

2023Q3

CITY OF MINNEAPOLIS GUARANTEED BASIC INCOME PILOT PROGRAM EVALUATION CUMULATIVE RESULTS

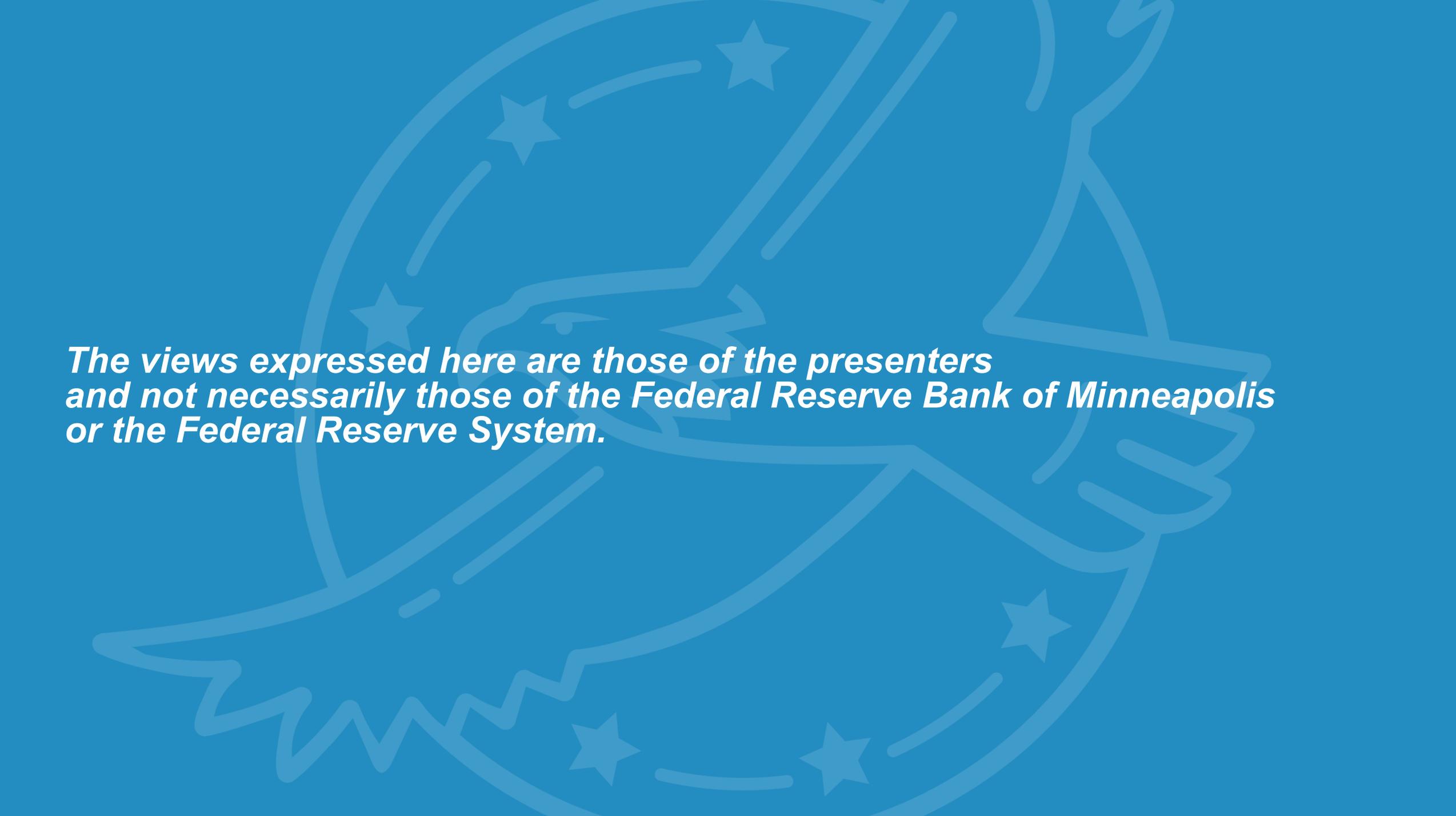
Andrew Goodman-Bacon
Ryan Nunn
Vanessa Palmer

Analytical support from Natalie Gubbay and Ayushi Narayan

November 1, 2023



FEDERAL RESERVE BANK
OF MINNEAPOLIS



*The views expressed here are those of the presenters
and not necessarily those of the Federal Reserve Bank of Minneapolis
or the Federal Reserve System.*

