





NORTHWEST PORTLAND AREA INDIAN HEALTH BOARD Food Insecurity and Food Access in Washington State Tribal Communities During the COVID-19 Pandemic Findings from the WA State Tribal Food Survey



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## About the WATRIBAL Team

The WATRIBAL survey was a joint effort between the Northwest Tribal Epidemiology Center (NWTEC), a division of the Northwest Portland Area Indian Health Board (NPAIHB), the University of Washington (UW), and Tacoma Community College (TCC).

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## Acknowledgements

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#### Food insecurity high

Using the United States Department of Agriculture 6-item validated scale, 67% of households were food insecure during the past 12 months.

#### Food assistance use doubled during COVID-19

Participation in each food assistance program included in the survey increased since COVID-19. Pick-up at food banks, SNAP, mobile food boxes, grocery vouchers, the commodity foods program (FDPIR), the Emergency Food Assistance Program (TEFAP), summer school meals, more than doubled since COVID-19 in the overall sample. Almost every food assistance program had higher participation among those living off a reservation as compared to living on a reservation.

#### Many reported barriers to food assistance

Top reported barriers to using food assistance included worrying they wouldn't qualify, being afraid to apply, too much trouble/red tape to apply, and that the distance was too far. Those living on a reservation had a higher proportion report that they didn't think they were qualified as compared to those living off a reservation.

#### Households on unemployment high

Twenty-seven percent of the sample were unemployed or not in the workforce, but 55% of households reported receiving unemployment, with 55% of those households having difficulty applying.

#### Traditional food use decreased during COVID-19

Almost half of the sample reported decreasing their use of traditional foods during COVID-19. A higher proportion of those living off a reservation reported a decrease as compared to those living on a reservation (47% vs. 39%). Many reported lower consumption of shellfish and wild game (46% and 40% respectively). About a third reported reduced access to traditional foods including fish, wild game, berries, and shellfish.

#### Disruptions and barriers due to COVID-19

Community dinners, gatherings, and first food ceremonies were the top reported disruption during the pandemic (51%). COVID-19 restrictions were the top barrier to growing food in the community (28%). Not having the materials was the top barrier for growing food at home (41%). The top barrier to accessing traditional foods was COVID-19 restrictions (40%). Traditional food distribution channels were all disrupted, with distribution amongst community members decreasing by more than half.

#### Tribal government seen as leaders and other positive outcomes

Many reported the tribal government as the top leader in their community (38%). People in the community helping one another grow and access food was the top positive outcome during COVID-19 (37%). Support from local grocers and restaurants, and access to food assistance in the community were other top reported positive outcomes.

#### INTRODUCTION

## About the WATRIBAL Survey

The Washington (WA) State Tribal Food Project (WATRIBAL), funded through the University of Washington (UW) Population Health Initiative (UWPHI), was conducted from September 2020 to August 2021. The goal was to study changes in food access pathways, food insecurity, and additional need during the COVID-19 pandemic among American Indian/Alaska Native (AI/AN) communities in WA State. The project took a mixed methods approach to develop a quantitative survey based on qualitative interviews among 9 tribes, while using the survey from the WAFOOD project<sup>†</sup> as a template. A total of 196 WA residents identifying as a member or descendent of a tribe responded to the WATRIBAL survey, which was deployed from March to April 2021. All but 3 tribes were represented in the study sample. This report provides a summary of survey responses on employment, income, food assistance, and food insecurity. We also examine barriers to accessing federal, state, and tribal programs before and since the pandemic, accessing traditional foods, and growing foods at home and in the community.

†The WAFOOD project was as a UWPHI COVID-19 Rapid Response Grant-funded project titled "Examining the impact of the COVID-19 pandemic on food systems, food security, and food access in Washington State," launched in June-July 2020. For more information about this project, please visit <u>https://nutr.uw.edu/cphn/, https://www.nfactresearch.org/washingtonstate</u>.



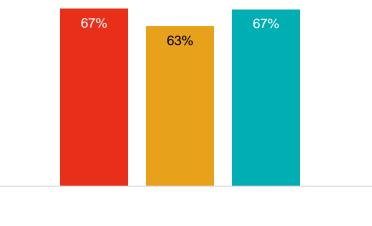


## Disparities in Food Insecurity

- The United States Department of Agriculture (USDA) defines a food secure household as one in which all members always have access to enough food for an active, healthy life.
- Using the USDA 6-item validated scale, WATRIBAL households were identified as being food secure (33%), or as having low (32%) or very low (35%) food security.
- Food insecure households are defined as those with either low or very low food security, which equates to 67% of WATRIBAL households (Figure 1).
- Food insecurity was higher among those living off a reservation as compared to participants living on a reservation (67% vs. 63% respectively).
- Very low food security was higher among those living off a reservation as compared to participants living on a reservation (35% vs. 32%).

#### Figure 1: Food insecurity: on vs. off-reservation

Note: Percentages are out of participants reported who provided reservation status and had complete food insecurity data.

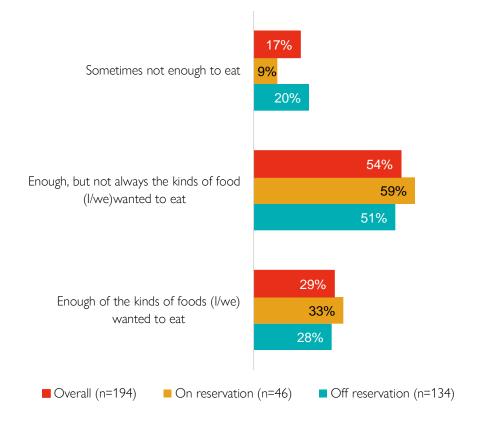


■ WATRIBAL (n=185) ■ On reservation (n=41) ■ Off reservation (n=133)

## Disparities in Food Insufficiency

- Food insufficiency is a measure of whether a household has enough to eat, assessed by a single question from the USDA.
- A higher proportion of those living off a reservation reported sometimes not having enough to eat compared to those living on a reservation (Figure 2).

