



## **MULTI-STATE WIC PARTICIPANT SATISFACTION SURVEY: CASH VALUE BENEFIT INCREASE DURING COVID**

**RESULTS FOR: ALL PARTICIPATING STATE WIC AGENCIES  
(CONNECTICUT, INTER TRIBAL COUNCIL OF ARIZONA, NEVADA,  
NEW HAMPSHIRE, NEW MEXICO)**

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## EXECUTIVE SUMMARY

### HOW DID THE WIC CASH VALUE BENEFIT CHANGE DURING COVID?

The federal Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides healthy foods and beverages (the WIC food packages) and nutrition education, breastfeeding support, and referrals for social and health services to women, infants, and children up to age 5 years who are low-income. A component of the WIC food packages is a monthly cash value benefit (CVB) that WIC participants can use to purchase their choice of allowable fruits and vegetables. The CVB amount was \$9 per month for children and \$11 per month for women enrolled in WIC. In 2017, the National Academies of Sciences, Engineering and Medicine recommended the USDA increase the CVB amount to better align the WIC food packages with the Dietary Guidelines of Americans (NASEM, 2017).

In response to COVID-related economic impacts, federal legislation was adopted in March 2021, authorizing States to provide a 4-month increase to the WIC CVB ending September 30, 2021. State WIC Agencies could increase the CVB to \$35 per month for all children and women participants. The successful implementation of the WIC CVB increase over summer 2021 encouraged Congress to extend the benefit increase with a Continuing Resolution passed on September 30, 2021. Starting October 1, 2021, monthly CVB amounts were adjusted to \$24 for children 1-4 years old to be consistent with the value suggested by NASEM to support children in receiving half of their recommended intake of fruits and vegetables. In that legislation, all states were required to implement the increase. As of this writing,

a subsequent Continuing Resolution has extended the \$24 per month for children amount through March 31, 2022, with a reversion to the original \$9 per month on April 1, 2022 should Congress fail to extend appropriations. The purpose of this survey project was to evaluate the enhanced WIC CVB for children.

### WHAT WAS DONE TO EVALUATE THE WIC CASH VALUE BENEFIT CHANGE?

We previously reported results from a 2021 multi-State survey of WIC participants on their experiences and satisfaction with remote interactions with WIC, shopping for WIC foods, and using the WIC Card and App during the pandemic. Twelve State WIC Agencies participated in this survey to collect feedback to inform future policy and operational decisions. A subset of these State WIC Agencies agreed to administer additional survey questions related to the enhanced WIC CVB. Four States and one Indian Tribal Organization out of the 12 (hereafter referred to as State WIC Agencies) volunteered to participate: Connecticut, Inter Tribal Council of Arizona, Nevada, New Hampshire, and New Mexico. Using a repeat cross-sectional design, State WIC Agencies recruited WIC participants to complete the initial online survey in English or Spanish in spring 2021 before the CVB increase. These State WIC Agencies subsequently recruited another sample of WIC participants to complete a shorter survey in fall 2021 during the CVB increase. Survey respondents were asked questions about their perception of the CVB amount for children and about their youngest child's dietary intake of fruit and vegetables.

Descriptive statistics were generated by first averaging responses in each State and then averaging across the 5 State WIC Agencies. Summary data were included from respondents (3,590 before the CVB increase, 6,449 during the CVB increase) who had a child ages 1-4 years old enrolled in WIC and completed select CVB and sociodemographic questions. Mixed effects linear regression was used to compare child intake of fruit and vegetables before and during the CVB increases, adjusting for State of residence of each participant, parental age, race/ethnicity, education, and employment status, household duration on WIC, who in the household participates in WIC, and type of food support used by the household in the prior month, and reference child age.

## WHAT WAS LEARNED?

Most survey respondents were between the ages of 25-39 years old, were white or Latinx, had completed high school or some college education, and had participated in WIC for 3 or more years. Approximately half were employed or going to school part- or full-time. A majority reported household food insecurity. The average age of the youngest child on WIC (excluding infants) was 2 ½ years.

**THE MAJORITY OF WIC PARTICIPANTS WERE SATISFIED WITH THE CVB INCREASE FOR CHILDREN AND WANT IT TO CONTINUE.** Before the CVB increase, most survey respondents indicated that \$9 was inadequate for their children. During the CVB increase, about two-thirds said the increased amount was just right and only about one-fourth said the increased amount was not enough. Participants would prefer a monthly CVB amount that is substantially higher than \$9 for their child in the future.

**CHILD INTAKE OF FRUIT AND VEGETABLES INCREASED AFTER THE CVB INCREASE.** Total daily fruit and vegetable intake increased by 1/3 cup from 2.01 cups before the CVB increase to 2.31 cups with the CVB increase. When juice, legumes and fried potatoes were excluded<sup>1</sup>, the increase averaged 1/4 cup per day. These increases were statistically significant after adjusting for potential confounders and are consistent with the increases observed when young children are exposed to other types of fruit and vegetable interventions (Hodder et al., 2020). Repeated exposure is critical for increasing child intake and liking of new fruits and vegetables (Fisher et al., 2021). Therefore, future studies should assess the impact of a CVB increase over a longer period of time as it may take more than a few months to achieve larger changes in fruit and vegetable intake by young children. Studies of impacts of a CVB increase over a longer period of time are needed to assess sustainability.

**AN INCREASE IN THE VALUE OF THE WIC CVB INCREASE SHOULD BE CONTINUED POST-COVID.** Early childhood is a critical period for establishing lifelong dietary habits. Nearly 90% of Americans fail to consume recommended amounts of vegetables and over 80% fail to meet recommended amounts of fruit (USDA & USDHHS, 2020). A higher CVB amount will likely result in improved and sustained child fruit and vegetable intakes (NASEM, 2017). Further, survey results suggest that WIC participants overwhelmingly prefer a CVB amount higher than \$9 to cover the fruit and vegetable needs of their child. Thus, the federal government should consider a permanent increase of the WIC CVB.

<sup>1</sup> Juice and legumes are not allowable CVB purchases and are provided separately as part of WIC food packages. Fried potatoes are less likely to be prepared if purchased with the WIC CVB; while WIC participants can use the CVB to purchase raw potatoes which can be subsequently fried, restaurants or packaged foods are the primary source of fried potatoes consumed in the U.S..

## INTRODUCTION

The federal Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides nutrition assistance to income-eligible pregnant, breastfeeding and postpartum women, infants, and children up to 5 years old who are found to be at nutritional risk. WIC benefits include nutrition education, breastfeeding support, supplemental nutritious foods (via WIC food packages), and referrals to other health and social services. In January 2020, WIC served 6.16 million participants nationally; this increased to 6.31 million in January 2021. WIC programs are administered by 89 State WIC Agencies, including 50 States, 33 Indian Tribal Organizations, 5 U.S. Territories, and the District of Columbia. The State WIC Agencies provide program services through local agencies and/or sites, following regulations and guidance from the U.S. Department of Agriculture (USDA).