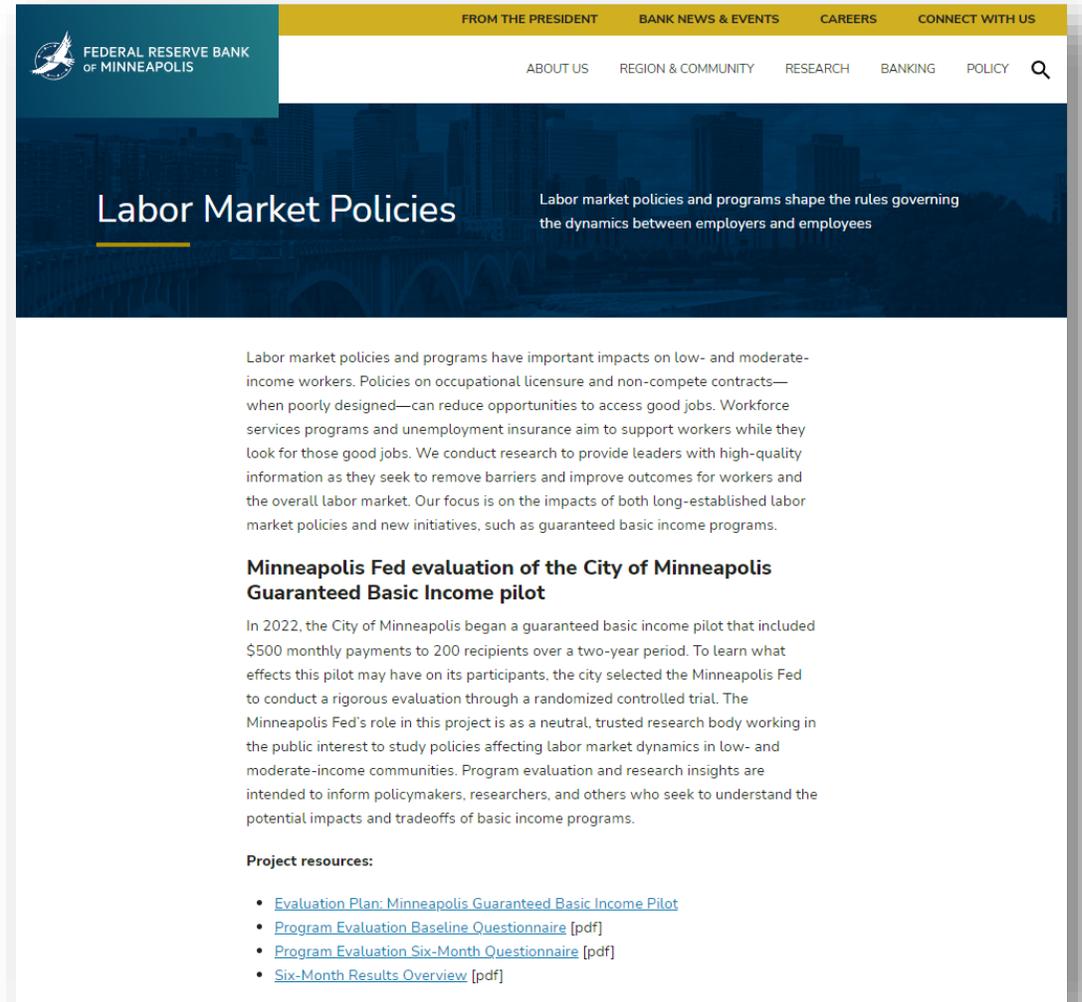
TODAY

- Brief introduction
- Share 12-month results
- Answer questions and discuss



RESOURCES AND DETAILS

- Full questionnaires
- Detailed analysis plan
- All materials published to date



<https://www.minneapolisfed.org/topic/labor-market-policies>

Also linked from [City's GBI pilot landing page](#)

SUMMARY OF RESULTS AT 12 MONTHS

- Early evidence from the City of Minneapolis' guaranteed basic income (GBI) pilot shows:

Positive impacts on:

- **Food security**
- **Financial security**
- **Self-assessed well-being** ☆
- **Psychological wellness** ☆

Potential positive impacts on:

- **Housing stability**
- **Healthcare access**

Cannot detect (at this time) impacts on:

- **Labor supply**
- **Transportation access**
- **School/training attendance**
- **Use of low-cost credit**
- **Healthcare utilization**
- **Housing "quantity"**

*Formal outcome measures shown in **bold***

☆ indicates a change at 12 months compared to 6 months

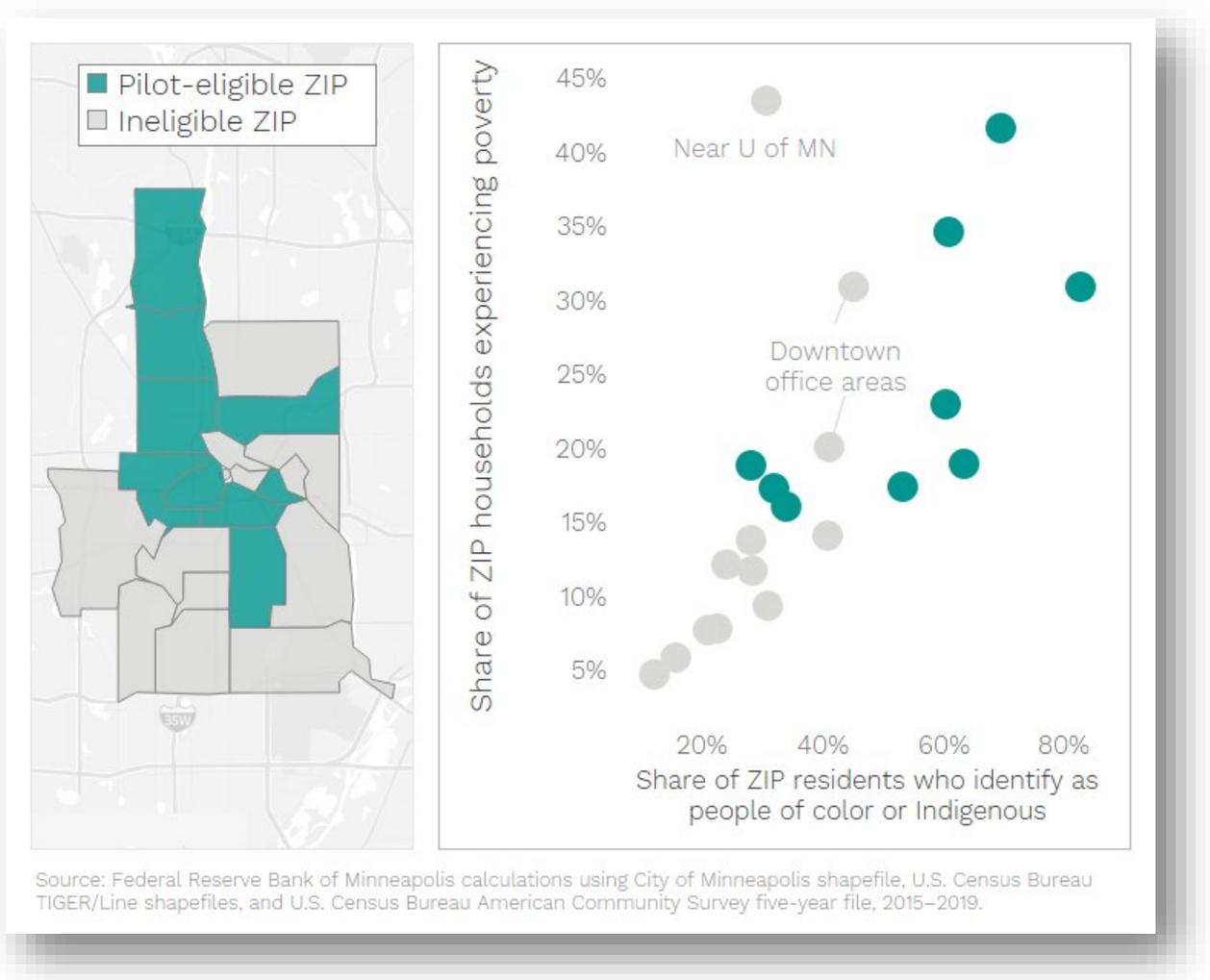
- We will report on new data through 2023-24



