionally, there was no statistically significant difference between those who signed up from Spring 2020 to Fall 2020 versus Winter 2020 to Fall 2021.

In phone interviews, when asked about a change in motivation, the majority of the clients stated that their motivations are the same, given that their situation has not changed.

> *"Yeah, no, they, things... I mean, there's, things change of course, but I, I mean my situation, my economic situation is still the same, and you know my health, health situation and all that." - #22*
>
> *"They haven't – the reasons are still the same." - #29*

Some clients mentioned that they had the same motivations but increased needs due to unemployment, lay-offs and increased food prices during the COVID-19 pandemic, meaning that they rely on the program even more than when they first signed up.

> *"I would say it's about the same. I guess I might need it more now than I did last year. I've been having issues with my job and… since COVID like I can't afford food as much so it really helps more now I'd say, but [I] still just like that it's free and easy." - #31*
>
> *"It's still much needed. Like, I get social security so I don't get much in food stamps. Even though they said they were going to up it, I still haven't received the increase. You know what I mean? So even if it's chicken, breakfast meat that you guys bring, eggs…it really does mean a great deal." - #18*

A few clients mentioned that their reasons for using the UWKC-DoorDash Program have changed as they now depend on the program for food security and stability. These clients expressed that UWKC-DoorDash Program allows them to have extra food stocked in case of

emergency and gives them peace of mind, knowing that they will have food to feed their families.

"It's still mostly safety based. Especially if I don't have anybody to watch my kids. Then at least I'll have some food. I mean, we have food. But at least I'll have some fresh food to give them. "- #27

"I think that the only thing that has changed is that we always have extra food reserved in case of an emergency. There is always food, so we are not worrying about that right now." - #34

Figure 3. UWKC-DoorDash clients' number one reason for using the program, by signup period (n=390).
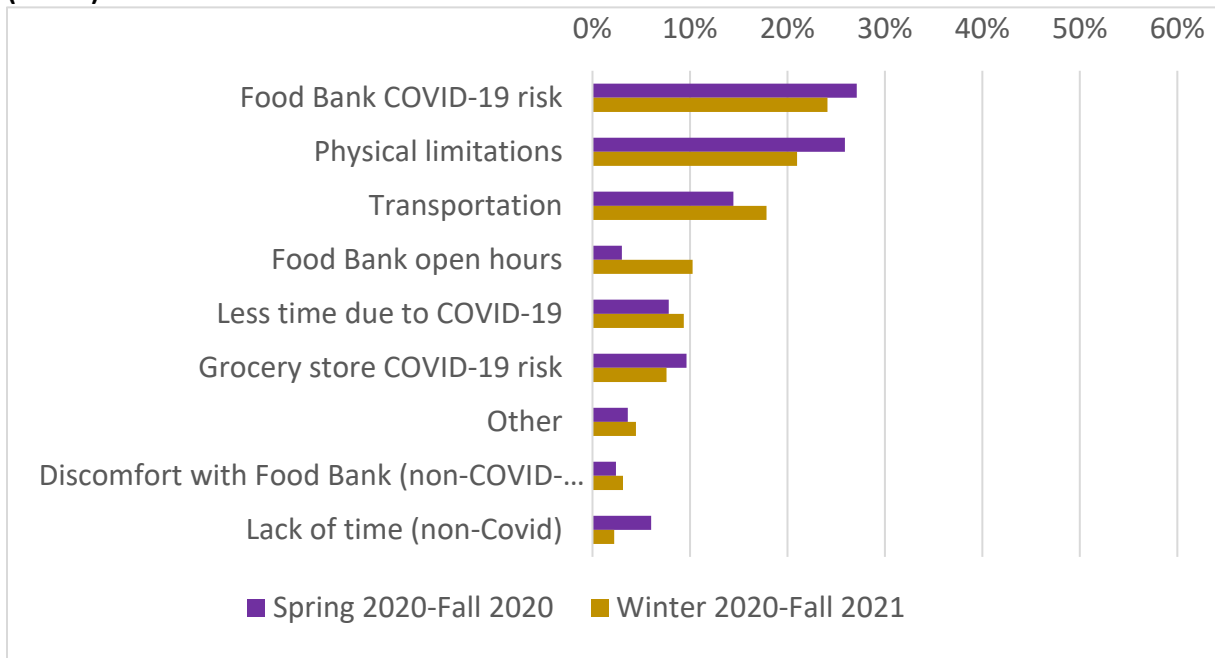
Note: respondents selected a single top reason for their participation.

Figure 4. UWKC-DoorDash Program clients' reasons for using the program, by signup period (n=390).
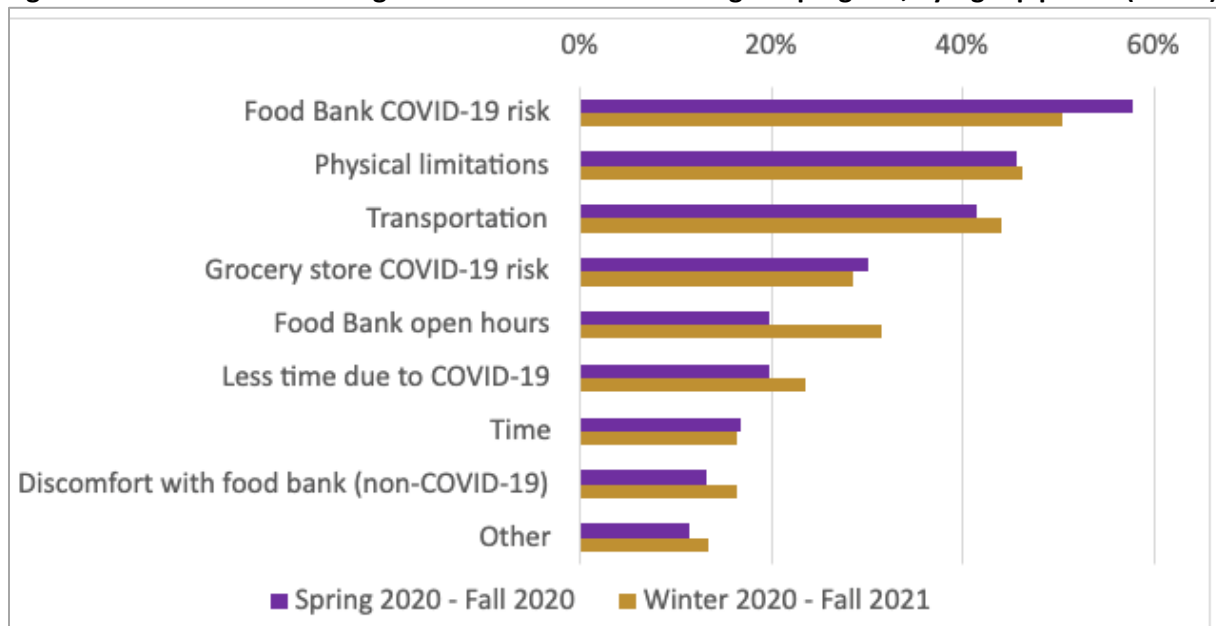
Note: respondents selected all relevant reasons for their participation.

Client satisfaction with the current UWKC-DoorDash Program

We found that, overall, clients were very or somewhat satisfied and overwhelmingly grateful for the UWKC-DoorDash Program. In the UWKC-DoorDash Survey data, we found the highest rates of satisfaction were among seniors and households with children, and Hispanic/Latinx, Middle Eastern, and South Asian respondents. We found the lowest rates of satisfaction with Black or African respondents and those with a disability. In phone interviews, even among a satisfied group, we found several commonly discussed themes regarding dissatisfaction with the foods they were receiving. These themes include receiving expired foods, allergies and food intolerances, and foods that did not align with their dietary or cultural preferences.