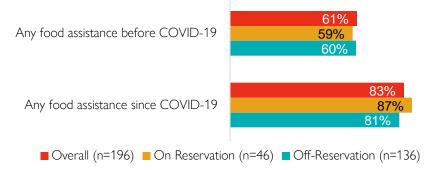
#### Figure 2: Food insufficiency overall and for participants living on- vs. off-reservation



# Food Assistance Use High Before COVID-19 and Increased Since

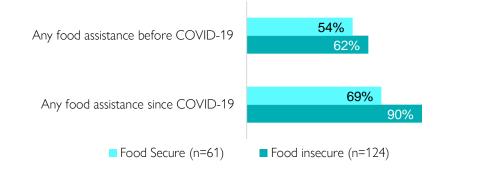
- Any food assistance use increased from 61% to 83% since COVID-19 in the overall sample (Figure 3).
- The increase in food assistance use was higher among those living on a reservation (59% to 87%).
- Almost all of those using food assistance since COVID-19 were food insecure (90%) (Figure 4).

#### Figure 3: Any food assistance use before and since COVID-19



## Figure 4: Any food assistance use before and since COVID-19 among food insecure and food secure

Note: Percentages are out of participants reported who provided reservation status and had complete food insecurity data.

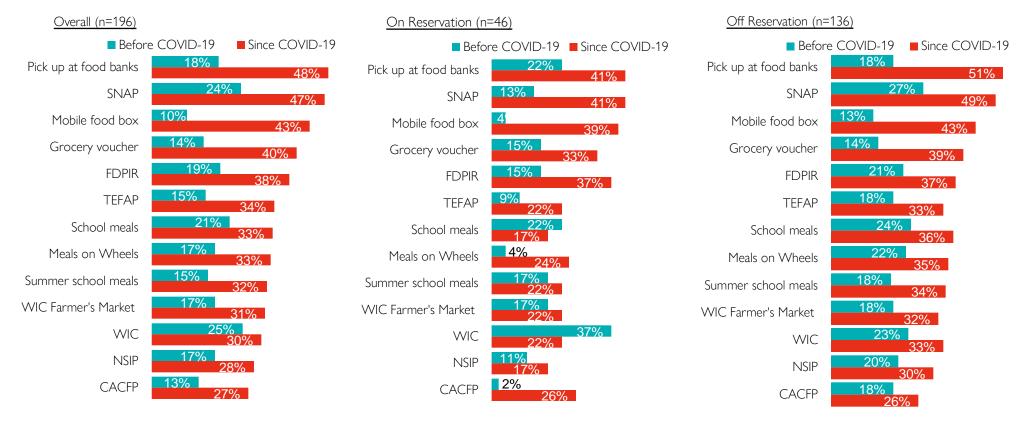




## Food Assistance Use Increased Since COVID-19

- Every food assistance program included in the survey increased since COVID-19 in the overall sample and among those living on and off a reservation (Figure 5).
- Pick up at food banks, SNAP, mobile food boxes, grocery vouchers, the commodity foods program (FDPIR), the Emergency Food Assistance Program (TEFAP), summer school meals more than doubled since COVID-19 in the overall sample.
- Pick up at food banks and SNAP were used by about half the sample since COVID-19.
- Almost every food assistance program had higher participation among those living off a reservation as compared to living on a reservation.

#### Figure 5: Food assistance use before and since COVID-19.



## Concern Over Eligibility and Application Process Among Top Barriers Related to Accessing Food Assistance

- Concern that one would not qualify, fear of applying, and the trouble • involved in applying were among the top barriers to accessing food assistance (Figures 6A-C).
- Barriers varied some between on and off reservation households, though ٠ the key concerns remained the same between both demographics.
- Travel concerns were also commonly named as barriers to accessing food ٠ assistance, with 32% of households reporting that the distance involved was too far, 23% reporting that they did not have gas money, and 20% referencing a general lack of transportation.
- A lack of childcare was reported as a food access barrier by 20% of on • reservation households and 28% of off reservation households.
- A lack of knowledge about food assistance programs was another major ٠ barrier reported and was a sentiment consistent between on reservation (33%) and off reservation (28%) households.

#### Figure 6A-C: Barriers to Food Assistance

Note: Percentages are out of participants reported who provided reservation status, were using any form of food assistance, and had complete food assistance barriers data.

<u>A: Overall (n=162)</u>	Don't think I'm qualified	41%	46	<mark>% 11%</mark>
	I'm afraid to apply	40%	36%	22%
lt's too mu	ch trouble/red tape to apply	33%	44%	19%
	The distance was too far	32%	35%	31%
l don't know abo	ut food assistance programs	28%	39%	30%
	Embarrassment	27%	42%	28%
Food ass	istance benefits not enough	25%	43%	28%
	I don't have child care	24%	41%	31%
	Didn't have gas money	23%	47%	28%
A	oplied but was turned down	21%	42%	34%
Health problem	is prevent me from applying	20%	39%	36%
l de	on't have any transportation	20%	42%	35%
A family membe	er did not want me to use it	17%	43%	38%
	🗖 Agree 📑 Neutral	Disagree	Prefer no	ot to respond

<u>B: On Reservation (n=40)</u> Don't think I'm qualified	5	3%	30% 13%
It's too much trouble/red tape to apply	33%	33%	28%
I don't know about food assistance programs	33%	20%	43%
I'm afraid to apply	30%	28%	35%
The distance was too far	28%	23%	48%
Embarrassment	25%	40%	33%
Food assistance benefits not enough	23%	33%	43%
Applied but was turned down	23%	33%	40%
l don't have child care	20%	25%	50%
Health problems prevent me from applying	20%	28%	45%
A family member did not want me to use it	20%	35%	40%
Didn't have gas money	15%	45%	38%
I don't have any transportation	13%	33%	45%
🗖 Agree 🗖 Neutral 🗖	Disagree	Prefer r	not to respond