Fruit and vegetables are among the food groups most under consumed relative to recommendations for health. One component of the WIC food packages is a monthly cash value benefit (CVB)—\$9 per month for children and \$11 per month for women—that WIC participants can use to purchase any variety of fruits and vegetables, providing more individual choice than most other WIC food package components. A 2017 report from the National Academies of Sciences, Engineering and Medicine recommended that the USDA increase the CVB amounts. Cost neutrality constraints limited NASEM’s ability to achieve the goal of the CVB meeting 50% or more of a participant’s monthly fruit and vegetable needs, but the report clearly states that any additional funding be directed toward increasing the CVB in order to better align the WIC food package

with the Dietary Guidelines for Americans (NASEM, 2017). In response to COVID-related economic impacts, federal legislation was adopted in March 2021, authorizing States to grant a 4-month increase until 9/30/21 of the CVB to \$35 per month for all children and women participants (increased from \$9 per month for children and \$11 for women participants). In October, 2021, the monthly CVB amounts were adjusted to \$24 for children 1-4 years old, \$43 for pregnant and postpartum participants, and \$47 for breastfeeding participants to be consistent with the NASEM recommendations for food package changes should USDA allocate additional funds to the WIC food package. Through Continuing Resolutions passed in September and December, 2021, Congress appropriated funds to continue this level of CVB benefits through March 31, 2022. A Congressional Omnibus bill or passage of a Continuation Resolution with appropriations for an extended CVB is needed by March 11, 2022 to extend this CVB increase beyond March 31, 2022.

The purpose of this repeat cross-sectional survey of WIC participants in multiple States was to evaluate their satisfaction with the initial CVB increase of \$35 per month for children and to examine whether the enhanced CVB was associated with measurable changes in perceptions of adequacy of CVB and in child fruit and vegetable intake. This report summarizes survey responses from WIC participants from a subset of 5 State WIC Agencies that participated in a larger project, detailed results of which can be found elsewhere (National WIC Association 2021).

## METHODS

In October 2020, the National WIC Association invited directors of all State WIC Agencies (n=89) to participate in a WIC participant satisfaction survey. The goal was to recruit 5-7 State WIC Agencies representing different regions of the country, with a range of sizes based on the number of participants served and using different flexibilities to provide services under COVID-19 waivers. State WIC Agencies were asked to recruit at least 500 WIC participants to complete the survey in the spring of 2021. Eleven State WIC Agencies and one Indian Tribal Organization (hereafter referred to as State WIC Agencies collectively representing all regions of the country volunteered to participate: Colorado, Connecticut, Inter Tribal Council of Arizona (ITCA), Louisiana, Maine, Minnesota, Nevada, New Hampshire, New Mexico, North Carolina, Ohio, and West Virginia). A subset of participating State WIC Agencies (Connecticut, ITCA, Nevada, New Hampshire, and New Mexico) also agreed to add survey questions related to the WIC CVB increase (**Table A**). The first survey was administered in spring 2021 before the CVB increase (when children received \$9 per month). The second survey was administered in fall 2021 during the CVB increase (when children received \$35 per month), when children had received the increased CVB benefit for 4 months, at most.

A group of WIC researchers and WIC experts drafted the CVB survey questions based on a separate ongoing CVB increase trial funded by the Robert Wood Johnson Foundation Healthy Eating Research program. The CVB survey questions included (**Appendix**):

- a. WIC Participation – 2 questions
- b. Sociodemographic Characteristics – 6 questions, including a 2-item question on household food insecurity
- c. Cash Value Benefit – 18 questions, including 10 questions on child dietary intake.

Because households may have more than one child enrolled in WIC, respondents were asked to report on their youngest child on WIC between the ages of 1 and 4 years old (referred to as the reference child). Food frequency questions (a subset of the [NHANES 2009-10 Dietary Screener Questionnaire \(DSQ\)](#)) were asked for the prior month (30 days) in order to quantify fruit and vegetable intake (in cup equivalents per day) by the reference child (Thompson et al., 2017). The NHANES DSQ is a validated method to assess regular dietary consumption patterns. Separate averages were computed for fruit (with and without 100% juice), vegetables (with and without legumes and fried potatoes), and total fruit and vegetable intake. Juice was examined separately because WIC food packages provide juice as a benefit separate from the CVB for fruits and vegetables. Vegetables were examined without legumes because beans are available as a food package option separate from the CVB. Fried potatoes were excluded because the primary source of fried potatoes in the American diet is French fries which are commonly sourced from restaurants or as prepared frozen foods, neither of which are part of WIC food packages.

The survey and sample recruitment materials (flyer and text or social media post; **Appendix**) were translated into Spanish by a native Spanish speaking research assistant, and reviewed and revised as needed by a second native Spanish-speaker. The survey for each State WIC Agency was programmed into survey software (Qualtrics) to enable WIC participants to complete it on a smartphone, tablet or computer. Each State WIC Agency received two unique survey links (English and Spanish versions of the survey) to share with participants through methods available to their State or local agencies. These included text messages, emails, flyers (handed out or mailed), WIC App notifications, websites/social media, or



verbal messaging during a WIC appointment or interaction (**Table B**). State WIC Agencies selected the recruitment strategies, including determining if local agencies would provide the survey information to participants instead of or in addition to the State WIC Agency. Recruitment of WIC participants to complete the survey before the CVB increase began in spring 2021, and the survey was open for two months; this was extended for two additional weeks for ITCA and New Mexico to facilitate reaching the goal of 500 respondents per State agency. Recruitment of participants to complete the survey during the CVB increase began in fall 2021; the survey was open for two months.

No personal identifying information (such as respondent name or other private or protected health information) was collected from WIC participants who volunteered to complete the surveys. The project was reviewed and deemed not to be human subject research by the Institutional Review Board (IRB) at the University of California, Davis.

Researchers tabulated survey responses, generated descriptive statistics, and prepared a summary of findings for each State WIC Agency and across all participating Agencies by respondent language (English or Spanish) and overall for the 5 participating State WIC Agencies. Summary data were included only from respondents who currently had a child 1-4 years old enrolled in WIC and who also completed select sociodemographic questions (parental age, race/ethnicity, education, current employment/school status) even if they did not complete all other survey questions; hence respondent numbers vary slightly by topic. Data were first averaged for respondents in each State and then averaged across the 5 State averages. This method was used because of widely different

numbers of survey respondents per State (**Table C**); averaging across all respondents regardless of State would have weighted the data in favor of those States with larger numbers of responses.

The following sections of the report provide cumulative data collected from survey respondents in total (n=3,590 before the CVB increase; n=6,449 during the CVB increase) and by survey language (n=2,624 in English and n=966 in Spanish before the CVB increase; n=5,175 in English and n=1,274 in Spanish after the CVB increase). The large variation in survey responses is likely due to survey fatigue. The survey conducted before the CVB increase included 14 questions that were added to the end of a much longer survey of 28 questions, whereas the survey conducted during the CVB increase had only 19 questions in total (see **Appendix**). Because participants could choose to not answer all questions, sample sizes may vary by question. Mixed effects logistic and linear regression were used for comparisons of categorical variables and continuous variables, respectively, before to during the CVB increase. Given that the results were compiled for all five participating State WIC Agencies and numbers per State WIC Agency varied, all comparisons were adjusted for the State of residence of participants. Comparisons of child intake of fruit and vegetables before to during the CVB increase were further adjusted for parental age, race/ethnicity, education, and employment status, household duration on WIC, who in the household participates in WIC, type of food support used in the prior month, and reference child age. Comparisons between Spanish and English respondents are not discussed below but are presented descriptively in the tables. Values in **[red font]** in tables indicate the corresponding survey question, available in the **Appendix**.