A strong majority of survey respondents reported being somewhat or very satisfied with the program. Of the UWKC-DoorDash Survey respondents who rated their overall satisfaction (N=445), 80% expressed being somewhat or very satisfied with the UWKC-DoorDash Program (Table 4). Specifically, 51% reported being "very satisfied," and 29% reported being "somewhat satisfied." A majority of the remaining 20% of respondents were "neutral" (12%); the other 8% of respondents were unsatisfied with the program (6% "somewhat unsatisfied," 2% "very unsatisfied"). While it is encouraging that many respondents are "very satisfied" with the program in its current state, there is room for improvement, given that the remaining 49% respondents who categorized their satisfaction as either "somewhat satisfied", "neutral", "somewhat unsatisfied" or "very unsatisfied".

Table 4. Overall satisfaction with the program, as indicated by UWKC-DoorDash Survey respondents (n=445).

	N (%)
Very satisfied	227 (51%)
Somewhat satisfied	131 (29%)
Neutral	53 (12%)
Somewhat unsatisfied	27 (6%)
Very unsatisfied	7 (2%)

Satisfaction with the UWKC-DoorDash Program by race and ethnicity

Among people in all race or ethnicity categories (Table 5), Hispanic/Latinx (n=104), Middle Eastern (n=8), and South Asian (n=8) survey respondents reported the highest rates of satisfaction (88%). African respondents (n=2) reported the lowest satisfaction rate at 50%, and Black or African American respondents (n=72) reported the second-lowest rate of satisfaction (69%). The satisfaction rate among Native American, Indigenous, or First Nation respondents (n=35) was 77%. Additionally, Native American, Indigenous, or First Nation respondents had the highest rate of being unsatisfied, with 14% reporting being "somewhat unsatisfied" or "very unsatisfied" with the program. A complete breakdown of satisfaction with the UWKC-DoorDash Program by race and ethnicity can be found in Table 5.

Table 5. UWKC-DoorDash Program satisfaction by race/ethnicity (n=459).

	Satisfied	Neutral	Unsatisfied
Racial category*	*n (%)*	*n (%)*	*n (%)*
Hispanic/Latinx	92 (88%)	9 (9%)	3 (3%)
White	111 (76%)	16 (11%)	19 (13%)
Black or African American	50 (69%)	14 (19%)	8 (11%)
African	2 (50%)	2 (50%)	0 (0%)
Asian	75 (81%)	12 (13%)	6 (6%)
South Asian	7 (88%)	1 (13%)	0 (0%)
Native American, Indigenous, or First Nation	27 (77%)	3 (9%)	5 (14%)
Native Hawaiian, Pacific Islander, or Alaskan Native	10 (83%)	1 (8%)	1 (8%)
Middle Eastern	7 (88%)	1 (13%)	0 (0%)
Other^	11 (73%)	3 (20%)	1 (7%)
Prefer not to answer	16 (73%)	3 (14%)	3 (14%)
*Participants were able to select more than one race			
^Participants who selected "other" and wrote in their race.			
Note: The racial categories in this table are different from Table 1 and Table 3 because the other tables included condensed race and ethnicity categories adjusted to compare to the Food Bank data.			

UWKC-DoorDash Survey respondents in the 65+ age group and respondents in households with seniors had the highest satisfaction with the program (90%), indicating that the program is excelling with respect to meeting the needs of older clients. Households with adults and households with children also had relatively high satisfaction with the program (80% and 81%, respectively), but satisfaction among adults under 55 was notably lower than satisfaction among adults 55 and over (78% vs 89%). In terms of annual household income, there was no clear linear trend in satisfaction, but respondents who reported household incomes between $25,000-49,999 had the highest rate of being unsatisfied with the program (12%). Respondents with a disability also had a lower rate of satisfaction with the program (78%) and a higher rate of being unsatisfied with the program (11%) compared to respondents without a disability. A complete breakdown of satisfaction with the UWKC-DoorDash Program by household composition, age group, annual household income, disability status, and survey language can be found in Table 6.

Table 6. UWKC-DoorDash Program satisfaction by household composition, age, annual household income, disability status, and survey language (N=445).

	Satisfied	Neutral	Unsatisfied
Household composition	*n (%)*	*n (%)*	*n (%)*
Households with children	210 (81%)	29 (11%)	20 (8%)
Households with seniors	52 (90%)	2 (3%)	4 (7%)
Age			
18-30	73 (79%)	15 (16%)	5 (5%)
31-54	176 (78%)	30 (13%)	19 (8%)
55-64	56 (88%)	3 (5%)	5 (8%)
65+	52 (90%)	2 (3%)	4 (7%)
Annual household income			
Less than $10,000	109 (83%)	14 (11%)	9 (7%)
$10,000 to $24,999	98 (76%)	21 (16%)	10 (8%)
$25,000 to $49,999	89 (82%)	7 (6%)	13 (12%)
$50,000 and above	21 (78%)	5 (18%)	1 (4%)
Don't know	18 (90%)	2 (10%)	0 (0%)
Prefer not to answer	19 (86%)	2 (9%)	1 (5%)
Disability			
Yes	145 (78%)	21 (11%)	21 (11%)
Survey Language			
Amharic	1 (100%)	0 (0%)	0 (0%)
Chinese	2 (100%)	0 (0%)	0 (0%)
English	281 (77%)	50 (14%)	32 (9%)
Spanish	50 (93%)	2 (4%)	2 (4%)
Vietnamese	24 (96%)	1 (4%)	0 (0%)

Satisfaction as expressed by program clients during phone interviews

In phone interviews, the majority of the clients expressed gratitude for the food they received through the program. They described feelings of relief at having a reliable source of food and expressed that opening the boxes made them feel special. Many clients also talked about their appreciation for specific foods they received, particularly fresh produce and meat products.

"It's very nice to open a clean cardboard box and [what's] inside is intended to make you feel better. And it's exactly how I feel when I open the box. I feel very blessed to receive the items because I didn't have them and now they're here. It might sound corny but it is! It's just, I could probably tell you the first time I got it, it did bring me to tears because there were items in there I wasn't able to purchase." - #01

"Most of the time they do send things that I would pick out anyway. So it's guaranteed they'll send me a dozen eggs, some vegetables, a couple of apples, that sort of thing. A meat product. So I guarantee those things off of my list." - #12

Clients who were dissatisfied with the food they received most commonly mentioned that the boxes contained foods at or past expiration, did not take into account food allergies and intolerances, did not align with their cultural preferences, and/or contained a high proportion of foods clients perceived as unappealing, such as canned and ready-to-eat items. While overall we found that clients were satisfied with the food they received, we discuss opportunities for improvement that clients most commonly mentioned in the following section, "Potential UWKC-DoorDash Program improvements."

Dissatisfaction with canned and ready-to-eat food

In phone interviews, many clients reported dissatisfaction with the canned or ready-to-eat foods due to health reasons or because they perceived these foods as unappealing. They viewed canned and ready-to-eat foods as overall less healthy, sometimes stating specific health reasons for not eating those foods. Some also stated a preference for cooking homemade meals over eating ready-to-eat foods. Others found these foods to be unfamiliar or unappetizing and, at times, almost offensive to receive in their food boxes. Most often, interview participants stated that the canned meat products were unappealing and that they did not use these products.

"...we all have high blood pressure, well my brother has high blood pressure and I have high blood pressure... so I usually don't do a lot of canned soups, because those are higher in sodium." - #08

> *"...it bothers me because, I mean, that pork in the can… I wouldn't even give that to my dog… Like, man, you're going to have to add a lot of seasoning and a lot of frying and a lot of straining to that to really make it manageable and eat-able." - #24*

Dissatisfaction with foods at or near expiration

In our interviews, clients talked about throwing out food items that were expired or near-expired upon arrival. Participants voiced frustration with receiving meat and produce that was past expiration and unusable. Many participants also noted that the fresh produce only lasted a couple of days before going bad, making it difficult to fully use all the items in the box.