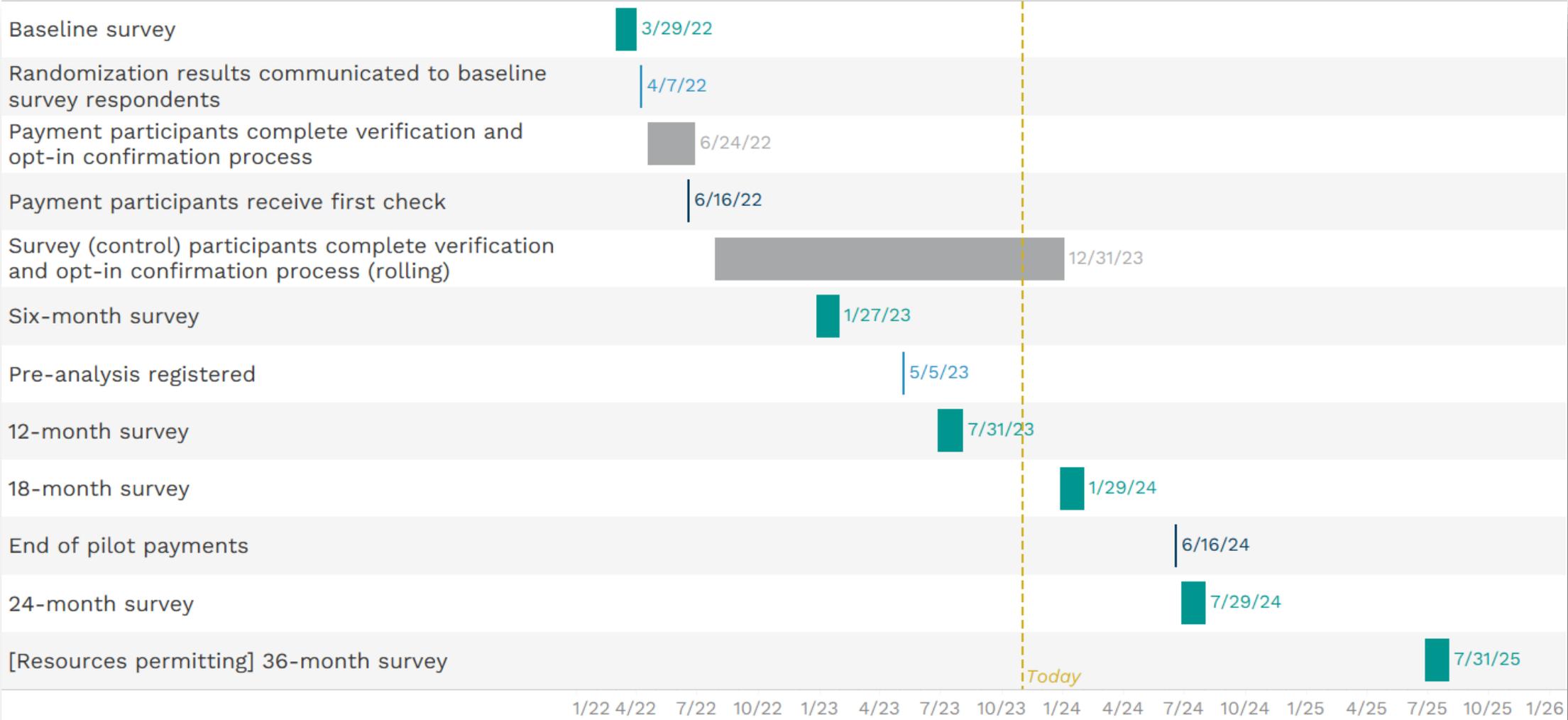
MINNEAPOLIS GBI PILOT: OVERVIEW

Basic design:

- City of Minneapolis recruited participants from community at large, through community-based organizations and advertising
- **After baseline survey, randomization, and eligibility verification** by the City:
 - **200** participants assigned to the **payment (treatment) group** to receive **\$500 per month for 24 months**
 - **330** participants assigned to the **survey (comparison) group** to receive compensation for taking surveys
- Surveys occur every six months (*planned*)
- Minneapolis Fed serves as neutral program evaluator



EVALUATION TIMELINE TO PRESENT



A large, faint, light-blue watermark of the United States Seal is centered in the background. It features an eagle with wings spread, holding an olive branch and arrows, with a shield on its chest and stars above its head.