## TABLE A. CHARACTERISTICS OF STATE WIC AGENCIES.

STATE WIC AGENCY	REGION <sup>1</sup>	AVERAGE MONTHLY PARTICIPATION (OCT 2020 TO FEB 2021) <sup>2</sup>	TREND IN PARTICIPATION (FEB 2020 TO FEB 2021) <sup>3</sup>	FOOD BENEFIT ISSUANCE <sup>4</sup>
CONNECTICUT	NE	43,453	-0.9%	Online EBT
INTER TRIBAL COUNCIL OF ARIZONA	SW	7,059	-7.1%	Online EBT
NEVADA	W	56,639	-3.3%	Online EBT
NEW HAMPSHIRE	NE	13,707	+16.6%	Online EBT
NEW MEXICO	SW	35,427	-8.7%	Offline EBT

1. USDA Food and Nutrition Service regions include: West (W), Southwest (SW), and Northeast (NE). States from the Southeast, Mid-Atlantic, Midwest, and Mountain Plains regions, although part of the larger project, did not volunteer to participate in the CVB survey.

2. Data source: WIC Data Tables: Monthly Data for FY 2021 Preliminary, <https://www.fns.usda.gov/pd/wic-program>.

3. Data source: WIC Data Tables: State Level Participation, <https://www.fns.usda.gov/pd/wic-program>.

4. Data source: WIC EBT Detail Status Report, <https://fns-prod.azureedge.net/sites/default/files/resource-files/May2021WICEBTDetailStatusReport.pdf>.

## TABLE B. METHODS USED TO RECRUIT SURVEY RESPONDENTS.

STATE WIC AGENCY	PARTICIPANT RECRUITMENT METHODS CONDUCTED BY STATE AND/OR LOCAL WIC AGENCIES									ESTIMATED PARTICIPANT HOUSEHOLDS REACHED FOR THE SURVEY BEFORE THE CVB INCREASE (NUMBER OR PERCENTAGE)	
	TEXT MESSAGE		EMAIL		WEBSITES & SOCIAL MEDIA		WIC APP		FLYER <sup>1</sup>		VERBAL <sup>2</sup>
	STATE	LOCAL	STATE	LOCAL	STATE	LOCAL	STATE	LOCAL	LOCAL		
CONNECTICUT	X									X	30,460 <sup>4</sup>
INTER TRIBAL COUNCIL OF ARIZONA <sup>3,5</sup>	X		X		X		X		X	X	7,800
NEVADA	X						X			X	25,000
NEW HAMPSHIRE		X			X		X			X	10,986 <sup>6</sup>
NEW MEXICO <sup>3</sup>		X			X				X	X	11,500

1. Flyers handed out during appointments and/or included with materials mailed to participants.

2. Verbal information shared during appointments and/or interactions with participants.

3. State agency offered participation in a gift card drawing for participants that completed a survey (Inter Tribal Council of Arizona for both surveys, New Mexico for only the survey during the CVB increase).

4. Number of text messages with survey link successfully delivered.

5. Number of text messages sent, with multiple messages sent to each household

6. Combination of text messages sent, number of times WIC App banner clicked, and number reached on Facebook.

## TABLE C. WIC PARTICIPANT SURVEY RESPONSES BY STATE WIC AGENCIES.<sup>1</sup>

STATE AGENCY	BEFORE CVB INCREASE			DURING CVB INCREASE		
	ANY DATA		ANALYTICAL DATA	ANY DATA		ANALYTICAL DATA
	TOTAL	TOTAL	PERCENT OF ANY SURVEY DATA	TOTAL	TOTAL	PERCENT OF ANY SURVEY DATA
CONNECTICUT	6237	1216	20.5%	3925	2226	56.7%
INTER TRIBAL COUNCIL OF ARIZONA	818	280	34.2%	954	653	68.4%
NEVADA	5544	1595	28.7%	5098	2879	56.5%
NEW HAMPSHIRE	939	317	33.8%	584	328	56.2%
NEW MEXICO	576	182	31.6%	558	363	65.1%
<b>TOTAL</b>	<b>14114</b>	<b>3590</b>	<b>25.4%</b>	<b>11119</b>	<b>6449</b>	<b>58.0%</b>

1. Surveys used in the analyses included only respondents who were currently on WIC and answered a minimum of 4 sociodemographic questions (parental age, race/ethnicity, education, current employment/school status), even if they did not respond to all other survey questions or selected 'prefer not to answer' on any of the 4 sociodemographic question. Most respondents were excluded due to not completing the 4 sociodemographic questions. The large variation in survey responses is likely due to survey fatigue. The survey conducted before the CVB increase included 14 questions that were added to the end of a much longer survey of 28 questions, whereas the survey conducted during the CVB increase had only 19 questions in total (see **Appendix**).



## SURVEY RESPONDENTS

Survey respondents (n=3,590 before the CVB increase, n=6,449 during the CVB increase) were asked questions about their age, race/ethnicity, education, and employment and/or school status (**Table 1**). Most respondents (74.0% and 69.9% before and during the CVB increase, respectively) were between the ages of 25-39 years old. The largest racial/ethnic groups were white (18.5% and 20.2% before and during the CVB increase, respectively) or Latinx (55.9 and 57.3% before and during the CVB increase, respectively). Most had completed high school (27.9 and 31.3% before and during the CVB increase, respectively) or had a minimum of some college education (42.0% and 37.9% before and during the CVB increase, respectively). Over a third of people were employed or going to school either part- or full-time (34.8% and 39.1% before and during the CVB increase, respectively). Approximately half of all reference children were female, with an average age for all reference children of 2.6 years (for both before and during the CVB increase).

Over half of respondents had one or more household member participate in WIC for 3 or more years duration (60.4% and 57.5% before and during the CVB increase, respectively). All respondents in the analytical sample had a child 1-4 years old enrolled in WIC since this was an inclusion criteria for analysis for the survey responses before the CVB increase and required for completion of the survey during the CVB. In terms of other family members currently on WIC, 23.3% and 43.3% before and during the CVB increase included a prenatal, postpartum or breastfeeding participant, and 16.8% and 22.6% had an infant before and during the CVB increase, respectively.

During the month prior to completing the surveys, a majority of respondents (80.2% and 69.7% before and during the CVB increase, respectively) reported using sources of free food in addition to WIC. The Supplemental Nutrition Assistance Program (SNAP) was the source used by the largest proportion of households (43.1% and 47.1% before and during the CVB increase, respectively). Household food insecurity averaged 72.5% the year prior to the survey conducted before the CVB increase and 70.9% the year prior to the survey conducted during the CVB increase. The difference between before and during the CVB increase was not statistically significant. It should be noted that the 12 months preceding each survey response timepoint were overlapping, which may have limited detection of a before and during the CVB change in household food insecurity.

Averages for most other respondent characteristics were significantly different from the before and during the CVB increase survey samples, after adjusting for the State of residence of participants (see Table 1 for details).