> *"... there has been… a time that we have gotten cantaloupe that had mold or was just too squishy… and like, you can't use [it]." - #20*

> *"...some of the other stuff, the fruits and the veggies, do turn pretty quickly. So that stuff, besides the canned meats and stuff, I just put in the garbage because nobody I know is going to want that." - #16*

Dissatisfaction related to food allergies or intolerances

Clients we interviewed commonly expressed dissatisfaction with the food in their boxes due to food allergies or intolerances. Several noted that they liked the boxes overall but had to give away a portion of each box due to food allergies.

> *"I have said more than one time I am definitely allergic to melon. All forms of melon. I can't even touch it. So because of that I have to get rubber gloves to move that around. And then I have to wash it so well, then it doesn't even have the residue of the melon for me to even use it." - #19*

> *"... I am allergic to nuts, and so I have a neighbor that was really struggling at that time and I was able to help her with peanut butter and bread and eggplant. So you guys were giving to me and I was able to help give it back." - #18*

Dissatisfaction related to cultural values and food preferences

Many clients, especially from the interviews conducted in Spanish, noted that the foods they received did not always align with their cultural values and preferences. For example, some clients stated that they prefer cooking from scratch instead of using canned or processed foods. Others reported receiving foods they did not know how to cook or large quantities of unfamiliar foods, such as peanut butter.

See Appendix F and G for a deeper discussion of culturally relevant food. To help increase the provision of culturally relevant foods in food banks and community food programs, it is

necessary to understand and partner with the community that is being served. Conducting a community health assessment could be an approach to gather and analyze the health-related needs and concerns of the community, such as the provision of culturally relevant food (Appendix F). Additionally, it could be beneficial to establish a plan for ensuring consistent donations or purchases of culturally relevant foods. When possible, these items could be sourced from local and BIPOC farmers and producers or from community organizations with established gardens or cooperative-purchasing models (Appendix G).

"It would be good if we could give a selection of products so as not to waste food that could be used for another family. For example, one time I had couscous and I have no idea what to do with it. There are also some flours and walnuts. As Latinos we often don't eat those things. Then I think 'what is that and how do you eat it?'"   *- #17*

"Sometimes food comes from other cultures. I don't know how to cook them. Sometimes we get things that I honestly don't know what they are." - #23

Potential UWKC-DoorDash Program improvements

There was an overarching sentiment of gratitude in participant feedback from both the survey responses and the interviews, as well as a variety of suggestions for program improvement that fell into five main categories:

1. Changes to the delivery model
2. Improved communication
3. Increased variety of foods
4. Improved food quality
5. Box customization

Thirty-six percent of respondents to the UWKC-DoorDash Survey did not have any changes to suggest or left the 'suggested changes' question blank. A higher percentage of senior participants (21%) left the question blank than respondents with children (14%) and respondents overall (19%).

Among survey respondents who provided feedback, the most common sentiment was appreciation for the service (n=133, 35%). More clients with children expressed appreciation compared to senior clients (40% [n=86] vs. 19% [n=9]). This gratitude and appreciation were evident in phone interviews, as well. Many of those interviewed felt that the program was very effective and did not have any suggestions for improvements. Frequently, those who offered suggestions first emphasized how much the program has helped them, especially during the pandemic.

Of the 34 survey respondents (7%) who were "somewhat unsatisfied" or "very unsatisfied," two expressed appreciation and 31 provided constructive feedback. This group most commonly requested changes to the DoorDash delivery model (n=12, 35% of unsatisfied respondents),

increased variety (n=6, 18% of unsatisfied respondents), checking expiration dates (n=5, 14% of unsatisfied respondents), and increasing amounts of foods that align with their dietary restrictions/preferences (n=5, 14% of unsatisfied respondents). Qualitative findings from client interviews were consistent with these themes.

Changes to the delivery model

Many survey respondents expressed frustration with the delivery process: 13% of respondents overall (10% of clients with children and 22% of seniors) voiced changes they would like to see within the DoorDash delivery model. These changes include greater attention to stated delivery instructions, a more specific delivery window, and delivery to their doors instead of in the entryways of their apartment complexes.

Our interviews highlighted the potential reasons for these requests. Several clients mentioned that drivers frequently had difficulty finding their residence and delivered boxes to the wrong place. Others explained that their boxes were stolen on a somewhat-regular basis. Searching for missing deliveries was frustrating and time-consuming for clients. Many clients spoke of the significant time and effort dedicated to being home during the entirety of their delivery windows to avoid having their boxes stolen. This often meant that clients had to sacrifice other tasks and responsibilities on delivery days. Furthermore, clients with disabilities highlighted the additional stress associated with being unable to get to the front of their apartments quickly. Clients felt that delivery to individual units, as well as shorter delivery windows, could mitigate these stresses and frustrations.

"Make sure drivers are actually delivering the food where it goes. Especially in cases where mobility issues prevent people like me from being able to carry these heavy boxes any amount of distance." - #325

"DoorDash is a headache and problem: 99.99% does not deliver to door but everywhere else, e.g. another address, pictures shown delivery left on the street."
- #222

Improved communication

In phone interviews, clients expressed that clearer and more efficient communication would make the program better. Many indicated that communication surrounding the program sign-up process, specifically, was difficult. For example, some tried to help sign up their neighbors for the program and never heard back, leading to confusion and frustration. Clients also highlighted challenges in communicating with UWKC staff when discussing problems experienced with the food and delivery. Specifically, clients were unsure of the best way to get in touch with someone at UWKC to give feedback or request changes. In some extreme cases, clients with allergies tried to request not receiving foods they were allergic to, but they could not get through to a staff member and were worried for their safety.

"I can't have melon and I can't have bananas. You guys keep putting both of these in there. Can I ask for another kind of box, and I don't get a response. And then the next week, I get melon. You know, melon and oranges. And then I'm like, Okay, I sent another request, is there a way I can pick a different box?... I'm not sure if I'm responding to the wrong person or what." - #19

In other cases, clients felt providing feedback might reflect poorly on them. When asked why they did not communicate suggestions to UWKC staff, one client (#01) stated: *"I never thought about it. I don't want to sound ungrateful. I don't want anybody to feel like, 'well you should be grateful for what you have.'"*

Clients felt that opening up the lines of communication between program clients and staff could allow for boxes to be better tailored to individual needs and could keep small issues from building into larger frustrations. Clients feel that routine check-ins and/or surveys asking for feedback would make the program more effective.

Increased variety of foods

In both phone interviews and the UWKC-DoorDash Survey, clients and respondents expressed interest in receiving a greater variety of items in their delivery boxes, specifically requesting a wider variety of fresh produce, protein sources, and cooking supplies.

In the survey, respondents had the opportunity to write in the top two items that they'd like to see added to their boxes. All respondents (n=468) wrote in at least one item. We coded these write-in responses and display them in a TreeMap diagram (Figure 5). Survey respondents most commonly wrote-in requesting fresh fruits and vegetables, along with a variety of protein items.