SELECTED PRELIMINARY RESULTS

CURRENT COUNTS

Pool of potential future survey respondents: **333**
Total of 279 reportable responses at 6 months and 294 at 12 months

Ever received payments: **201**
Loss of 4 to date

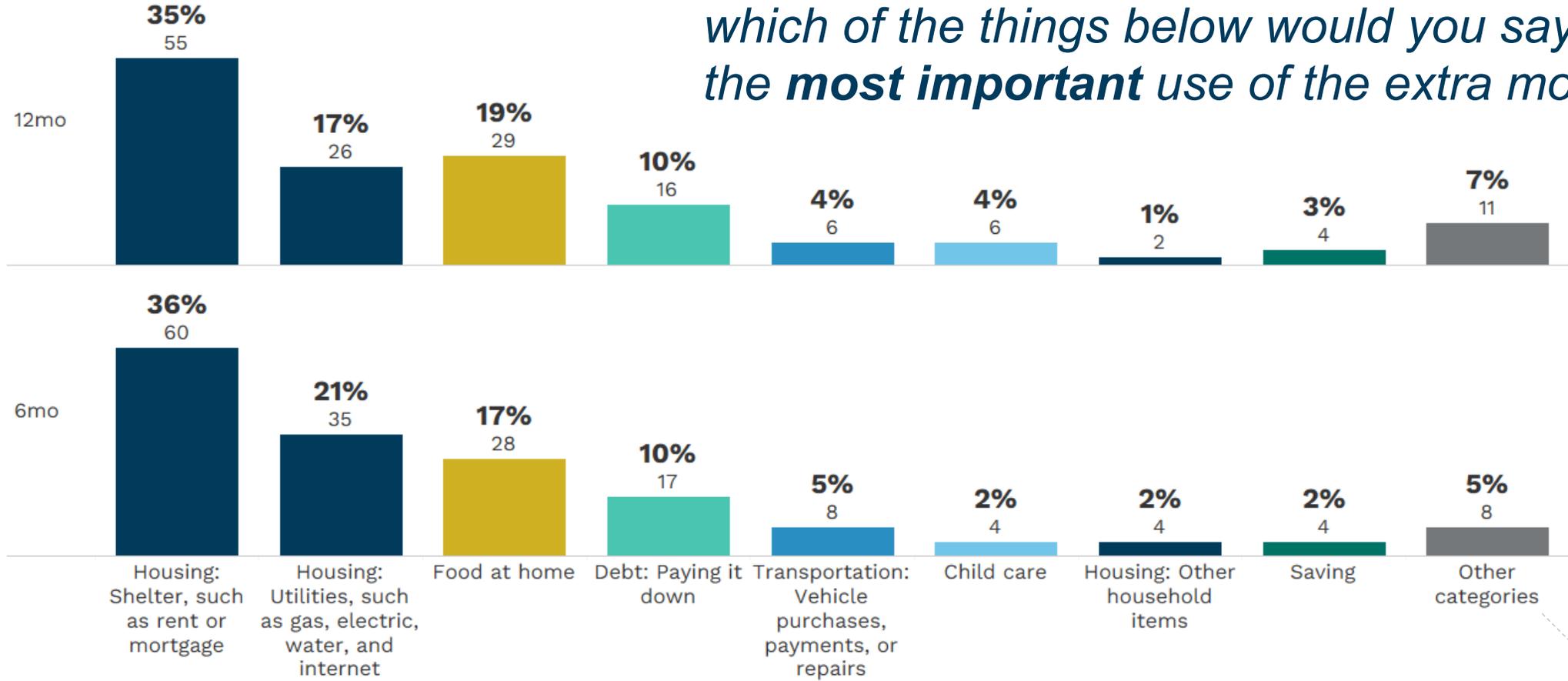
			Current eligibility unknown	Not currently eligible	Currently eligible	All
Randomized to payment group	Assigned to payment group	Confirmed eligible		3	167	170
		Confirmed ineligible		9		9
Assigned to survey (control) group		Confirmed eligible			4	4
		Eligibility unknown	15			15
Randomized to survey (control) group	Assigned to payment group	Confirmed eligible		1	30	31
		Confirmed ineligible		2		2
Assigned to survey (control) group		Confirmed eligible		3	132	135
		Confirmed ineligible		20		20
		Eligibility unknown	134			134
Opted out		Confirmed ineligible		9		9
All			149	47	333	529

As of 10/20/2023



CUMULATIVE RESULTS: MOST IMPORTANT USE

*Since you began receiving monthly GBI payments, which of the things below would you say has been the **most important** use of the extra money?*