C: Off Reservation (n=109)				
C. Off Reservation (n=109)	I'm afraid to apply	41%	39%	17%
Do	n't think I'm qualified	39%	50%	10%
lt's too much trou	ble/red tape to apply	32%	49%	17%
The	distance was too far	31%	40%	27%
l don't know about food	assistance programs	28%	42%	28%
	Embarrassment	28%	45%	27%
1	don't have child care	28%	46%	24%
Food assistance	benefits not enough	27%	46%	24%
D	idn't have gas money	23%	50%	26%
l don't hav	ve any transportation	22%	44%	32%
Applied b	out was turned down	19%	46%	32%
Health problems preve	ent me from applying	19%	47%	30%
A family member did r	ot want me to use it	17%	50%	33%
■ A	gree 📕 Neutral	<ul> <li>Disagree</li> </ul>	Prefer not	to respond

## CHAPTER 2: ECONOMICS AND EMPLOYMENT



#### CHAPTER 2: ECONOMICS AND EMPLOYMENT

## Majority are Employed, Essential Workers, or Union Members

- The majority of the sample were employed, essential workers, and/or union members (Table 1).
- Twenty-seven percent of the sample were unemployed.
- Employment status did not differ between those living on and off reservation, however there was a slightly higher proportion of essential workers and union members among those living off a reservation.
- About half the households reported receiving unemployment benefits since COVID-19 (55%), and 55% of those reported having difficulty applying.

#### Table 1: Employment status

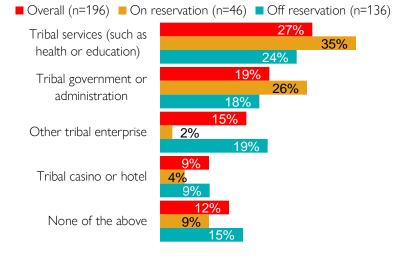
	Overall	On Reservation	Off Reservation
n	196	46	136
Employment status			
Employed	72%	74%	73%
Essential Workers	77%	68%	80%
Union Workers	63%	47%	67%
Unemployed or not in labor force	27%	26%	27%

Note: 1% reported prefer not to answer for employment status. The percentages for essential workers and union workers were calculated based on the total number of employed participants. 3% reported prefer not to answer for essential worker status and 2% reported prefer not to answer for union worker status.

## Tribal Services and Government Top Occupations

- Overall, more than a quarter (27%) of those surveyed were employed in tribal services, with more than a third (35%) of on reservation respondents reporting employment in tribal services (Figure 7).
- Another 19% of respondents worked in tribal government or administration positions. Over a quarter (26%) of on reservation respondents worked in tribal government or administration.
- Others in the overall sample worked in either unspecified tribal enterprise (15%) or in tribally owned casinos and hotels (9%). Workers in these categories lived mostly off reservation.

#### Figure 7: Tribal occupations

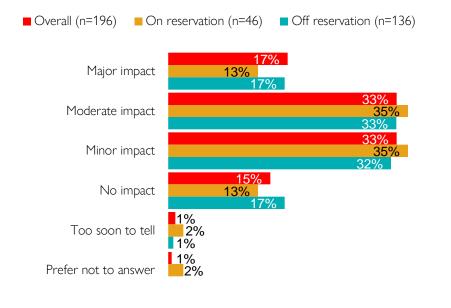




## Most Report a Moderate Economic Impact of COVID-19 on Ability to Meet Financial Obligations

- Seventeen percent of respondents reported the pandemic had a major impact on their ability to meet their financial obligations medical bills (Figure 8).
- About a third of participants reported a moderate impact of COVID-19 on their finances.
- Responses did not differ much between those living off vs. on a reservation.

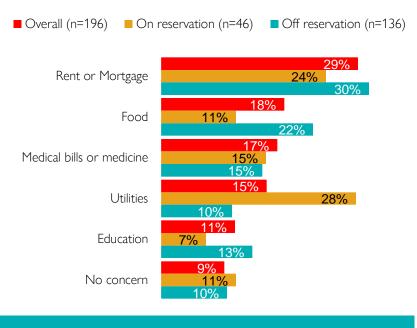
#### Figure 8: Self-reported economic impact of COVID-19



## Rent/Mortgage Most Reported Financial Concern

- Nearly a third of those surveyed reported that COVID-19 impacted their ability to pay rent or mortgage, and this was their top financial concern. This impact was reported by more off reservation (30%) than on reservation (24%) respondents (Figure 9).
- On reservation participants reported utilities as their top financial concern at nearly triple the rate (28%) of off reservation participants (10%).
- Off reservation respondents reported food (22%) and education (15%) as top financial concerns at nearly double the rate of on reservation respondents (11% and 7% respectively).
- Utilities was reported as a top financial concern by those living on a reservation at nearly triple the rate compared to those living off a reservation (28% vs. 10% respectively).

#### Figure 9: Top financial concerns during COVID-19

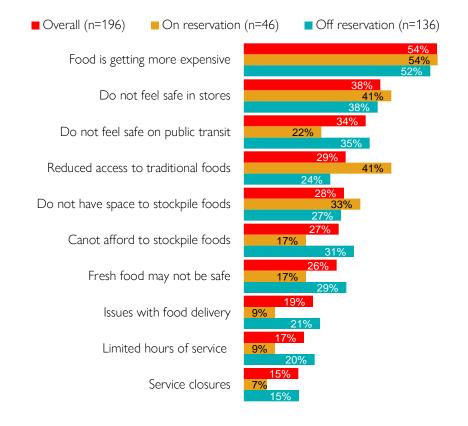


## More Expensive Food a Top Barrier to Getting Food

- About half (54%) of respondents said food becoming more expensive was the top barrier for getting food (Figure 10).
- About one-third of respondents said top barrier to getting food included not feeling safe in stores (38%) and/or public transit (34%).
- Some respondents said reduced access to traditional foods and lack of space to stockpile foods were barriers to getting food.