Figure 5. TreeMap of write-in food item requests.
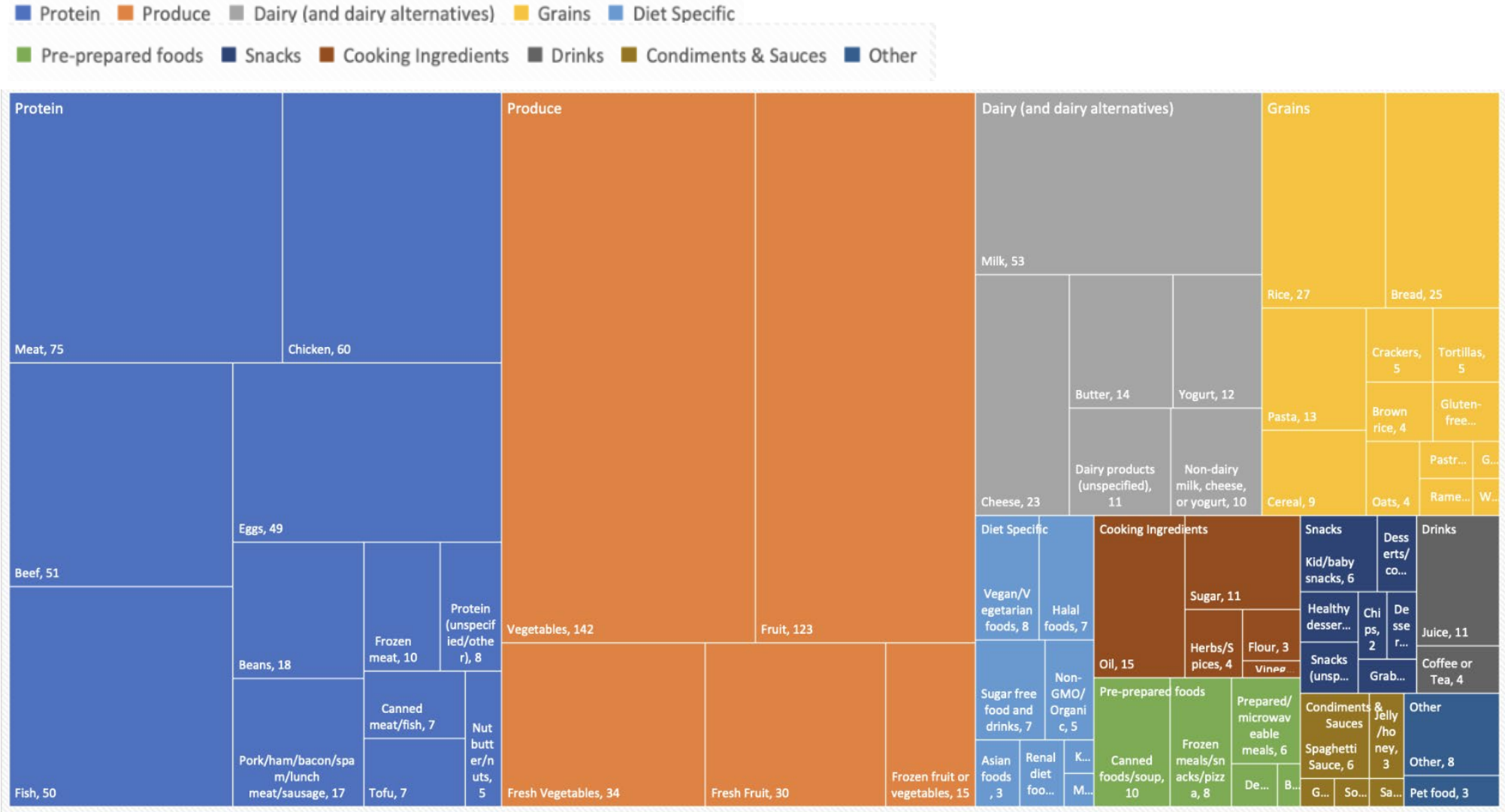
Note that where are some categories with small numbers of write-ins and as a result, it is hard to see these in the above TreeMap. We've outlined some of these less-often requested categories below:

Condiments & Sauces
- Gelatin, 1
- Soy sauce, 1
- Sauces (unspecified), 1

Diet Specific
- Asian foods, 3
- Renal diet foods, 3
- Kosher Meats, 1
- Mexican foods, 1

Grains
- Pastries, 2
- Ramen, 2
- Gluten-free pasta, 1
- Whole grains, 1

Snacks
- Desserts/cookies/candy, 3
- Healthy desserts/snacks, 3
- Snacks (unspecified), 3
- Dessert mixes, 2
- Chips, 2
- Grab & Go Snacks, 2

Pre-prepared foods
- Dehydrated side dishes, 2
- Baby food, 1

Cooking Ingredients
- Vinegar, 1

Other
- The other category includes write-ins like "More variety" or "Breakfast items" or "Fresh items" that didn't easily fit into any other category

In addition to having the option to spontaneously write in their desired food items, survey respondents could check boxes from a list of food items to indicate what they wanted to see more of in their boxes. As shown in Table 7, the top 5 requests among survey respondents in this section were fresh fruits (83%), fresh vegetables (73%), cooking oil (68%), and sugar (60%). There was strong interest in fresh meat products among all participants, but interest in fresh meat was higher among households with children and seniors. Households with children would like to see more fresh chicken (61%) and fresh beef (53%), and households with seniors would like to receive more fresh fish (54%). In terms of dairy products, a majority (>50%) of all survey respondents and households with children want more milk, cheese, and butter, while households with seniors (56%) want more yogurt.

In our analysis of write-in responses to the survey question "What changes, if any, should we make so that this program best meets your needs?", we found that 9% of respondents overall, 9% of respondents with children, and 19% of households with seniors spontaneously wrote-in that they wanted to see a greater variety of foods included. Respondents wrote in specific suggestions related to the various changes they want to see to the types of food in their boxes, including fewer cans (8% of all respondents and households with children, 13% of households with seniors) and more fresh foods (6% of all respondents). These findings align with the survey data described in Table 7 and Figure 5. In the open-ended survey questions, some respondents also expressed a desire for non-food items like diapers, baby food, pet food, hygiene products, cleaning supplies (4% of all respondents).

The desire for increased variety came up during our phone interviews as well.

"I seem to get the same thing every other week. Too many canned foods and too many dry foods." - #143

"I've struggled with the lack of variety. I've gotten large amounts of the same things week after week. A few times, I got boxes that contained only three items such as several pounds each of rice, dried lentils, and plain yogurt. It's been difficult to find uses for so [many] plain staple[s]." - #230

In addition to these suggestions, interviewed clients highlighted other potential changes that would increase the variety and make the program better for them. Many expressed that they would appreciate boxes that differ from week to week or season to season. Along these lines, clients suggested that partnering with a broader number of food banks, farmers' markets, or other producers could allow for a greater variety of available items. Some mentioned wanting boxes with fresh items (e.g., meat, dairy, fresh fruits, and vegetables) every week, along with "fun boxes" with snacks or kid-friendly foods twice a month. One interviewed client emphasized the positive impact increased variety could have on clients by explaining, *"it seems like such a tiny thing, but it's such a huge quality of life improvement to have… it feels like I'm being recognized that I am a person that likes to have treats and have fun things. It makes me feel good and I'm sure it does for other people." - #25*

Receiving boxes with kid-friendly foods came up multiple times in interviews, as clients with children felt this would better suit their needs. As one client stated, *"there are certain things kids like that would be nice… it's nice to have snacks and I don't know, maybe foods more tailored toward children's needs." - #20*

Table 7. Top requested food items* (n=459).