**TABLE 1. PARTICIPANT CHARACTERISTICS<sup>1</sup>**

	BEFORE CVB INCREASE						DURING CVB INCREASE						P VALUE
	ENGLISH (N=2,624)		SPANISH (N=966)		TOTAL (N=3,590)		ENGLISH (N=5,175)		SPANISH (N=1,274)		TOTAL (N=6,449)		
	N	%	N	%	N	%	N	%	N	%	N	%	
<b>PARENT AGE IN YEARS [F1]</b>													
UNDER 24	235	10.5	83	8.9	318	9.7	647	12.4	277	18.4	924	15.4	<0.001
25-29	511	21.9	178	40.1	689	31.0	1278	24.8	241	21.3	1519	23.0	<0.001
30-34	703	26.7	186	14.3	889	20.5	1433	27.7	279	22.3	1712	25.0	0.051
35-39	621	22.4	335	22.6	956	22.5	1022	20.2	271	23.7	1293	21.9	<0.001
OVER 40	533	18.0	166	13.3	699	15.6	736	14.1	145	10.9	881	12.5	<0.001
<b>Parent race/ethnicity [F2]</b>													
American Indian or Alaska Native	272	19.8	0	0.0	272	9.9	498	14.8	3	0.1	501	7.5	<0.001
Asian	136	3.7	0	0.0	136	1.9	284	3.4	0	0.0	284	1.7	0.126
Black	316	7.6	1	0.0	317	3.8	570	7.0	1	0.0	571	3.5	0.941
Latinx	629	21.4	884	90.4	1513	55.9	1408	24.1	1200	90.4	2608	57.3	0.011
White	904	34.5	13	2.6	917	18.5	1709	38.7	16	1.7	1725	20.2	<0.001
Other	271	9.9	44	4.9	315	7.4	521	8.9	27	3.4	548	6.2	0.507
<b>Parent education level [F3]</b>													
8th grade or less	16	0.7	131	10.8	147	5.7	50	1.0	187	9.0	237	5.0	0.228
Some high school	217	8.6	197	28.7	414	18.7	385	7.5	241	24.6	626	16.0	0.001
High school	760	28.6	290	27.2	1050	27.9	1587	29.6	399	33.0	1986	31.3	0.106
Some college	1152	44.4	134	6.8	1286	25.6	2122	41.3	161	12.6	2283	27.0	0.714
College graduate	298	11.1	90	4.9	388	8.0	665	13.7	96	4.4	761	9.0	0.077
Post graduate degree	102	4.1	14	12.7	116	8.4	172	3.4	11	0.4	183	1.9	0.361
<b>Parent employment or school [F4]</b>													
Part-time	465	17.3	139	12.4	604	14.8	1020	19.2	206	12.5	1226	15.9	0.004
Full-time	726	31.0	92	9.0	818	20.0	1526	31.1	165	15.3	1691	23.2	<0.001
Not currently	1275	46.4	539	48.4	1814	47.4	2223	35.0	605	49.4	2828	42.2	<0.001
Reference child sex, female [G3]	1278	48.1	469	46.5	1747	47.3	2555	48.8	627	55.4	3182	52.1	0.111
Reference child age in months, [G2] mean (SD)	30.22	11.78	33.07	12.53	31.65	12.15	29.91	11.29	31.83	11.40	30.87	11.34	<0.001
<b>Duration of family on WIC [A2]</b>													
Less than 1 year	260	9.0	88	3.7	348	6.4	419	8.7	106	8.4	525	8.5	0.008
1-2 years	894	32.3	304	32.3	1198	32.3	1899	34.9	442	25.2	2341	30.1	0.002
3 or more years	1449	58.0	549	62.8	1998	60.4	2721	54.4	651	60.7	3372	57.5	0.001
<b>Family member(s) on WIC<sup>2</sup>[A1b]</b>													
Pregnant woman	186	8.4	55	5.5	241	7.0	1060	21.4	183	18.5	1243	19.9	<0.001
Breastfeeding woman	308	12.5	108	4.6	416	8.6	1046	22.7	167	18.2	1213	20.5	<0.001
Other postpartum woman	107	4.4	22	10.9	129	7.7	253	5.2	20	0.7	273	2.9	0.118
Infant <12 months old	415	15.7	136	17.8	551	16.8	1279	25.9	195	19.3	1474	22.6	<0.001
1 year old child	887	35.2	315	26.0	1202	30.6	1735	33.8	324	32.1	2059	32.9	0.111
2 year old child	901	33.3	269	34.0	1170	33.7	1701	33.1	308	18.5	2009	25.8	0.167
3 year old child	741	29.0	236	19.3	977	24.1	1358	26.6	262	19.5	1620	23.0	0.023
4 year old child	600	22.9	220	25.7	820	24.3	959	20.3	202	25.9	1161	23.1	<0.001

Used for household food in past 30 days <sup>2</sup> [F5]													
Food pantry/food bank/ religious organization	700	26.1	377	28.7	1077	27.4	1228	24.0	392	31.8	1620	27.9	<0.001
School meals	856	31.7	378	36.6	1234	34.2	1651	33.9	360	38.4	2011	36.2	<0.001
From family/friends	743	28.4	269	15.6	1012	22.0	1575	31.8	214	9.9	1789	20.9	0.639
SNAP	1210	47.0	317	39.1	1527	43.1	2248	45.6	394	48.6	2642	47.1	0.034
Pandemic-EBT	822	34.3	220	25.0	1042	29.6	1790	38.7	318	42.4	2108	40.6	0.001
Any of the above	2083	79.2	771	81.2	2854	80.2	4118	70.0	887	69.5	5005	69.7	<0.001
None of the above	541	20.8	195	18.8	736	19.8	1057	19.2	387	30.5	1444	24.9	<0.001
Household food insecure in past 12 months <sup>3</sup> [F6]	1689	65.9	719	79.1	2408	72.5	3451	64.6	916	77.2	4367	70.9	0.636

**FOOTNOTES:**

1. Survey participants were parents of a child 1-4 years old enrolled in WIC. Percentages may not add up to 100% as participants were able to select 'prefer not to answer' as a response option. Sample size may vary due to incomplete surveys or preference to not answer survey questions. Total is the average of each State's average. Abbreviations: CVB, Cash Value Benefit; EBT, Electronic Benefits Transfer; SNAP, Supplemental Nutrition Assistance Program. Respondents marking Latinx were included in that category only, regardless of whether they marked other racial groups. Values in **red font** indicate the corresponding survey question, available in the **Appendix**.

2. Respondents instructed to select all that apply.

3. Based on two questions, a subset of the 18-item [USDA Food Security Module](#), asked about the prior 12 months. These 2 items have been shown to be a valid indicator of household food insecurity when it is not practical to ask more questions (Gundersen et al., 2017; Hager et al., 2010).

## PERCEPTIONS OF THE WIC CASH VALUE BENEFIT

At both timepoints, survey respondents were asked to rate the CVB amount available to children: \$9/month before the CVB increase and \$35/month during the CVB increase (**Table 2**). Before the CVB increase, a majority (76.0%) indicated that \$9 was not enough and a minority (13.0%) said \$9 was the right amount for their child. During the CVB increase, fewer (24.5%) said that \$35 was not enough and more (67.7%) said that \$35 was the right amount. Only 4 respondents (<0.5%) said that \$35/month was too much for their child. All before to during the CVB increase changes were significantly different after controlling for respondent characteristics that differed between the before and during CVB samples.