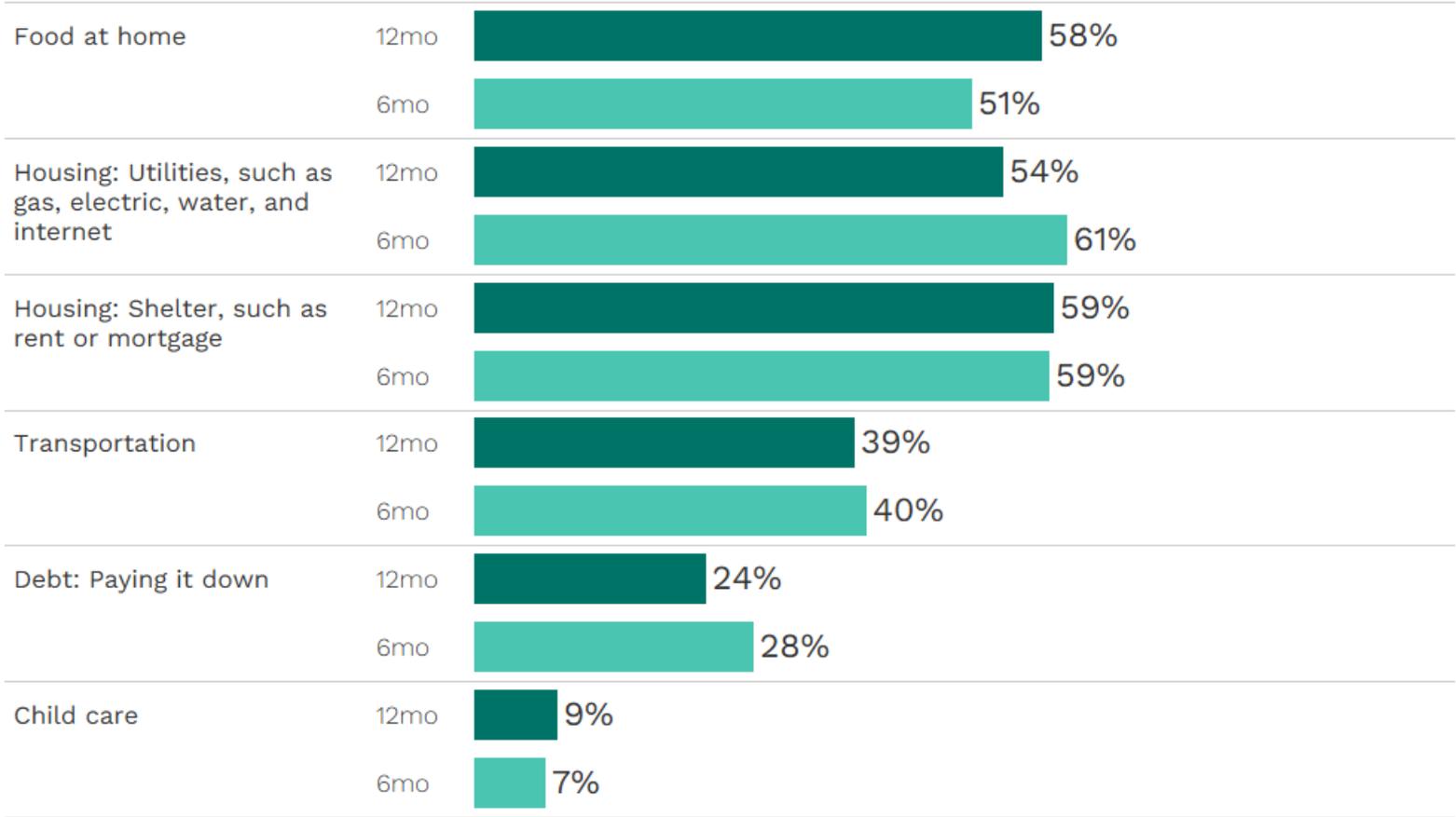


- Transportation: Gas/fuel and oil
- Clothing
- Education (not including child care)
- Food away from home (restaurants)
- Health care
- Other category not listed
- Don't know or prefer not to respond

Includes responses from participants ultimately verified to have been study-eligible at baseline; future results may show small changes

CUMULATIVE RESULTS: TOP 3 SPENDING CATEGORIES

Share of respondents ranking each category somewhere within their top three



Includes responses from participants ultimately verified to have been study-eligible at baseline; future results may show small changes