#### Figure 10: Food shopping issues during COVID-19

Note: Issues reported by 10% or less of the overall sample were omitted for readability.

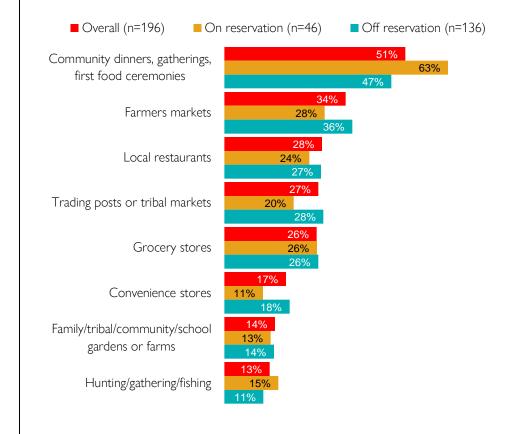


## Community Dinners, Gatherings, and First Food Ceremonies Disrupted

- Community dinners, gatherings, and first food ceremonies were reported as disrupted by half the sample, with a higher proportion among those living on a reservation as compared to off a reservation (Figure 11).
- Farmers markets, local restaurants, trading posts/tribal markets, and grocery stores were other top reported disruptions.

#### Figure 11: Community disruptions during COVID-19

Note: Issues reported by 10% or less of the overall sample were omitted for readability.

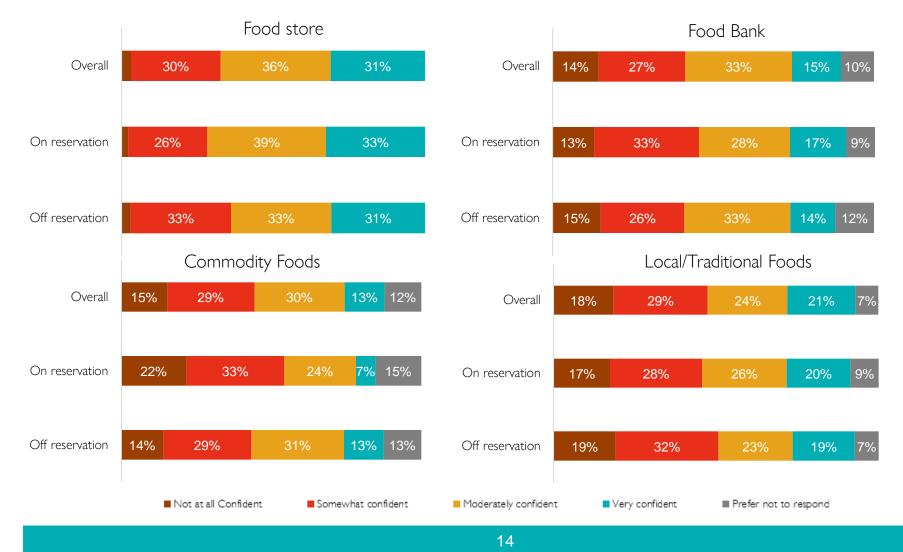


### Many Reporting Low Confidence in Accessing Food Over the Next Few Months

- Overall, about a third of the sample felt only somewhat confident in being able to access foods in the next few months from food stores, food banks, commodity foods, and local/traditional foods, with the lowest confidence in accessing traditional foods (Figure 12).
- Those living on a reservation were slightly less confident in accessing commodity foods as compared to those living off a reservation.

#### Figure 12: Confidence in accessing food from food sources

Note: Overall n=196, On reservation n=46, Off reservation=136.

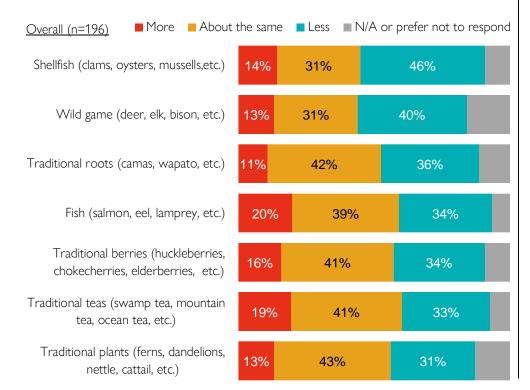




## Most Report Decrease in Traditional Food Consumption

- Overall, 46% of participants reported decreasing their use of traditional foods during COVID-19, whereas 39% reported no change, and 14% reported an increase. Those living off a reservation were more likely to report a decrease as compared to those living on a reservation (47% vs. 39%).
- About half of participants reported a decrease in shellfish (46%) and many reported a decrease in wild game (40%) (Figure 13).
- About a third reported decreases in fish, traditional roots, berries, teas, and plants.

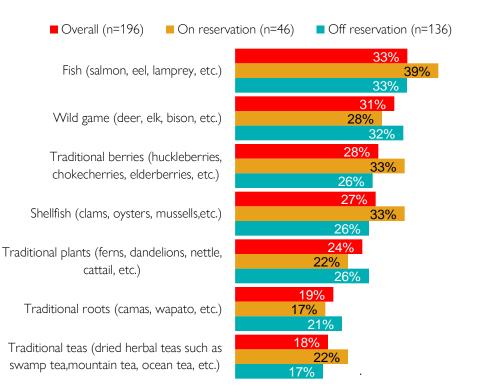
#### Figure 13: Changes in traditional food consumption during COVID-19



### Many Reported Reduced Access to Traditional Foods

- In an open-ended question, the most reported traditional foods included berries, salmon, fish, and teas.
- About a third of the sample reported reduced access to various traditional foods, including fish, wild game, traditional berries, and shellfish (Figure 14).
- About a quarter of the sample reported reduced access to traditional plants, roots, and teas.
- A higher proportion of those living on a reservation reported reduced access to fish, traditional berries, and shellfish as compared to those living off a reservation.