Several additional questions were asked after the CVB amount was increased. A majority knew about the enhanced benefit (85.3%), were somewhat or very satisfied with the \$35/month amount (84.1%), and preferred a monthly amount of \$32 or more (76.4%) in the future. If the CVB value returned to \$9, however, most said that they were either somewhat (20.4%) or very (57.6%) likely to continue participating in WIC.

**TABLE 2. PERCEPTIONS REGARDING THE WIC CASH VALUE BENEFIT (CVB) INCREASE FOR CHILDREN<sup>1</sup>**

	BEFORE CVB INCREASE						DURING CVB INCREASE						P VALUE <sup>2</sup>
	ENGLISH (N=2,624)		SPANISH (N=966)		TOTAL (N=3,590)		ENGLISH (N=5,175)		SPANISH (N=1,274)		TOTAL (N=6,449)		
	N	%	N	%	N	%	N	%	N	%	N	%	
<b>ADEQUACY OF MONTHLY CVB<sup>3,4</sup> [G14, G16]</b>													
TOO MUCH	3	0.1	1	0.0	4	0.1	22	0.4	2	0.1	24	0.2	<b>0.026</b>
NOT ENOUGH	2241	83.8	750	68.2	2991	76.0	1162	24.0	298	25.1	1460	24.5	<b>&lt;0.001</b>
JUST RIGHT	266	10.7	112	15.3	378	13.0	3309	74.0	633	61.3	3942	67.7	<b>&lt;0.001</b>
DON'T KNOW	82	4.4	47	13.0	129	8.7	50	1.0	30	3.6	80	2.3	<b>&lt;0.001</b>
PREFER NOT TO ANSWER	32	1.0	56	3.4	88	2.2	34	0.7	121	9.9	155	5.3	0.356
Knew about CVB increase, n=6,449 [G15]	--	--	--	--	--	--	4577	88.9	1084	81.7	5661	85.3	--
Satisfaction with \$35 per month CVB, <sup>4</sup> n=5,661, Mean score (SD) <sup>5</sup> [G17]	--	--	--	--	--	--	3.36	1.07	3.40	0.81	3.38	0.94	--
Very unsatisfied	--	--	--	--	--	--	639	14.2	193	10.2	832	12.2	--
Somewhat unsatisfied	--	--	--	--	--	--	133	2.7	60	3.4	193	3.1	--
Somewhat satisfied	--	--	--	--	--	--	770	15.4	250	21.8	1020	18.6	--
Very satisfied	--	--	--	--	--	--	3015	67.3	561	63.8	3576	65.5	--
Don't know	--	--	--	--	--	--	20	0.4	20	0.8	40	0.6	--
<b>Preferred CVB amount per month [G18]</b>													
\$9-12	--	--	--	--	--	--	25	0.6	7	0.6	32	0.6	--
\$13-16	--	--	--	--	--	--	46	1.3	5	0.2	51	0.7	--
\$17-20	--	--	--	--	--	--	146	2.8	19	1.1	165	1.9	--
\$21-24	--	--	--	--	--	--	115	3.2	21	2.1	136	2.7	--
\$25-27	--	--	--	--	--	--	271	5.4	34	2.1	305	3.8	--
\$28-31	--	--	--	--	--	--	169	15.7	19	12.8	188	14.3	--
\$32-35	--	--	--	--	--	--	2996	50.2	812	51.6	3808	50.9	--
More than \$35	--	--	--	--	--	--	1407	21.0	357	29.9	1764	25.5	--
Overall average \$, Mean (SD) <sup>5</sup>	--	--	--	--	--	--	32.97	4.70	34.06	3.83	33.52	4.26	--
<b>Likelihood of participating in WIC if CVB returned to \$9 per month<sup>3</sup>, Mean score (SD)<sup>5</sup> [G19]</b>													
Very unlikely	--	--	--	--	--	--	295	6.0	177	11.7	472	8.9	--
Somewhat unlikely	--	--	--	--	--	--	412	7.7	49	2.8	461	5.3	--
Somewhat likely	--	--	--	--	--	--	1348	25.8	204	15.0	1552	20.4	--
Very likely	--	--	--	--	--	--	2717	53.8	684	61.5	3401	57.6	--
Don't know	--	--	--	--	--	--	403	6.7	160	9.0	563	7.8	--

**FOOTNOTES:**

1. Percentages may not add up to 100% as participants were able to select 'prefer not to answer' as a response option. Sample size may vary due to incomplete surveys or preference not to answer survey questions. Total is the average of each State's average. Cells with -- indicate that question only asked in follow-up survey. Abbreviations: CVB, Cash Value Benefit. Values in [red font] indicate the corresponding survey question, available in the **Appendix**.
2. Values for the total samples compared before and during the CVB increase by running a mixed effects logistic regression (adjusting for State, parental age, race/ethnicity, education, and employment status, household duration on WIC, who

participates in WIC, and types of food support, and child age). Values in bold font indicate P<0.050, indicating significant differences.

3. Survey asked about \$9 per month before the CVB increase; survey asked about \$35 per month during the CVB increase.
4. Question only asked if respondent knew about the CVB increase. Scored as follows: 1 = very unsatisfied, 2 = somewhat unsatisfied, 3 = somewhat satisfied, and 4 = very satisfied; excluded 'Don't know' from mean and SD.
5. Scored as follows: 1 = very likely, 2 = somewhat unlikely, 3 = somewhat likely, and 4 = very likely; excluded 'Don't know' from mean and SD.
6. Midpoint of range of each answer option used to compute overall average; \$37.50 used for the more than \$35 range.

## CHILD FRUIT AND VEGETABLE INTAKE

On both surveys, before and during the CVB increase, respondents reported on their child's intake of fruit and vegetables (**Table 3**). After controlling for State, parental age, race/ethnicity, education, and employment status, household duration on WIC, who participates in WIC, types of food support, and child age, significant increases were observed in all measures. For example, intake of fruit (excluding juice), increased from a mean of

0.68 daily cup equivalents before the CVB increase to 0.89 daily cup equivalents during the CVB increase. Vegetable intake (excluding legumes and fried potatoes) increased from 0.52 to 0.59 daily cup equivalents before and during the CVB increase, respectively. The total increase in fruit and vegetable intake averaged about 0.3 cup per day. For context, the Dietary Guidelines for Americans recommend that children ages 1 to 4 years old consume 0.5 – 1.5 cups of fruit and 0.7 – 2 cups of vegetables for a total in the range of 1.3 – 3.5 cups per day.