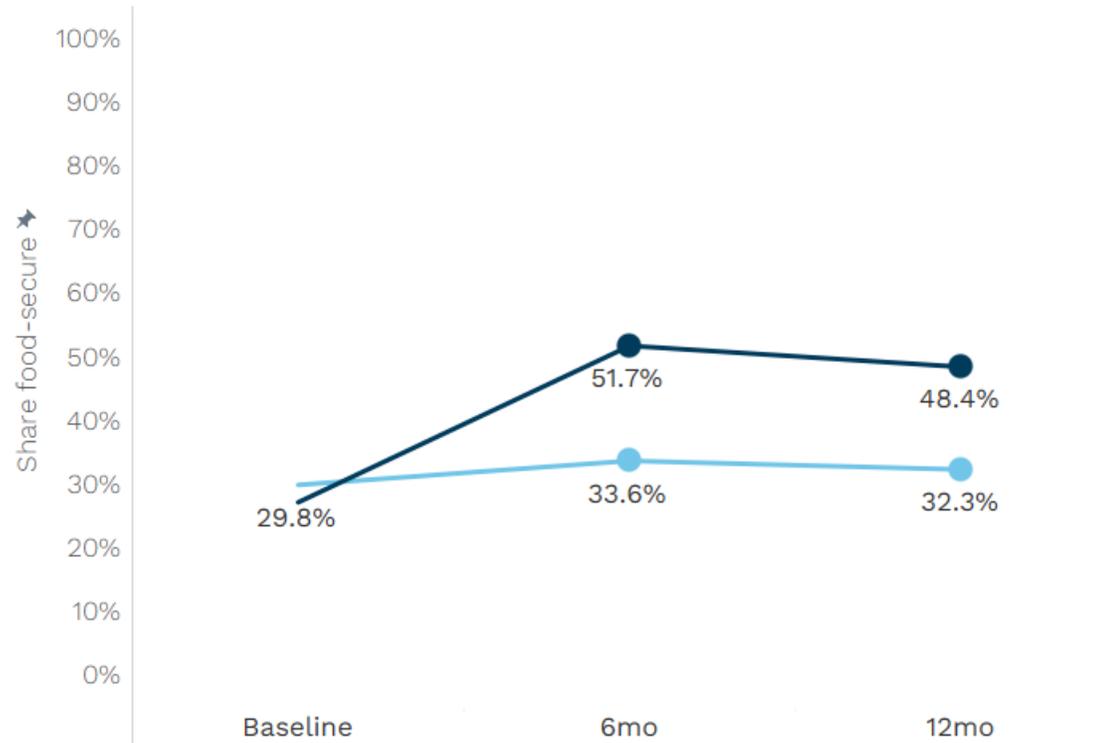
*Since you began receiving monthly GBI payments, which of the things below would you say has been the **most important** use of the extra money?*

...second most important?

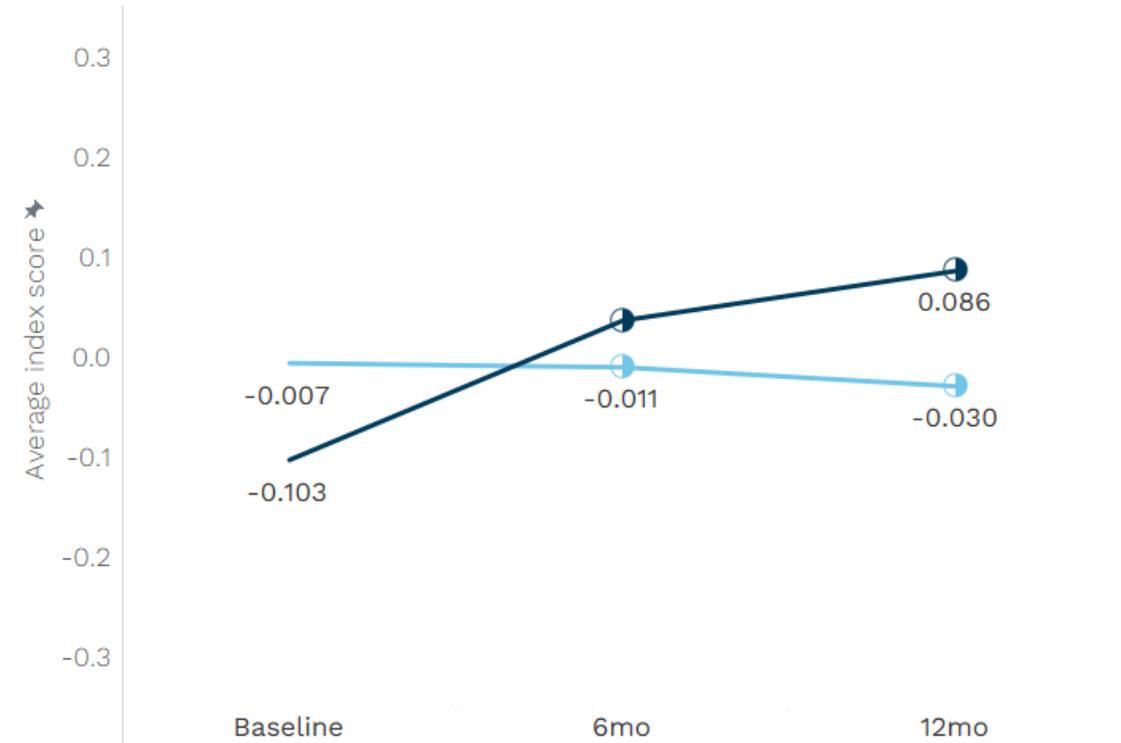
...third most important?

CUMULATIVE RESULTS: FORMAL OUTCOMES (slide 1 of 3)

Food Security (USDA Food Security Survey Module)