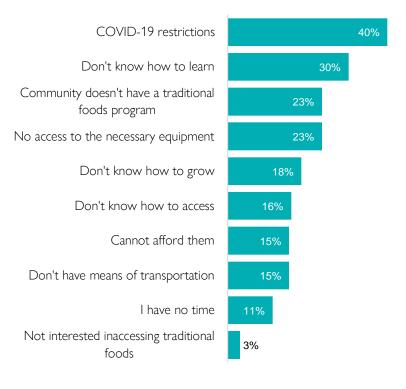
#### Figure 14: Reduced access to some traditional foods



## COVID-19 Restrictions Top Barrier to Accessing Traditional Foods

- Many (40%) reported COVID-19 restrictions as the top barrier for accessing traditional foods (Figure 16).
- About a third (30%) reported not knowing where or how to learn about traditional foods.
- About a quarter of the sample (23%) did not have a traditional foods program in their community or did not have access to the necessary equipment as barriers.

#### Figure 16: Barriers to accessing traditional foods in during COVID-19 (n=196)

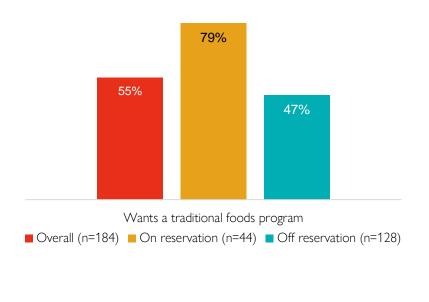


## Traditional Foods Program Desired

- Twenty-one percent of the overall sample report that their community already has a traditional foods program.
- Of those who do not already have a traditional foods program, about half reported wanting a traditional foods program (Figure 17).
- The majority of participants who live on a reservation want a traditional foods program (79%) as compared to 47% among those living off a reservation.

#### Figure 17: Desire for a Traditional Foods Program

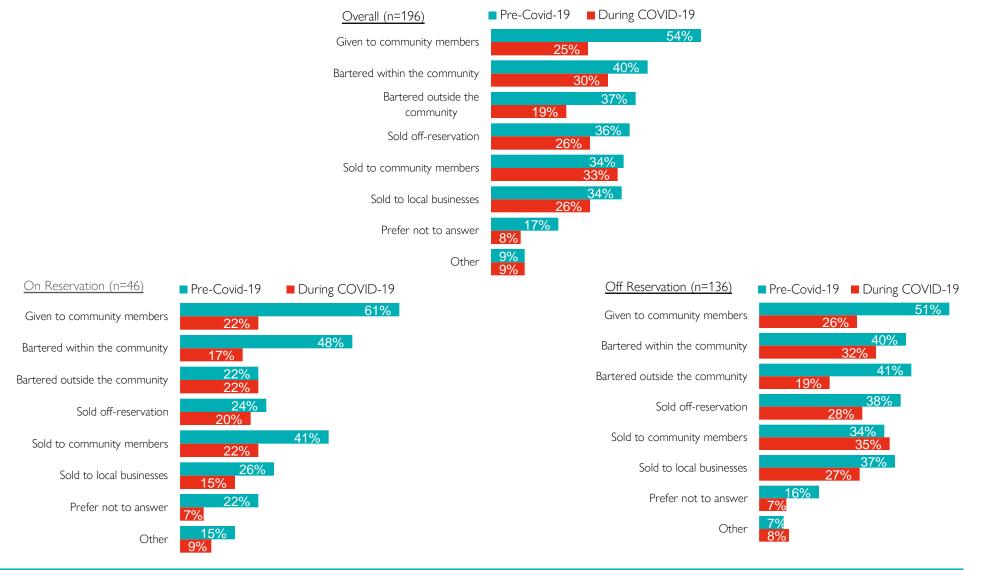
Note: Percentages are out of those who did not already have a traditional foods program.



## Traditional Food Distribution Channels All Decreased During COVID-19

- All distribution channels for traditional foods surveyed decreased during COVID-19 overall and among those living on and off a reservation (Figure 18).
- Distributing to community members decreased by half overall and by two thirds among those living on a reservation.

#### Figure 18: Traditional food distribution channels before and during COVID-19



COVID-19 Restrictions Top Issue for Growing Food in the Community, and Lack of Materials Top Issue for Growing Food at Home

- COVID-19 restrictions were the top issue relating to growing food among the community (such as in community gardens) (Figure 19).
- Many (40%) reported not having the materials at home as the top issue to growing food at home.
- About a quarter reported not knowing how to grow and not having the space as issues at home and among the community.

#### Figure 19: Issues related to growing food at home (n=196)

I/

•	At home In the community
COVID-19 restrictions	28%
I/my community does not have the materials.	41% 21%
I/my community does not have access to equipment.	32% 26%
I/my community does not have the space.	26% 23%
I do not know where or how to learn.	23% 22%
I do not know how to.	<mark>17%</mark> 20%
I do not have access to enough water that can be used for growing.	14% 13%
l have no time.	14% 12%
I am not interested in growing food.	10% 11%
l cannot afford it.	10% 10%
I do not have means of transportation.	<mark>9%</mark> 9%



## CHAPTER 5: HEALTH STATUS

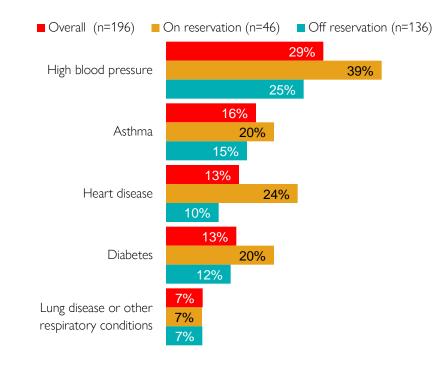


#### CHAPTER 5: HEALTH STATUS

### COVID-19 Risk Factors Widespread

- About one-third (29%) of respondents had high blood pressure, with higher rates among those living on a reservation as compared to off a reservation (Figure 20).
- 13% of individuals had heart disease and diabetes (inclusive of Type I or II, pre-diabetes, and gestational diabetes).