	All respondents	Households with seniors	Households with children
	n=459	*n=61*	*n=266*
Fruit, fresh	**381 (83%)**	**54 (89%)**	**225 (85%)**
Fruit, frozen	106 (23%)	10 (16%)	50 (19%)
Fruit, canned	51 (11%)	5 (8%)	28 (11%)
Vegetables, fresh	**335 (73%)**	**49 (80%)**	**203 (76%)**
Vegetables, frozen	112 (24%)	10 (16%)	55 (21%)
Vegetables, canned	43 (9%)	3 (5%)	24 (9%)
Chicken, fresh	**259 (56%)**	**31 (51%)**	**162 (61%)**
Chicken, frozen	159 (35%)	20 (33%)	84 (32%)
Chicken, canned	28 (6%)	2 (3%)	13 (5%)
Beef, fresh	**229 (50%)**	**22 (36%)**	**141 (53%)**
Beef, frozen	139 (30%)	15 (25%)	69 (26%)
Beef, canned	20 (4%)	0 (0%)	9 (3%)
Pork, fresh	164 (36%)	19 (31%)	97 (36%)
Pork, frozen	92 (20%)	8 (13%)	47 (18%)
Pork, canned	15 (3%)	1 (2%)	6 (2%)
Fish, fresh	**228 (50%)**	**33 (54%)**	**130 (49%)**
Fish, frozen	141 (31%)	17 (28%)	72 (27%)
Fish, canned	32 (7%)	2 (3%)	20 (8%)

Cooking oil	**311 (68%)**	**34 (56%)**	**209 (79%)**
Sugar	**277 (60%)**	26 (43%)	**181 (68%)**
Cheese	**257 (56%)**	30 (49%)	**158 (59%)**
Butter	**239 (52%)**	29 (48%)	**145 (55%)**
Milk	**235 (51%)**	27 (44%)	**145 (55%)**
Yogurt	221 (48%)	34 (56%)	126 (47%)
Bread	213 (46%)	24 (39%)	126 (47%)
Flour	203 (44%)	17 (28%)	**139 (52%)**
Crackers	183 (40%)	18 (30%)	120 (45%)
Cereals	189 (41%)	14 (23%)	122 (46%)
Rice	171 (37%)	18 (30%)	115 (43%)
Pasta	154 (34%)	10 (16%)	103 (39%)
Tofu	110 (24%)	21 (34%)	63 (24%)
Canned/jarred tomato sauce	109 (24%)	9 (15%)	74 (28%)
Peanut or other nut butters	104 (23%)	19 (31%)	46 (17%)
Canned beans	79 (17%)	9 (15%)	45 (17%)
Dry beans	64 (14%)	9 (15%)	34 (13%)
Lentils	59 (13%)	11 (18%)	34 (13%)

* Survey respondents were asked "What foods, if any, would you like to see more of in your delivery box?" and provided with a list of food items from which they could select all that applied. Food items selected by ≥50% of respondents are bolded.

Box customization

Both survey respondents and interviewed clients also expressed a desire to have the option to customize their delivery boxes. One of the most common write-in suggestions from survey data was that UWKC distribute a list of available items virtually before the delivery for clients to select from. Clients felt that allowing them to select from a list could increase client satisfaction and decrease food waste; clients mentioned this in interviews as well.

"I got over-served on some items... adjusting the flow with a list might help on both ends" - #125

"An app where you can list what is needed so you're not overstocking on certain items" - #212

"It would be nice if we can customize, or give our opinions on the box because some of the stuff they give you, it just doesn't fit for some families" - #33

Greater customization would be especially beneficial for clients with dietary limitations, allergies, or specific cultural preferences. From the survey data, 11% of all clients spontaneously wrote-in requests for their boxes to align with their stated preferences and restrictions including halal, vegan, vegetarian, diabetic, dairy-free, and gluten-free. This percentage was higher amongst seniors (16%) than clients with children (8%). Some clients reported frustration

that although they included these specific needs and preferences on their interest form, they were not correctly accounted for in their boxes.

"There is a section when signing up that asks if you have any dietary restrictions— first, those should be observed, then there should be follow up asking if there is any flexibility or if it's okay to receive fewer items. This way nothing is wasted, and more people can receive aid from the items one person can't have." - #160

"I am a vegetarian and my family doesn't eat beef or pork, for a long time we were getting a lot of pork and beef hotdogs. If it could be catered towards dietary needs, that'll be helpful! The assistance is appreciated, but it would be even more helpful if I could actually eat more of what's in the box." - #247

Improvements in food quality

Many program clients expressed that receiving higher-quality foods would make the program better for them. They shared that often, they received food that was expired, not fresh, or went bad quickly. In the survey, 12% of respondents spontaneously wrote in that they received "moldy" and "rotten" fruits, vegetables, and meats, opened packages, and/or foods that had either expired or will expire within a couple of days of box delivery. Survey respondents' suggestions revolved around checking expiration dates on packages before delivery and inspecting the condition of the food before sending out boxes In interviews, several clients expressed fear that the food might make them or their families sick.

"The times I've gotten yogurts I've had to throw them away because they were 3-4 days expired so there's no way I would give them to my kids or even myself, because, you know, food poisoning." - #33

Additionally, clients described how receiving low-quality foods resulted in food waste. In interviews, clients frequently expressed discontent with the amount of food they throw away and stated that this makes the program's ability to meet their needs unreliable. Some felt discouraged about receiving this kind of food, with one participant requesting that the program administrators not *"...give people food that they wouldn't eat themselves."*

"it gets dropped off like on a Wednesday but by Saturday, Saturday or Sunday, it goes bad. So, then I have to throw it out so I don't get to use all of it." - #06

"...we have gotten cantaloupe that had mold or was just too squishy… and like, you can't use [it]. There was a bag of broccoli we got once that was, like, slimy. You can't… you just can't eat it" - #20

"Quite a few times I have received fruit and/or vegetables that had mold, and also opened packages/containers. Foods should be at least 1-2 weeks before expiration. Thoroughly check that packaging is unopened, and food is not molded."- #107

Other Services Used by UWKC-DoorDash Program clients

UWKC-DoorDash Program clients have surprisingly low participation rates in other nutrition assistance programs, including SNAP. Those who do participate in other programs are most often receiving services from governmental sources such as SNAP, Women, Infants and Children (WIC), and the National School Lunch Program (NSLP). Clients also use various non-governmental programs to meet their needs. Institutions providing these programs include non-profits such as the YMCA, Mutual Aid, and the Boys and Girls Clubs. Overall, clients perceive these programs as helpful, especially during the COVID-19 pandemic. However, clients often expressed that the use of these programs is supplemental and that none are enough in isolation to meet their household's needs.

This section presents information about SNAP participation, application status, eligibility, and characteristics of non-participants among UWKC-DoorDash Program clients, as well as SNAP's impact on food security and nutrition status. Further analysis is included for households with children and participation in programs like the NSLP, WIC, and Pandemic-EBT (P-EBT).

Table 8. Characteristics of UWKC-DoorDash Program clients not currently receiving SNAP benefits (n=252).

Race*	n=244
African	2 (1%)
Asian (Chinese, Japanese, Filipino, ect.)	47 (19%)
Black or African American	36 (15%)
Hispanic or Latino	70 (29%)
Middle Eastern (Iraqi, Iranian, Saudi, Turkish, etc.)	4 (2%)
Native American, Indigenous, or First Nation	13 (5%)
Native Hawaiin, Pacific Islander, or Alaska Native	5 (2%)
South Asian (Indian, Pakistani, Bengali, etc.)	6 (2%)
White	68 (28%)
Other	6 (2%)
Prefer not to answer	16 (7%)
Age	**n=241**
18-30	51 (21%)
31-54	132 (55%)
55-64	28 (12%)
65+	30 (12%)
Household size	**n=239**
1	34 (14%)
2	44 (18%)
3	49 (21%)
4	48 (20%)
5	28 (12%)
6	21 (9%)
7	9 (4%)
8+	6 (3%)
Disability status	**n=244**
At least 1 person with a disability in household	73 (30%)
No persons with disabilities in household	150 (61%)
Prefer not to answer	21 (9%)
Children	**n=231**
At least 1 child in household	147 (64%)
No children in household	84 (36%)
*Participants were able to select more than one race	
Note: The racial categories in this table are different from Table 1 and Table 3 because the other tables included condensed race and ethnicity categories adjusted to compare to the food bank data.	

<u>SNAP participation</u>

Only 46% (n=215) of UWKC-DoorDash Program clients currently receive SNAP benefits. The majority of individuals not receiving SNAP were in the 31-55 age group, of Hispanic/Latino ethnicity or White race, had 1-5 people in their household, and at least 1 child. Households reporting at least one member with a disability comprised 30% of individuals not currently receiving SNAP (Table 8).