Housing Stability Index

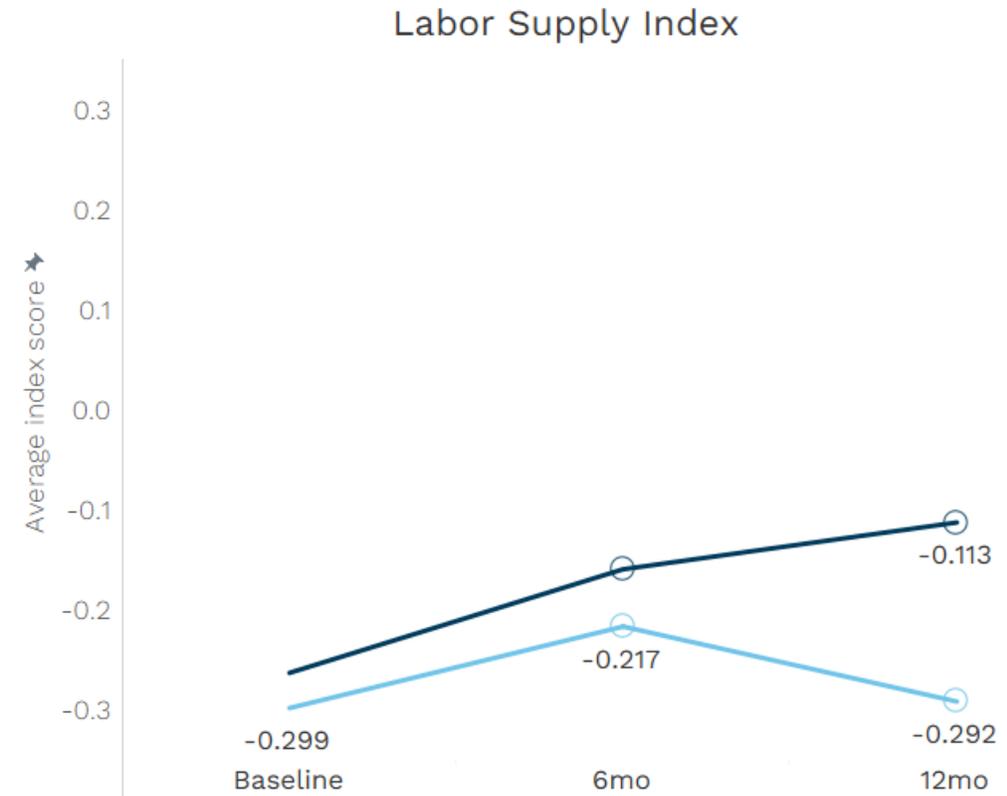
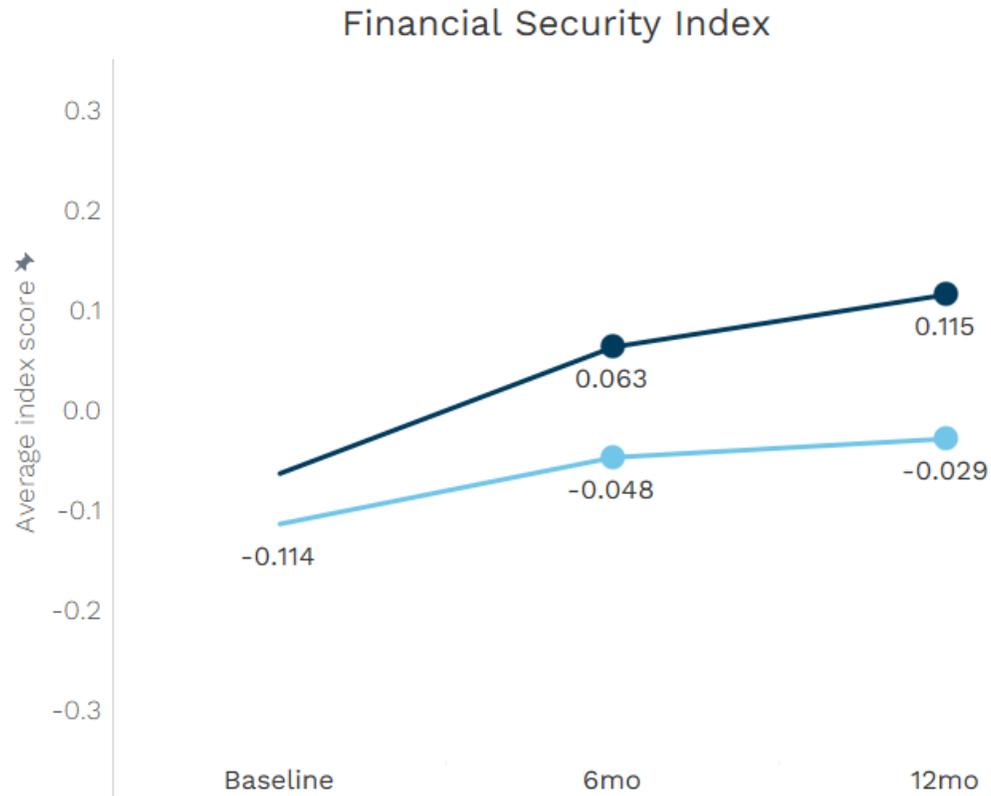


- Payment group
- Statistically significant difference between groups at this timepoint
- Survey group
- ◉ Difference suggestively significant
- Difference not statistically significant

Showing responses over time from participants who responded to the twelve-month survey **and** who had been verified to have been study-eligible as of that time; future results may show small changes