#### Figure 20: COVID-19 risk factors

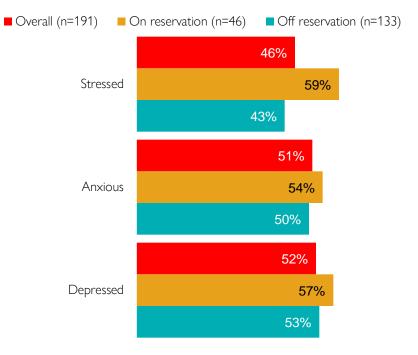


# Many Experienced Elevated Stress, Anxiety, and Depression

- About half of respondents (46%) reported feeling stressed almost all the time (Figure 21), with higher rates among those living on a reservation.
- Half of the sample were classified as anxious or depressed based on their responses on the Patient Health Questionnaire four-item scale.

#### Figure 21: Mental Health during the pandemic

Note:1% of the sample reported prefer not to respond on stress and 3% reported prefer not to answer for at least one of the PHQ4 questions.

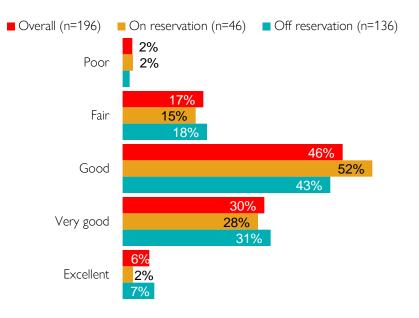


#### CHAPTER 5: HEALTH STATUS

## Many Report Good Health Status

- About half (46%) of respondents reported their health as good (Figure 22).
- About one-third (30%) of respondents reported their health as very good.

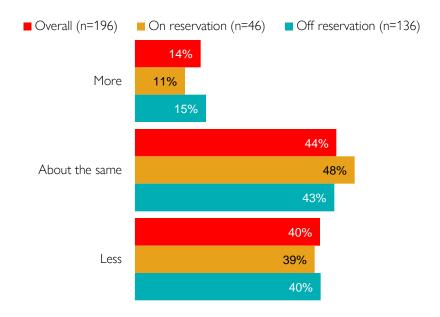
#### Figure 22: Self-reported health status



# Many Report Having the Same Activity Level During COVID-19 as Before COVID-19

- Many respondents (44%) said they had about the same physical activity level as before COVID-19 (Figure 23).
- Many respondents (40%) said they were less physically active during COVID-19.

#### Figure 23: Physical activity since COVID-19



## CHAPTER 6: LEADERS AND POSITIVE OUTCOMES



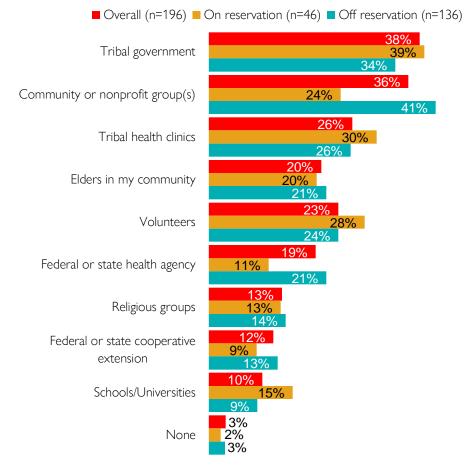
#### CHAPTER 6: LEADERS AND POSITIVE OUTCOMES

## Tribal Government Viewed as Top Leaders Solving Food Problems in the Community

- Tribal government reported as top community leader solving food problems in the overall sample and for those living on a reservation (Figure 24).
- Community organizations/nonprofits were reported as the top leader solving food problems among those living off reservations.

#### Figure 24: Community leaders solving food problems

Note: 4% reported prefer not to respond, 2% reported other.





#### CHAPTER 6: LEADERS AND POSITIVE OUTCOMES

## People Helping One Another Reported as a Top Positive Outcome During COVID-19

- People helping one another in the community to grow and access food was ٠ the top reported positive outcome in the overall sample and for those living on and off a reservation (Figure 25).
- Support from local grocers and restaurants, access to food assistance services ٠ were reported as a positive outcome by about a third of the sample.
- Those living off a reservation had a higher proportion reporting connecting ٠ with local farmers as a positive outcome as compared to those living on a reservation (32% vs. 20%).

#### Figure 25: Positive outcomes during COVID-19

Note: 1% reported prefer not to respond, 1% reported other.

■ Overall (n=196) ■ On reservation (n=46)	■ Off reservation (n=136)
People in your community helping out one another to grow and access food	37' 33%
Support from local grocers and restaurants	35% 33% 35%
Access to food assistance services in your community	34% 28% 32%
Connecting with local farmers	29% 20% 32%
Tribal or health leaders listening to community concerns	28% 26% 28%
More free time to enjoy cooking and mealtime	25% 24% 24%
None	9% 11% 8%



37% % 40%

35%

## CHAPTER 7: DEMOGRAPHICS AND WAFOOD COMPARISON



#### CHAPTER 7: DEMOGRAPHICS AND WAFOOD COMPARISON

- Of the 196 WATRIBAL respondents, 46 (23%) lived on a reservation. Those living on reservation tended to be older with lower educational attainment, but with higher average income than those living off reservation. More women (69%) lived on reservation than men (31%) (Table 2).
- WATRIBAL participants reported substantially lower incomes than both WAFOOD respondents and WA State AI/AN population estimates, with nearly half of respondents reporting household incomes of less than \$35,000 per year.
- WATRIBAL respondents were much more likely to be married and to have children than WAFOOD respondents. WATRIBAL respondents were, on average, younger than both WAFOOD participants and Washington State averages, with only 13% of the WATRIBAL sample over 55 years old.