Clients reported differing and sometimes multiple reasons for not receiving SNAP benefits. Of those who do not participate in SNAP, 22% applied and did not receive benefits, while 33% applied and got benefits but have since lost them. It is possible that this is a result of client ineligibility for the program. According to clients, this ineligibility was often due to earning an income above the threshold for SNAP participation. In particular, during the COVID-19 pandemic, many clients reported receiving unemployment benefits, which raised their income levels.

"[SNAP] cut me off while I was on unemployment because they said I was making too much money. Before the pandemic, I had been getting benefits for a few months." -
#04

Of those who do not participate in SNAP and provided information about their application history (n=223), 45% (N = 100) have never applied (Table 9).

Table 9. Application history among UWKC-DoorDash clients not participating in SNAP (n=223).

	<u>*n (%)*</u>
	<u>*n=223*</u>
Applied & did not receive benefits	49 (22%)
Benefits were discontinued	74 (33%)
Never applied	100 (45%)

Clients who have not applied for benefits cite a number of reasons (Table 10), the most frequent of which are "I don't know how or where to apply" (30%, n=30), "I don't know if I'm eligible because of my income" (27%, n=27), "I don't know if I'm eligible because of my immigration status" (13%, n=21), "I don't know if I'm eligible because of my employment status" (13%, n=13), and "I don't want to submit an application with my personal info" (11%, n=11).

Table 10. Reasons for not applying for SNAP* among SNAP non-recipients who had never applied (n=100).

	_n (%)_
	_n=100_
I don't know how or where to apply	30 (30%)
I don't know if I'm eligible because of my income	27 (27%)
I don't know if I'm eligible because of my immigration status	21 (21%)
I don't know if I'm eligible because of my employment status	13 (13%)
I don't want to submit an application with my personal info	11 (11%)
I don't want to submit an application with my immigration status	7 (7%)
The dollar amount isn't enough to help	3 (3%)
I don't feel comfortable spending SNAP dollars at the grocery store	3 (3%)
Other: I don't think I qualify	8 (8%)
Other: Unable to visit grocery store	1 (1%)
Other: Didn't know it was available	1 (1%)
Other: Mental health	1 (1%)
*Participants were able to select more than one reason	

In our analysis of potential SNAP income eligibility among UWKC-DoorDash Program clients, we found that only 5% (N = 20) of households estimated to be income-eligible for SNAP do not know how to apply for benefits (Table 11). We estimated that 83% (N = 329) of UWKC-DoorDash Program clients are eligible to receive SNAP benefits based on reported income and household size (Table 11). Based on eligibility criteria[7], at least 38% of program clients are income eligible yet not receiving SNAP benefits. While income-eligible households generally seem to know how to apply for SNAP, UWKC-DoorDash Program clients could potentially be better informed surrounding income-eligibility guidelines. Fifty-six percent of program clients who had not applied for SNAP benefits because they thought their income was too high (n=14), are likely income eligible.

Qualitative results support these general findings, as some clients expressed that they did not know whether or not they were eligible for SNAP and did not feel they had sufficient information on the program or how to apply. Further, clients discussed their concerns about their immigration status and refrained from utilizing government assistance of any kind due to fear and uncertainty. Though not reflected in the quantitative data, some clients interviewed stated that they did not apply for SNAP benefits because SNAP participation would potentially hinder their eligibility for other assistance programs.

"My husband is not a full citizen yet, so taking help from the state or the government is a no-no sort of thing. I don't want to mess it up for him, so I'm just not going to do it." - #12

"I've looked into [SNAP] and I would qualify for it, but the problem is that it impacts child support… I'm getting more in child support than I would get on food stamps and when I was on food stamps, then they took the child support." - #20

Table 11. UWKC-DoorDash Program client SNAP eligibility, based on reported income and household size (n=396).

	Eligible	May be eligible*	Ineligible
SNAP eligibility	*n (%)*	*n (%)*	*n (%)*
Total income-eligible households	329 (83%)	48 (12%)	19 (5%)
Income-eligible households who are not enrolled	151 (38%)	40 (10%)	N/A
Income-eligible households who do not know how to enroll	20 (5%)	5 (1%)	N/A
Households who think their income is too high to qualify	14 (3%)	7 (2%)	4 (1%)
*Based on categorical survey responses, it is not possible to determine SNAP eligibility for households near the maximum allowed income.			
**72 participants (15% of initial sample) did not report income and/or household size and are not included in analysis.			

Use of other programs among program clients with children

Households with children may be eligible for SNAP and a number of additional nutrition assistance programs such as Pandemic EBT (P-EBT), Women, Infants, and Children (WIC), the Summer Food Service Program (SFSP), and the National School Lunch Program (NSLP), depending on income level. Among client households with children (N=266, 57% of all client households), 45% (N = 119) reported receiving SNAP benefits (Table 12), 47% report participating in P-EBT, 20% in WIC, 30% in the NSLP, and 15% in SFSP. Client households with children were no more likely than UWKC-DoorDash Program participants as a whole to receive SNAP benefits.

Table 12. Participation in other programs among program clients with children (n=266).

Received benefit	***n (%)***
SNAP	119 (45%)
P-EBT	125 (47%)
WIC	53 (20%)
NSLP	80 (30%)
SFSP	40 (15%)

Impacts of SNAP on food security and nutrition status

Nationally, SNAP benefits are shown to improve food security but have mixed effects on nutrition status. Results vary by study, method, and year of measurement, but SNAP

participation reduces food insecurity by 4.2-17%.[9,10] In 2019-2020, increased SNAP enrollment played a significant role in keeping food security in the United States at 2019 levels (10.5%) despite significant impacts to household economic status during the COVID-19 pandemic.[9]

SNAP participation does not appear to increase the nutrient density of participants' diets compared to income-eligible nonparticipants. Studies use a variety of methods to consider the impact of SNAP on nutritional status, including the Healthy Eating Index (HEI), fruit and vegetable consumption as compared to other food groups, and National Health and Nutrition Examination Survey data. Although there are methodological challenges with measuring nutritional status, most studies suggest there is not a strong link between SNAP participation and improved nutritional status—indeed, many report increased consumption of energy-dense foods and lower dietary quality overall.[11]

Despite limited evidence of effects on nutritional status, SNAP still plays an important role in promoting health by reducing food insecurity. Food insecurity is consistently correlated with chronic health conditions, poor quality diet, and overall poor health.[12] Low SNAP participation, especially among households with children and people with disabilities, presents a significant outreach opportunity for UWKC.

Recommendations

In this section we propose program recommendations for the UWKC-DoorDash Program based on our assessment results. We recognize that UWKC is deeply invested in serving its clients with dignity and is implementing substantial programming under time and budget constraints. The following recommendations offer ideas that UWKC could use to build upon the strengths of its current programming, as well as considerations for ways to grow its programming in the future if time, resources, and budgets allow.

Our recommendations for the UWKC-DoorDash Program center around UWKC's priority of listening to community needs and serving clients with dignity. While many clients expressed gratitude and high satisfaction with the program, challenges with the current model offer an opportunity to bring client satisfaction to an even higher level and ensure all clients feel fully seen and cared for within the program. Additionally, expanding the program's future offerings could increase clients' choice and agency within the program.

As described in the Results section, clients most commonly requested changes to the delivery model, improved communication, increased variety, improved food quality, and box customization. Below we discuss our recommendations for satisfying each of these client requests. The following is a brief overview of recommendations for UWKC to consider, which are discussed in further detail below.