**TABLE 3. CHANGE IN REFERENCE CHILD DIET BEFORE TO DURING THE CVB INCREASE<sup>1</sup>**

	BEFORE CVB INCREASE						DURING CVB INCREASE						Difference (During - Before CVB)		P VALUE <sup>2</sup>
	ENGLISH		SPANISH (N=966)		TOTAL (N=3,590)		ENGLISH (N=5,175)		SPANISH (N=1,274)		TOTAL (N=6,449)		Total (n=10,039)	Mean	
	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD			
<b>FRUIT, CUP EQUIVALENT/DAY<sup>3</sup> [64, 65]</b>	1.34	1.05	1.12	0.72	1.23	0.89	1.58	1.31	1.38	1.16	1.48	1.24	0.23	<b>&lt;0.001</b>	
<b>FRUIT (EXCLUDING JUICE), CUP EQUIVALENT/DAY [65]</b>	0.79	0.66	0.56	0.46	0.68	0.56	0.95	0.76	0.82	0.66	0.89	0.71	0.21	<b>&lt;0.001</b>	
<b>100% JUICE, FL OZ/DAY [64]</b>	0.55	0.65	0.56	0.45	0.56	0.55	0.63	0.79	0.55	0.69	0.59	0.74	0.03	<b>&lt;0.001</b>	
<b>VEGETABLES, CUP EQUIVALENT/DAY<sup>4</sup> [66-613]</b>	0.73	0.70	0.82	0.80	0.77	0.75	0.83	0.83	0.84	0.66	0.84	0.75	0.07	<b>&lt;0.001</b>	
<b>VEGETABLES (EXCLUDING LEGUMES AND FRIED POTATOES), CUP EQUIVALENT/DAY [66, 68, 610, 611, 612, 613]</b>	0.52	0.50	0.52	0.56	0.52	0.53	0.61	0.66	0.57	0.52	0.59	0.59	0.07	<b>&lt;0.001</b>	
<b>FRUIT AND VEGETABLES, CUP EQUIVALENT/DAY<sup>3,4</sup> [64-613]</b>	2.07	1.49	1.94	1.23	2.01	1.36	2.41	1.80	2.22	1.48	2.31	1.64	0.30	<b>&lt;0.001</b>	
<b>FRUIT AND VEGETABLES (EXCLUDING JUICE, LEGUMES AND FRIED POTATOES), CUP EQUIVALENT/DAY [65, 66, 68, 610, 611, 612, 613]</b>	1.52	1.14	1.38	1.12	1.45	1.13	1.78	1.27	1.66	0.99	1.72	1.13	0.27	<b>&lt;0.001</b>	

**FOOTNOTES:**

1. Sample size may vary due to incomplete surveys or preference not to answer survey questions. Total is the average of each State's average. Abbreviations: CVB, Cash Value Benefit. Values in **[red font]** indicate the corresponding survey question, available in the **Appendix**.
2. Values for the total sample compared before and during the CVB increase by running a mixed effects linear regression (adjusting for State, parental age, race/

ethnicity, education, and employment status, household duration on WIC, who participates in WIC, and types of food support, and child age). Values in bold font indicate P<0.050, indicating significant differences.

3. Includes 100% fruit juice.
4. Includes legumes and fried potatoes.

## STRENGTHS AND LIMITATIONS

This project is novel because it involves cross-sectional survey data from WIC participants from multiple State WIC Agencies before and during the WIC CVB increase. While not nationally representative, the four States and one Indian Tribal Organization taking part in the project serve diverse populations. The survey provides timely information to inform policy changes in the WIC program when the federal child nutrition programs are reauthorized and to inform draft revisions to the WIC food package regulations, which are anticipated in 2022. The WIC CVB is a unique component of the WIC food packages in providing more flexibility to WIC participants to select items that meet individual and cultural preferences.

Despite the strengths and novelty of this project, it has several limitations. The findings are not generalizable to all WIC State Agencies as respondents were not recruited and data were not weighted to be geographically or demographically representative of WIC participants nationally nor within each State. Further, the data include survey responses collected in English or Spanish which may not reflect WIC participants who speak languages other than English or Spanish. Because all survey responses were collected from online or mobile devices, data also are not inclusive of WIC participants without access to online or mobile devices or with limited internet service. It is possible that some parents completed the survey both before and during the CVB increase. Presumably, the numbers are small, but if large, would violate the requirements of the statistical analyses performed. Finally, while most statistical comparisons were adjusted for respondent characteristics known to differ between the before and during the CVB increase samples, it is possible that other unmeasured

characteristics influenced the results, such as seasonality or circumstances related to the pandemic. A control group and random assignment, while a more robust study design for evaluating impacts of the CVB increase, was not possible given that the WIC CVB increase was not available nationally.

Additionally, we assessed impacts of child fruit and vegetable intake after only a few months of a CVB increase. It may take longer to incorporate more fruits and vegetables into a child's diet, given development of food acceptance occurs during childhood. Repeated exposures—ranging from 5 to 15 times or as many as 27 times—is critical for increasing children's intake and liking of new fruits and vegetables (Fisher et al., 2017). Therefore, future studies should assess the impact of a CVB increase over a longer period of time as it may take more than a few months to achieve larger changes in fruit and vegetable intake by young children.

<sup>1</sup> Fisher, J., Lumeng, J., Miller, L., Smethers, A., & Lott, M. (2021). *Evidence Based Recommendations and Best Practices for Promoting Healthy Eating Behaviors in Children 2 to 8 years*. Durham, NC: Healthy Eating Research. <https://healthyeatingresearch.org/wp-content/uploads/2021/10/her-heg-technical.pdf>

<sup>2</sup> Gundersen, C., Engelhard, E.E., Crumbaugh, A.S., & Seligman, H.K. (2017) Brief assessment of food insecurity accurately identifies high-risk US adults. *Public Health Nutrition*, 20(8):1367-1371. <https://doi.org/10.1017/s1368980017000180>

<sup>3</sup> Hager, E.R., Quigg, A.M., Black, M.M., Coleman, S.M., Heeren, T., Rose-Jacobs, R., Cook, J.T., Ettinger de Cuba, S.A., Casey, P.H., Chilton, M., Cutts, D.B., Meyers, A.F., & Frank, D.A. (2010). Development and validity of a 2-item screen to identify families at risk for food insecurity. *Pediatrics*, 126(1):e26-32. <https://doi.org/10.1542/peds.2009-3146>

<sup>4</sup> Hodder, R.K., O'Brien, K.M., Tzelepis, F., Wyse, R.J., & Wolfenden, L. (2020). Interventions for increasing fruit and vegetable consumption in children aged five years and under. *Cochrane Database of Systematic Reviews*, 9(9):CD008552. <https://doi.org/10.1002/14651858.cd008552.pub3>

<sup>5</sup> National Academies of Sciences, Engineering, and Medicine. (2017). *Review of WIC Food Packages: Improving Balance and Choice: Final Report*. Washington, DC: The National Academic Press. <https://doi.org/10.17226/23655>

<sup>6</sup> National WIC Association. (2021, December 13). *Multi-State WIC Participant Satisfaction Survey: Learning From Program Adaptations During COVID*. <https://thewichub.org/multi-state-wic-participant-satisfaction-survey-learning-from-program-adaptations-during-covid/>

<sup>7</sup> Thompson, F.E., Midthune, D., Kahle, L., & Dodd, K.W. (2017). Development and Evaluation of the National Cancer Institute's Dietary Screener Questionnaire Scoring Algorithms. *The Journal of Nutrition*, 147(6):1226-1233. <https://doi.org/10.3945/jn.116.246058>

<sup>8</sup> U.S. Department of Agriculture & U.S. Department of Health and Human Services. (2020, December). *Dietary Guidelines for Americans, 2020-2025. 9th Edition*. <https://www.dietaryguidelines.gov/>



## APPENDIX. PARTICIPANT SURVEY QUESTIONS

**PURPOSE:** Survey WIC participants from multiple State WIC Agencies on their experience with WIC CVB during COVID to inform future policy and operational decisions.