#### Table 2: WATRIBAL, WAFOOD, and WA State participant demographics

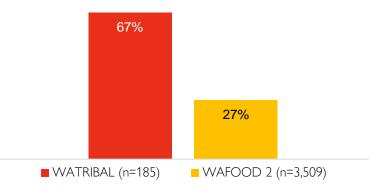
	WATRIBAL			WA State estimates		
	Overall	On reservation <sup>a</sup>	Off reservation	WAFOOD Wave 2 <sup>b</sup>	for AI/AN population <sup>c</sup>	
n	196	46	136	3,509	228,712	
Data collection timeframe		Mar-Apr 2021		Dec 2020-Jan 2021	2019	
Age						
18-34y	46%	39%	49%	21%	26%	
35-54y	40%	39%	40%	44%	24%	
55y+	13%	22%	11%	34%	21%	
Gender <sup>d</sup>						
Female	49%	69%	47%	83%	50%	
Male	46%	31%	53%	13%	50%	
Education <sup>e</sup>						
Some college or less	63%	76%	59%	50%	80%	
College graduate	27%	13%	31%	29%	14%	
Graduate degree	10%	11%	10%	21%	6%	
Income <sup>fg</sup>						
<\$35,000	48%	27%	53%	32%	41%	
\$35,000 to \$74,999	34%	39%	32%	29%	32%	
\$75,000+	18%	34%	15%	29%	27%	
Marital Status <sup>hi</sup>						
Married	64%	68%	61%	49%	34%	
Single/Divorced or unmarried couple	36%	32%	39%	51%	66%	
Children <sup>J</sup>						
One or more children	66%	65%	65%	44%	34%	

Note: (a) 14 reported prefer not to answer for whether they lived on a reservation, (b) WAFOOD 2 was used as the comparison since it was the closest WAFOOD time point temporally to the WATRIBAL survey. (c) WA state come from US Census Bureau 2019 American Community 1-year estimates for those who reported American Indian and Alaska Native alone or in combination with one or more other races, (d) 4% reported "other" gender (Two-spirit, prefer to self-describe), (e) WA State estimates for education include only those  $\geq$ 25 years (n= 140,246), (f) Income estimates come from the 2010-2015 American Community 5-year estimates for those reporting American Indian and Alaska Native alone or in combination with one or more other races (n=68,742) (g) 3% reported prefer not to answer for income, (h) 2% reported prefer not to answer for marital status, (i) WA State estimates for any children and income include total WA households (n= 222,806).

## Food insecurity and food assistance was higher among WATRIBAL participants

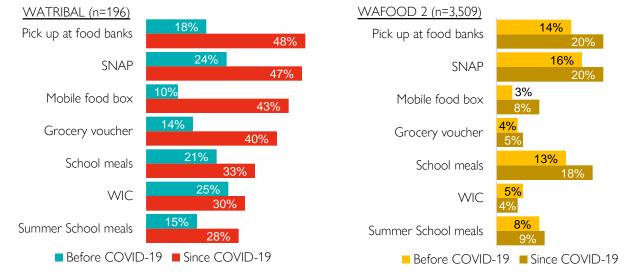
• Food insecurity was more than double among the WATRIBAL population as compared to WAFOOD (Figure 26).

#### Figure 26: WATRIBAL and WAFOOD food insecurity



- There was higher participation among WATRIBAL participants for all the overlapping food assistance programs on the WATRIBAL and WAFOOD surveys (Figure 27).
- Among both the WAFOOD and WATRIBAL samples, there was a marked increase in all food assistance programs since COVID-19, with larger increases among the WATRIBAL sample.

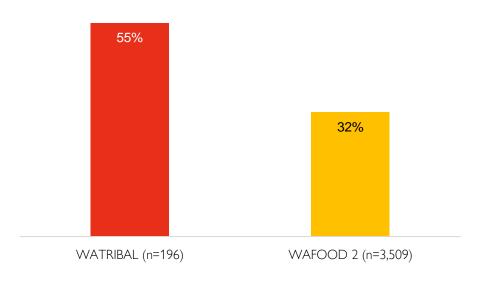
#### Figure 27: Food assistance use across WATRIBAL and WAFOOD 2



## Unemployment, anxiety, and depression higher among WATRIBAL participants

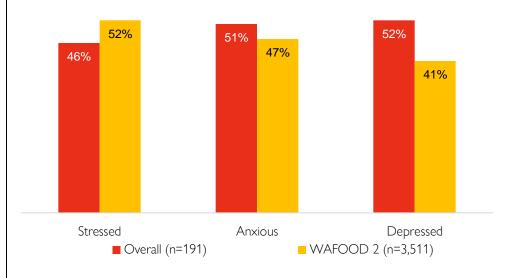
• The proportion of households seeking unemployment since COVID-19 was almost twice as high in the WATRIBAL sample compared to WAFOOD 2 (Figure 28).

#### Figure 28: WATRIBAL and WAFOOD unemployment



- Stress was slightly higher among the WAFOOD 2 sample (Figure 29).
- Anxiety and depression based on the PHQ4 module was slightly higher among the WATRIBAL sample as compared to the WAFOOD sample.