Overview of recommendations

- **Develop strategies to address client-identified delivery issues**
    - Label boxes
    - Shorten delivery windows
    - Develop driver training materials
- **Increase and improve communication with clients**
    - Create dedicated email for client feedback
    - Clarify box expectations
    - Streamline client-involved logistics
    - Use email to support client-preferred languages
- **Build upon the success of current box offerings**
    - Increase variety of shelf-stable box contents
        - Option 1: Send variety to partner food banks
        - Option 2: Centralize packing of boxes
        - Option 3: Alternative option to be determined by UWKC
    - Implement checks and protocols to ensure freshness
        - Formal logistics audit
        - Utilize email feedback

- o Increase box customization options
  - ▪ Support partner food banks in current box customization
  - ▪ Consider expanding customization options as finances and logistics allow
  - ▪ Consider fully customizable boxes in future years
  - ▪ Addition of cooking staples and non-food essentials
- **Potential future programming**
  - o Transition to a centralized distribution model
    - ▪ Consider partnerships with or adopting models from local food hubs
    - ▪ Consider separating shelf-stable and fresh delivery items
  - o Alternatively, remain with decentralized distribution model
  - o Hire and train in-house delivery drivers
  - o Provide clients with opportunities to access other delivery programs
  - o Consider the future build-out of an online portal

Develop strategies to address client-identified delivery issues

Clients in the UWKC-DoorDash program expressed gratitude for the consistent home delivery of essential food items, particularly for clients who were unable to visit a food bank due to disability, childcare needs, or lack of transportation. Clients did cite a few improvements that would reduce loss of boxes and ease stress on delivery days.

Implement labels to reduce box loss during or after delivery

A number of clients noted that unlabeled boxes were sometimes moved, not returned when delivered to the wrong address, or simply stolen from a front door or building lobby. To help remedy this, we recommend that UWKC adopt a practice of labelling all boxes with client names or unit numbers. If resources are available, we recommend printed labels or packing slips with the client's name, unit number, and client-provided delivery instructions affixed to the outside of the box.

Shorten delivery windows to reduce scheduling burden on clients

Clients cited that large delivery windows meant that they needed to be home most of the day to receive the package, and that shorter delivery windows would ease scheduling burdens and stress. We suggest UWKC limit delivery windows to three hours. If logistics allow, the possibility for clients to choose a delivery window that suits their schedule could further decrease scheduling burdens for clients.

Develop driver training materials to improve delivery experience for clients

The UWKC/DoorDash Inc. partnership has provided immense benefits in terms of logistical ease and required start-up time for this program. Additional training for DoorDash drivers around current pain points could enhance user experience and build client trust. Brief online or in-person training materials either through UWKC directly or passed along through DoorDash might focus on the following:

- Following client-provided delivery instructions.
- Dropping boxes at apartment door rather than in lobby: this is particularly important for seniors or clients with disabilities who might struggle to retrieve heavy boxes from mailrooms or apartment lobbies.
- Ensure that protocols regarding client notification before and after delivery are followed.

We suggest UWKC work with DoorDash to ensure drivers are compensated for their time completing this training session to ensure that these potentially marginalized workers are not further financially stressed in an attempt to serve a different marginalized community. We also recommend that—if not already known—UWKC reach out to DoorDash to better understand how drivers are compensated for UWKC deliveries. A clearer understanding of time constraints or financial pressures on drivers might elucidate why some of the delivery issues clients experience happen in the first place.

Increase and improve communication with clients

UWKC-DoorDash Program clients expressed interest in clarifications around box details and increased ease of communication with program staff. We recognize the constraints and potential complications of additional communication with clients in a decentralized program such as this with so many local food banks involved. Although a robust and proactive communication channel may not be possible, we do believe that this is an opportunity for UWKC to help clients feel heard, whether or not budgets and logistics allow for follow-up changes to be implemented. Therefore, we recommend that UWKC create a dedicated email address to improve communication with clients. While this is noted as a recommendation in and of itself, it could also serve as the channel for other communication-related recommendations listed below.

Create dedicated UWKC email to facilitate communication with UWKC-DoorDash clients

A central contact point for UWKC-DoorDash Program customer service would allow clients to report issues, ask questions, and simply feel heard. We recommend that UWKC print this email address on all program-related materials that reach clients. We see how invested UWKC is in ensuring client needs are being met, and a central contact email would help facilitate this. This would also allow for clients to send photos of boxes, giving UWKC real time insight into any challenges that may arise. UWKC could decide if and when to contact partner food banks about box issues and would be able to monitor consistent issues that might need attention.

Clarify expectations for box contents

Some clients noted that they were asked about dietary restrictions or preferences upon signing up for the UWKC-DoorDash Program, but that those requests were not met. We recommend that UWKC make clear to clients upon signing up that partner food banks will always try their best to meet requests, but that supply, or logistical limitations might prevent this for some weeks.

<u>Streamline client-involved logistics and onboarding for new services</u>
We recognize all of the ways in which UWKC serves their clients with dignity, meets them where they are, and streamlines as many processes as possible to reduce barriers to entry. To further support this mission, we recommend that UWKC utilize the email noted above to meet these additional goals:

⇒ *Receive client address changes*
Clients may need to move during the program for a number of reasons. Use of this email would streamline their process of informing UWKC of their new address and potential new delivery instructions.

⇒ *Send new client sign-up information*
A number of clients expressed interest in signing up friends and neighbors for the UWKC-DoorDash Program. If and when UWKC determines that it has the capacity to take on new clients in the program, this email can be used to notify clients of dates and procedures for signing up loved ones.

⇒ *Connect clients to additional services*
UWKC expressed their consistent effort to assist clients in signing up for additional services that they likely qualify for, and our research supported this suspicion that a number of eligible clients were still not enrolled in programs like SNAP. This email would allow UWKC an additional method of informing clients about services that they might qualify for, and could link directly to county or state enrollment websites.

⇒ *Alternative for additional services: printed flyer inside each box*
We recognize that not all UWKC-DoorDash clients may use or have access to email. Additionally, we recognize that informational emails of this nature may not be feasible or well suited for UWKC or its clients for various reasons. If that is the case, we recommend that UWKC instead consider flyers included in each box—weekly, monthly, or quarterly as UWKC sees fit—that would contain all necessary information about eligibility and sign up for other supportive services. The static nature of this information would allow UWKC and partner food banks to print flyers once for a full program cycle to then be included as needed.

⇒ *Email as an opportunity to support client-preferred languages*
We recognize the challenge UWKC faces working with such a linguistically diverse population and commend them on the work it already does to translate materials into a number of languages. In our research, clients expressed desire for more support for non-English speakers, particularly when dealing with questions and concerns. We recommend that UWKC utilize this customer support email address to field client inquiries in non-English languages. Having client communications in writing would allow UWKC to apply translation services to these communications, rather than real-time translation needed if fielding questions over the phone. Finally, if financially feasible, we

recommend that UWKC employ translation services to any of the previously mentioned email notifications sent to clients who are non-English speakers.

Build upon the success of current box offerings

The most central component of the UWKC-DoorDash Program is the content of the box itself. Clients expressed immense gratitude for receiving the boxes, and we acknowledge that food banks in general and UWKC specifically share a mission to improve food security and honor client choice and dignity. Based on the immense success of the program thus far, we believe that UWKC is well equipped to continue tailoring and refining box contents in pursuit of this mission.

Increase variety of shelf-stable box contents

In addition to praise for the program, clients requested an increased variety of box components from week to week, particularly regarding shelf-stable food items. Additionally, some respondents requested a wider variety of fresh foods to help diversify the meals they fed their families. If financial and logistical resources allow, we recommend that UWKC consider implementing one of the three following options:

1. UWKC could work directly with partner food banks to offer supplementary foods for boxes in order to increase variety for all clients regardless of food bank.
2. UWKC could centralize the packing of boxes at the location where it receives the bulk of its purchases and donations, so that the greatest diversity of contents can be chosen from. This could also help diversify the boxes of clients served by smaller food banks that might now have access to a large variety of goods. We discuss centralization in more detail below.
3. UWKC's logistical resources might offer an option that we have not yet considered, and we recommend that UWKC discuss internally what other channels might be available to help offer a greater variety of foods to clients on a consistent basis.