**GOAL:** Set of questions that State/Local WIC Agencies can disseminate to participants and that can be answered online (on a smartphone, tablet or computer) in 15 minutes or less.

**CONTENT:** 28 questions. Note that some marked as a single question, have multiple questions embedded within them. State-specific response options are in **red font**.

- A. Participation – 2 questions
- B. Sociodemographic Characteristics – 6 questions
- C. Cash Value Benefit – 20 questions

**APPROXIMATE TIME TO SELF-COMplete:** 10 minutes

### A. PARTICIPATION – 2 QUESTIONS

QUESTION	ANSWER OPTIONS	NOTES
1a. Did you or anyone in your family participate in WIC since March 1, 2020?	Yes [go to 1b, then Q2] No [not eligible, skip to end]	Newly developed question  Those who haven't participated in WIC since the pandemic began will be ineligible to complete the survey.
1b. Who in your family, including foster children, participated in WIC since March 1, 2020? (select all that apply)	Pregnant woman Breastfeeding woman Woman who had a baby and is not breastfeeding Infant under 12 months of age 1 year old child 2 year old child 3 year old child 4 year old child Prefer not to answer	Newly developed question
2. Overall, how long has your family participated in WIC? (please count all pregnancies and children)	Less than 1 year [go to Q3] 1 - 2 years [skip to Q4] 3 years or more [skip to Q4] Prefer not to answer	Source: WIC Services During COVID

### F. SOCIODEMOGRAPHIC CHARACTERISTICS – 6 QUESTIONS

QUESTION	ANSWER OPTIONS	NOTES
1. How old are you?	Under 18 18-24 25-29 30-34 35-39 40-50 Over 50 Prefer not to answer	Newly developed
2. How would you describe yourself? (select all that apply)	American Indian or Alaskan Native Asian Black or African American Hispanic or Latinx Native Hawaiian or other Pacific Islander White Other (write in: _____) Prefer not to answer	Newly developed  States were responsible for analyzing write in responses for "other".

3. What is the highest level of school you have completed or the highest degree you have received?	No formal schooling 8th grade or less Grade 9-12, but not a high school graduate High school graduate/GED Some college/trade school/associate degree 4-year college graduate Post graduate degree Prefer not to answer	Newly developed
4. Are you currently working and/or going to school full-time, part-time, or not at all?	Not currently working and/or going to school Full-time (at least 35 hours or more each week) Part-time Prefer not to answer	Newly developed
5. In the last 30 days, have you used any of the following to help feed your family?	A. Local food pantry, food bank or religious organization. No/Yes/ Prefer not to answer B. School meals or school meal distribution site. No/Yes/ Prefer not to answer a. Food Service Program meal distribution site. <b>NM</b> C. Food from friends, family or neighbors. No/Yes/ Prefer not to answer D. Supplemental Nutrition Assistance Program (SNAP, commonly known as food stamps or EBT). No/Yes/ Prefer not to answer E. Pandemic-EBT. No/Yes/Not sure/Prefer not to answer F. FDPIR (Food Distribution Program on Indian Reservations) <b>ITCA</b> G. Food Boxes / Farmers to Family Food Boxes <b>ITCA</b>	Newly developed States can include the name of SNAP if it is something different.
6. Here are some statements that people have made about their food situation. Please choose whether the statement was often true, sometimes true or never true <b>for your household in the last 12 months:</b> a. We worried whether our food would run out before we got money to buy more. b. The food that we bought just didn't last, and we didn't have money to get more.	Often true Sometimes true Never true Prefer not to answer	Source: <a href="#">USDA Food Insecurity Module</a>

## 6. CASH VALUE BENEFIT – 14 QUESTIONS

QUESTION	ANSWER OPTIONS	NOTES
1. If you have a child 1-4 years old enrolled in WIC, would you be willing to answer some questions about what your child is eating? These questions will take about 5 minutes to answer.	Yes [proceed to questions below] No [proceed to end of block] I do not have a child 1-4 years old enrolled in WIC [proceed to end of block]	Newly developed; only those answering yes included in analytic sample
Please select a child between the ages of 1 and 4 years old who is on WIC. If you have more than one child between the ages of 1 and 4 on WIC, please select <b>your youngest child on WIC. Do not include an infant less than 12 months.</b>		Newly developed
2. What is the birth date (month and year only) of <b>your youngest child on WIC (between 1 and 4 years old)</b> ?	Month (drop down Jan-Dec) Year (2017, 2018, 2019, 2020)	Newly developed
3. Is <b>your youngest child on WIC (between 1 and 4 years old)</b> a girl or boy?	Girl Boy	Newly developed; needed to quantify fruit and vegetable intake
We would like to know about the foods your <b>youngest child on WIC between 1 and 4 years old</b> ate or drank the <b>past month</b> , that is, the <b>past 30 days</b> . Please include meals and snacks at home, at childcare, in restaurants or take out, and any other place. You can answer never or the number of times per month, per week or per day. <b>Please select only one response for each question.</b>		
<b>During the past month, select how often YOUR CHILD ate each of the follow. Please only select one response.</b>		
4. <b>100% pure fruit juices</b> such as orange, mango, apple, grape and pineapple juices [Do <b>not</b> include fruit-flavored drinks with added sugar or fruit juice you made and added sugar to]	Never 1 time last month 2-3 times last month 1 time per week 2 times per week 3-4 times per week 5-6 times per week 1 time per day 2-3 times per day 4 or more times per day	Source: <a href="#">NHANES 2009-10 Dietary Screener Questionnaire (DSQ)</a>

5. <b>Fruit.</b> Include fresh, frozen or canned fruit [Do <b>not</b> include juices]	Never 1 time last month 2-3 times last month 1 time per week 2 times per week 3-4 times per week 5-6 times per week 1 time per day 2-3 times per day 4 or more times per day	Source: <a href="#">NHANES 2009-10 Dietary Screener Questionnaire (DSQ)</a>
6. Green leafy or lettuce <b>salad</b> , with or without other vegetables	Never 1 time last month 2-3 times last month 1 time per week 2 times per week 3-4 times per week 5-6 times per week 1 time per day 2-3 times per day 4 or more times per day	Source: <a href="#">NHANES 2009-10 Dietary Screener Questionnaire (DSQ)</a>
7. Any kind of <b>fried potatoes</b> , including french fries, home fries, or hash brown potatoes	Never 1 time last month 2-3 times last month 1 time per week 2 times per week 3-4 times per week 5-6 times per week 1 time per day 2-3 times per day 4 or more times per day	Source: <a href="#">NHANES 2009-10 Dietary Screener Questionnaire (DSQ)</a>
8. Any <b>other kind of potatoes</b> , such as baked, boiled, mashed potatoes, sweet potatoes, or potato salad	Never 1 time last month 2-3 times last month 1 time per week 2 times per week 3-4 times per week 5-6 times per week 1 time per day 2-3 times per day 4 or more times per day	Source: <a href="#">NHANES 2009-10 Dietary Screener Questionnaire (DSQ)</a>
9. Refried beans, baked beans, beans in soup, pork and beans or any other type of cooked dried <b>beans</b> [Do <b>not</b> include green beans]	Never 1 time last month 2-3 times last month 1 time per week 2 times per week 3-4 times per week 5-6 times per week 1 time per day 2-3 times per day 4 or more times per day	Source: <a href="#">NHANES 2009-10 Dietary Screener Questionnaire (DSQ)</a>
10. <b>Other vegetables</b> [Do <b>not</b> include green salads, potatoes, cooked dried beans]	Never 1 time last month 2-3 times last month 1 time per week 2 times per week 3-4 times per week 5-6 times per week 1 time per day 2-3 times per day 4 or more times per day	Source: <a href="#">NHANES 2009-10 Dietary Screener Questionnaire (DSQ)</a>
11. Mexican-type <b>salsa</b> made with tomato	Never 1 time last month 2-3 times last month 1 time per week 2 times per week 3-4 times per week 5-6 times per week 1 time per day 2-3 times per day 4 or more times per day	Source: <a href="#">NHANES 2009-10 Dietary Screener Questionnaire (DSQ)</a>