Figure 29: WATRIBAL and WAFOOD mental health





#### Conclusion and Recommendations:

The results from the WATRIBAL survey illustrate how the pandemic has exacerbated existing economic and food disparities among the AI/AN population in WA state, and the need for both long and short term investments into these communities. Though there have been examples of resiliency and positive outcomes, such as mutual aid in the community to grow and access food, and support from local grocers and restaurants, there is still a great deal of work that is needed to continue the response to food insecurity, recovery, and future emergency preparedness.

As trusted community leaders, tribal governments are poised to continue their key role in supporting their communities as the pandemic and its effects continue to unfold. In addition, state and federal agencies should continue to allocate resources to aid tribal communities in responding to the impacts of COVID-19 on their economic and food systems.

Some initial recommendations to address barriers to food access and food assistance programs are listed below:

- Expand communication efforts for food assistance programs. Many survey respondents were unaware of food assistance programs available, both on and off the reservation. A targeted messaging campaign to raise awareness of available food assistance programs, and the location of food pantries/food banks and distribution sites would help increase access to these services. It is important to consider the various ways to communicate this information. The use of social media, email, text, flyers, website, messaging in schools, tribal colleges, and health centers, and newsletters are ways to ensure outreach to a broad audience through various channels. Tribes and partner organizations may consider assessment of the most effective media channels to reach at-risk households.
- 2) Streamline the application process and improve coordination between assistance programs. The top barriers to using food assistance were: worry of not qualifying, being afraid to apply, and that the application process was too difficult. Streamlining the application process in a way that makes applying for assistance easy, allows community members to apply for multiple services simultaneously, and provides clear guidelines about eligibility would aid in getting individuals and families the services they need. The data demonstrate that educational attainment for more than 75% of the sample living on reservation is at or lower than some college. Considering both health literacy and technical literacy as areas of opportunity to offer workshops in high schools, tribal colleges, or health clinics about avenues of food access might be of value. These efforts need to be supported with additional funding to ensure that there are dedicated staff within the tribe to coordinate these resources.
- 3) Address stigma around utilization of food assistance. About one quarter of respondents cited embarrassment as a barrier to using food assistance programs. Tribes and partner organizations may consider investigating the nature of stigma around using food assistance programs, and tailored stigma-reduction messaging could be incorporated into expanded communication efforts. Dignity and privacy concerns should also be taken into consideration when developing program application and distribution processes, and in staff training.

- 4) Expand of distribution location sites and offer home delivery options. Another common barrier to using food assistance was distance. For larger or more spread-out communities, increasing the number of food distribution sites throughout the community, the times and frequency that distribution sites are open, and offering home delivery options (particularly for those with limitations such as mobility and transportation) could help reduce barriers to food access. Money for transportation was also demonstrated as a barrier, which can be resolved by additional sites or rotating sites.
- 5) Include culturally relevant foods into food distribution programs. By including first foods/traditional foods (when available) within the food pantries/banks, food boxes, and other food distribution programs, tribes and partners can increase access to these culturally relevant and nutritionally valuable foods and provide an additional opportunity for nutritional and cultural education about these foods. This suggestion also supports disaster prevention by increasing local sourcing, which could be helpful during global supply-chain interruptions such as those experienced during COVID-19.
- 6) Provide at-home gardening container kits and educational materials. Nearly half of respondents did not have the materials or equipment to grow their own food, and almost a quarter did not know where to learn about gardening. Offering a program to deliver at-home container gardening kits and teach gardening skills would encourage individuals and families to grow their own food, reducing reliance on food assistance and providing more fresh food, herbs, or medicine to tribal households. This strategy also serves as an investment into disaster prevention regarding access issues that surfaced during the pandemic.
- 7) Establish or expand traditional foods programs. The results of the WATRIBAL survey shine a light on the importance of traditional foods to Washington tribal populations. They also demonstrate that most community members rely on their tribe to provide these foods, and when these channels were disrupted by COVID-19, use of traditional foods dropped dramatically. Tribes with existing traditional foods programs should consider alternate distribution channels and flexible programming to strengthen programs' resilience to emergency disruptions. For tribes that do not currently have a traditional foods program, demand is high; among on-reservation respondents, nearly 80% wanted to see a traditional foods program in their community. Starting such a program could be a key component of addressing food insecurity for the tribal community.
- 8) Create a Tribal Advisory Committee to work with a Washington State Department of Agriculture (WSDA) Tribal Liaison on tribal recommendations for WSDA and United States Department of Agriculture (USDA) programs. There is currently no WSDA Tribal Advisory Committee. Further investment and resources are needed within Washington state tribal communities to strengthen tribal food system infrastructure and programs. A Tribal Advisory Committee would allow tribes to directly advocate for the food security needs of their community members.
- 9) Build flexibility into federal resource expenditure policies. By supporting additional flexibility in federal resource expenditure, in keeping with tribal selfdetermination and self-governance, tribes will improve their capacity for local purchasing, procurement, and inclusion of traditional first foods in the

FDPIR and all USDA programs. This will result in more resilient and culturally relevant tribal food assistance programs, increased tribal food sovereignty, and stronger tribal food and economic systems.

10) Increase state and federal resources to support tribal food system infrastructure. The results of the WATRIBAL survey point to a clear need within Washington tribal communities, as evidenced by the stark disparities in food insecurity in this population. They also demonstrate the critical role food assistance and traditional foods programs play in addressing that need. Increasing tribal food sovereignty and strengthening tribal food systems is an essential component of any tribal public health and emergency preparedness response. State and federal agencies can support this by investing in intertribal food systems to build sustainable and resilient food systems and security for tribal communities. Additional funds are also needed for food assistance programs and other assistance services to respond to the growing need. This approach considers both short and long-term needs by addressing the current requirement for assistance and the imperative for improving local environmental conditions, infrastructure, and community capacity to prevent food system collapse or crisis in the future.