Implement checks and protocols to ensure freshness

In our assessment, clients reported that boxes sometimes contained rotten, rotting, or soon-to-expire produce, as well as expired or soon-to-expire shelf-stable goods. It may be the case that although partner food banks share UWKC's mission to support client dignity through high quality food offerings, they may not possess the same resources to evaluate and ensure the timely delivery of all box contents. Therefore, we recommend that UWKC lend its resources to implement the following:

⟹ *Formal logistics audit to assess current bottlenecks or missed quality checks*
We recommend that UWKC explores the current packing and delivery timelines of the food banks participating in the program, as well as inquires about the quality checks put into place with the packers at each food bank. We recognize that UWKC may already be aware of some issues and working to solve them. A more formal audit could build upon the current understanding and hopefully offer clarity around what partner food banks or parts of the system might benefit from the most help.

⇒ *Utilize email feedback to monitor quality as fixes are implemented*
We recommend that UWKC utilize the email feedback option discussed above to gather in-the-field information about any ongoing challenges in box quality. This would allow UWKC to react in real time to help partner food banks solve any issues, and to make note of any patterns in where or how challenges arise.

Increase box customization options as resources allow

The current UWKC-DoorDash Program already allows clients to choose customized boxes depending on dietary need, but UWKC expressed their interest in furthering this offering as the program grows. To ensure availability of current offerings and to potentially expand offerings in the future, we recommend the following:

⇒ *Support partner food banks if unable to provide customized boxes consistently*
While UWKC-DoorDash Program clients were pleased to see box customizations on intake forms intended to suit dietary preferences, religious accommodations, and food allergies, a number of interview and survey responses noted that those listed preferences were not followed. To ensure customization can be met on a consistent basis, we recommend that UWKC offer partner food banks with stockpiles of certain shelf-stable foods or funding to purchase missing items, as well as staff or volunteer training to ensure the effective logistical management of box customizations.

⇒ *Consider expanding customization options as finances and logistics allow*
If logistically and financially possible, we recommend that UWKC consider expanding customization options. A next step in this direction could look like allowing clients to request vegetarian, produce-heavy, shelf-stable-heavy, diabetes-friendly, protein heavy, or kid-snack-heavy boxes. These categorized customizations would increase the complexity of the program by increasing the number of box options to ten or more, but the contents of the box within each category would be the same. This option may be more feasible if UWKC decides to transition to a centralized packing model, discussed more below.

⇒ *Consider fully-customizable boxes in future years*
A further step would be to consider fully customizable boxes that would allow clients to set a number of parameters such as "no broccoli," "more peanut butter," etc., as well as look up the contents of their upcoming box and adjust by adding on items, changing quantities, and/or excluding or exchanging certain items. We recognize that this would be a lofty goal and would require a customized online platform that we discuss further below. However, based on UWKC's enthusiasm for this program and capacity to create innovative systems to serve their clients, we believe this could be within the realm of possibility and could open a new world of possibilities for clients.

⇒ *Addition of cooking staples and non-food essentials*
We recognize that UWKC takes great care to select the right types of items to add to boxes to best serve client needs. To that end, we recommend UWKC consider the addition of cooking staples such as cooking oil, salt, spices, flour, and sugar, as well as non-food essentials like paper towels and dish soap. A number of clients in our research noted that despite receiving boxes, they still needed to visit food pantries or grocery stores in person for cooking staples or non-food items. For disabled clients and especially clients with young children, the addition of a non-food-items could help to reduce or eliminate remaining food pantry or grocery store trips. UWKC might consider if clients would best be served by the addition of these items to weekly boxes or a separate box of non-food essentials delivered monthly.

Potential future programming

We recognize that the current iteration of the program is dependent on DoorDash Inc.'s donation of rides and is therefore unlikely to last forever. For this reason, we believe it's important to consider what models could build upon the success of the current program.

Transition to a centralized distribution model

Given our study findings, we see the potential benefits of a centralized food distribution model. We recommend that UWKC—or the future program organizer—take on a centralized role in the logistics of the program to ensure consistent quality of program delivery to all clients, and thus, best meet client needs while doing so with client dignity at the forefront. UWKC has demonstrated that it is well equipped to take on this role, and we believe it could allow for improved scalability of the program's current success. Some additional considerations for this centralized distribution model are:

⇒ *Consider partnerships with or adopting models from local food hubs*
Organizations like Northwest Harvest purchase and donate shelf-stable foods to food banks throughout King County. We recommend UWKC consider sourcing shelf-stable item donations directly from an organization such as Northwest Harvest to improve program efficiency. Additionally, partnering and sharing best practices might offer each organization further insight into logistical efficiencies or addressing certain pain points.

⇒ *Consider separating shelf-stable and fresh delivery items*
We recognize that funding restrictions could limit the ability for partner food banks to pass along donated items to a centralized location. In order to work within the confines of these restrictions while still providing clients access to fresh produce, we recommend UWKC consider transitioning to a weekly produce-only box on top of a monthly or bi-weekly shelf-stable box. In this model, partner food banks would still deliver bi-weekly or monthly boxes to clients filled with shelf-stable food donations with funds from their given area, while UWKC would assemble and deliver weekly produce boxes. UWKC's control over weekly produce boxes would allow for tighter quality control, bulk purchasing from vendors, and ensuring variety from week to week.

Alternatively, remain with decentralized distribution model

Due to city funding restrictions impacting the ability for food banks to share donations at a centralized distribution point, we recommend that UWKC also consider a decentralized distribution model in which it purchases and sends shelf-stable and fresh produce items to regional food banks on a weekly or monthly basis as needed in order to meet box-customization requirements. Boxes could continue to be packed at and shipped from regional food banks with additional logistical support and guidance from UWKC.

Hire and train in-house delivery drivers

The reliance on DoorDash drivers—though very effective in getting the program up and running quickly—also left client experiences vulnerable to inconsistencies among drivers and training, as we saw come up in client interviews. We recommend that UWKC hire their own drivers or contract with King County Access Transportation to train and mobilize drivers as needed to the exact standards of delivery, which will support both program success as well as client satisfaction.

Provide clients with opportunities to access other delivery programs

We recognize UWKC's investment in connecting their clients with fresh food options while reducing barriers. With the goal of increasing variety and fresh options for clients to meet the requests noted in our research, we further suggest that UWKC could offer clients weekly credits through Amazon Fresh, Peapod, home-delivery-CSAs, or other grocery delivery services. These credits could supplement or replace boxes for clients with specific needs or allow for the purchase of weekly fresh produce to supplement a monthly box containing only pantry staples and non-food items discussed above. UWKC could consider this option in addition to or instead of a weekly fresh produce box, depending on funding and logistic limitations.

Consider the future build-out of an online portal to further program goals

This stage would come after capacity building for box customization discussed in the above sections and would likely not be possible in the near future. However, we believe it is a worthwhile consideration for future program direction based on the speed and effectiveness with which UWKC built the UWKC-DoorDash Program and the enthusiastic feedback of clients. We recommend that in the coming years, UWKC consider the benefits and drawbacks to platforms similar to Farmigo, Instacart, Imperfect Produce, Misfits Market, and Blue Apron. This research could help UWKC to develop possible ideas for their own future platform around functionality, box customization, and delivery day determined by zip code. Clients could log in each week to customize the contents of their box, with the default contents being delivered if alterations are not made, ensuring that clients would still receive food if they were too busy or otherwise unable to make their customization that week. A model such as this—though requiring a significant investment of time, money, and resources—could provide a place for customization, feedback, and ongoing support for a growing number of clients in the coming years.

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