12. Pizza. Include frozen pizza, fast food pizza, and homemade pizza	Never 1 time last month 2-3 times last month 1 time per week 2 times per week 3-4 times per week 5-6 times per week 1 time per day 2-3 times per day 4 or more times per day	Source: <a href="#">NHANES 2009-10 Dietary Screener Questionnaire (DSQ)</a>
13. <b>Tomato sauces</b> such as with spaghetti or noodles or mixed into foods such as lasagna [Do <b>not</b> include tomato sauce on pizza]	Never 1 time last month 2-3 times last month 1 time per week 2 times per week 3-4 times per week 5-6 times per week 1 time per day 2-3 times per day 4 or more times per day	Source: <a href="#">NHANES 2009-10 Dietary Screener Questionnaire (DSQ)</a>
14. Families with a child ages 1 through 4 years old receive \$9 per month from WIC to purchase fruits and vegetables for that child. What do you think about the \$9 amount given for fruits and vegetables? Would you say it is: <sup>1</sup>	Too much Not enough Just right Don't know	Source: RWJF HER Round 12 project, California WIC CVB Pilot <sup>3</sup>
15. To help during COVID-19, families with a child ages 1 through 4 years old are receiving from WIC <b>\$35 per month to purchase fruits and vegetables</b> for each child in that age range instead of the usual \$9 per month. Did you know about this increase? <sup>2</sup>	Yes No Don't know	Source: RWJF HER Round 12 project, California WIC CVB Pilot <sup>3</sup>
16. What do you think about the \$35 amount for fruits and vegetables for children ages 1-4 on WIC. Would you say it is...? <sup>2</sup>	Too much Not enough Just right Don't know Prefer not to answer	Source: RWJF HER Round 12 project, California WIC CVB Pilot <sup>3</sup>
17. How satisfied are you with the \$35 per month for fruits and vegetables for your children between ages 1-4 years on WIC? <sup>2</sup>	Very unsatisfied Somewhat unsatisfied Somewhat satisfied Very satisfied Don't know	Source: RWJF HER Round 12 project, California WIC CVB Pilot <sup>3</sup>
18. In the future, what amount of money from WIC for fruits and vegetables would you like for each of your children between ages 1-4 years? <sup>2</sup>	\$9-12 \$13-16 \$17-20 \$21-24 \$25-27 \$28-31 \$32-35 More than \$35 (please enter a \$ amount): _____	Source: RWJF HER Round 12 project, California WIC CVB Pilot <sup>3</sup>
19. If the amount you receive for fruits and vegetables went back to \$9 instead of \$35 per month, will you keep coming to WIC for your children between ages 1 and 4 years? <sup>2</sup>	Very unlikely Somewhat unlikely Somewhat likely Very likely Don't know	Source: RWJF HER Round 12 project, California WIC CVB Pilot <sup>3</sup>
20. Is there anything else you would like to tell us about the \$35 per month for fruits and vegetables? <sup>2</sup>	Nothing at this time Enter your comment: _____	Source: RWJF HER Round 12 project, California WIC CVB Pilot <sup>3</sup>

**FOOTNOTES:**

1. Only included in the survey conducted before the CVB increase.
2. Only included in the survey conducted during the CVB increase.
3. Robert Wood Johnson Foundation, Healthy Eating Research Program, Round 12 project: [Increasing fruit and vegetable intake in low-income children under 5: Piloting expansion of the WIC Cash Value Benefit](#)

## APPENDIX B. SAMPLE RECRUITMENT MATERIAL

### ENGLISH

#### RECRUITMENT TEXT/SMS/APP OR EMAIL NOTIFICATION:

We would like to hear from you about your recent experiences with WIC. Please complete a brief survey on your phone, tablet or computer by going to: [\[bitly link\]](#)

#### RECRUITMENT EMAIL:

We would like to hear from you about your recent experiences with WIC. If you are interested in completing a brief survey, please use your phone, tablet or computer to go to: [\[bitly link\]](#)

#### TELEPHONE, VIDEO OR IN-PERSON APPOINTMENT SCRIPT:

We would like to hear your opinions about your WIC appointment today and about shopping for WIC foods. Please complete a brief survey using your phone, tablet or computer by going to [\[state or local agencies add where the survey link is accessible, e.g., on WIC app, state or local WIC website, WIC portal, via QR code on flyer, etc.\]](#)

#### FLYER, SOCIAL MEDIA GRAPHIC, INTERNET ADVERTISEMENT: [\[See images below\]](#)



We would like to hear from **you** about your recent experiences with WIC.

If you are interested in completing a **brief survey**, please use your phone, tablet or computer to go to: [\[bitly link\]](#)

[\[QR CODE\]](#) [\[STATE/TRIBE WIC AGENCY LOGO\]](#)

### SPANISH

#### RECRUITMENT TEXT/SMS/APP PUSH NOTIFICATION:

Nos gustaría saber de usted sobre sus experiencias recientes con WIC. Si está interesado en completar una breve encuesta, use su teléfono, tableta o computadora para ir a: [\[bitly link\]](#)

#### RECRUITMENT EMAIL:

Nos gustaría saber de usted sobre sus experiencias recientes con WIC. Si está interesado en completar una breve encuesta, use su teléfono, tableta o computadora para ir a: [\[bitly link\]](#)

#### TELEPHONE SCRIPT:

Nos gustaría saber de usted sobre sus experiencias recientes con WIC. Si está interesado en completar una breve encuesta, use su teléfono, tableta o computadora para ir a: [\[bitly link\]](#)

#### FLYER, SOCIAL MEDIA GRAPHIC, INTERNET ADVERTISEMENT: [\[See images below\]](#)



Nos gustaría saber de **usted** sobre sus experiencias recientes con WIC.

Si está interesado en completar una **breve encuesta**, use su teléfono, tableta o computadora para ir a: [\[bitly link\]](#)

[\[QR CODE\]](#) [\[STATE/TRIBE WIC AGENCY LOGO\]](#)