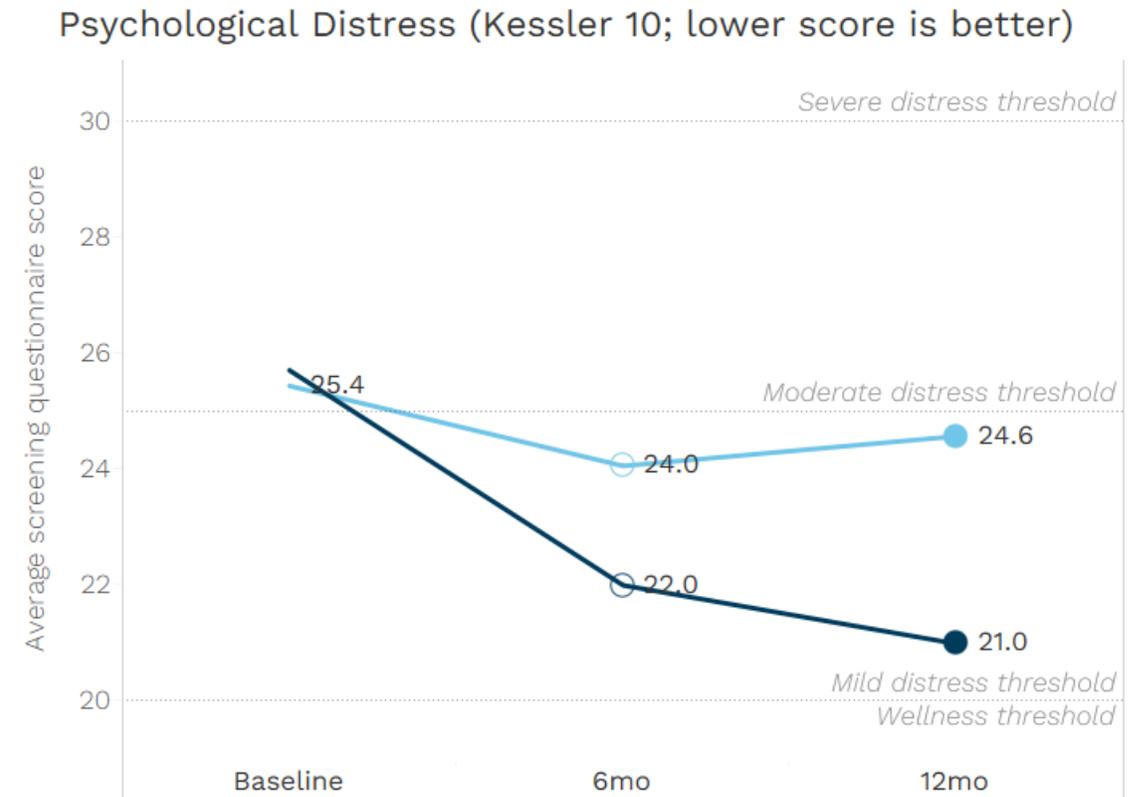
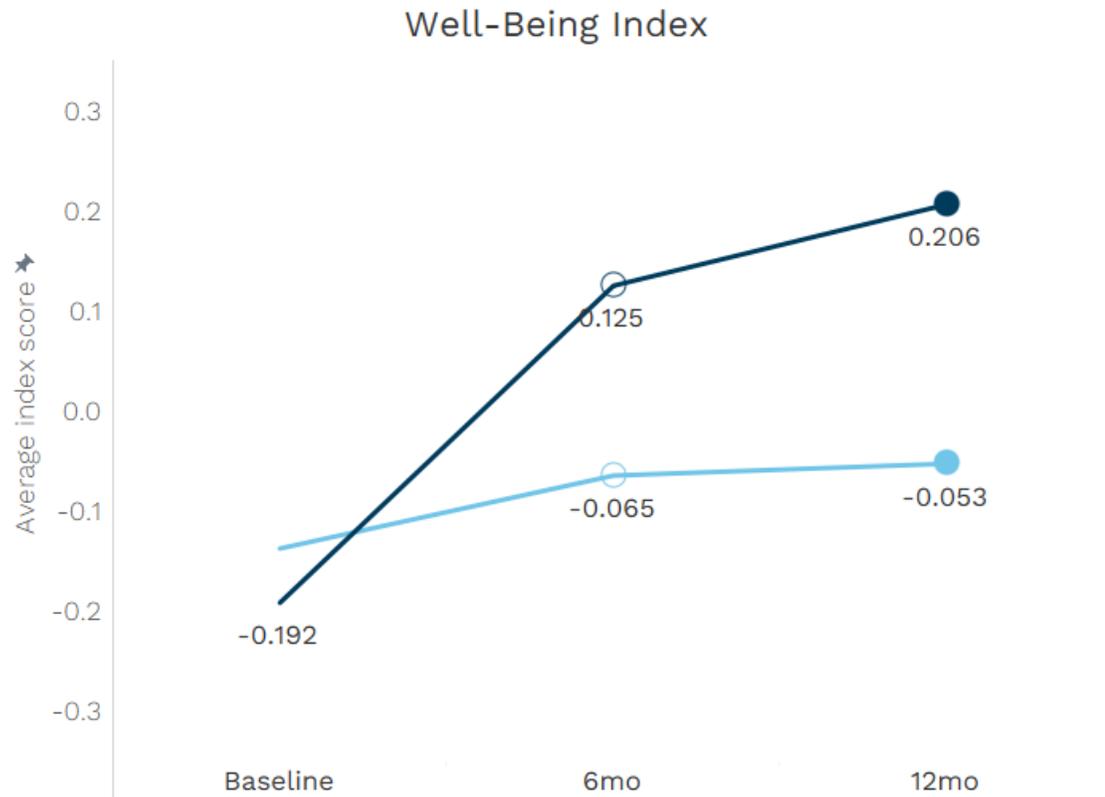
CUMULATIVE RESULTS: FORMAL OUTCOMES (slide 2 of 3)



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CUMULATIVE RESULTS: FORMAL OUTCOMES (slide 3 of 3)



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- We will report on new data through 2023-24



A large, stylized, light blue outline of an eagle with its wings spread, set against a dark blue background. The eagle is facing left. In the upper left and lower right areas of the eagle's body, there are several five-pointed stars. The text "Q&A" is centered over the eagle's chest.

Q&A

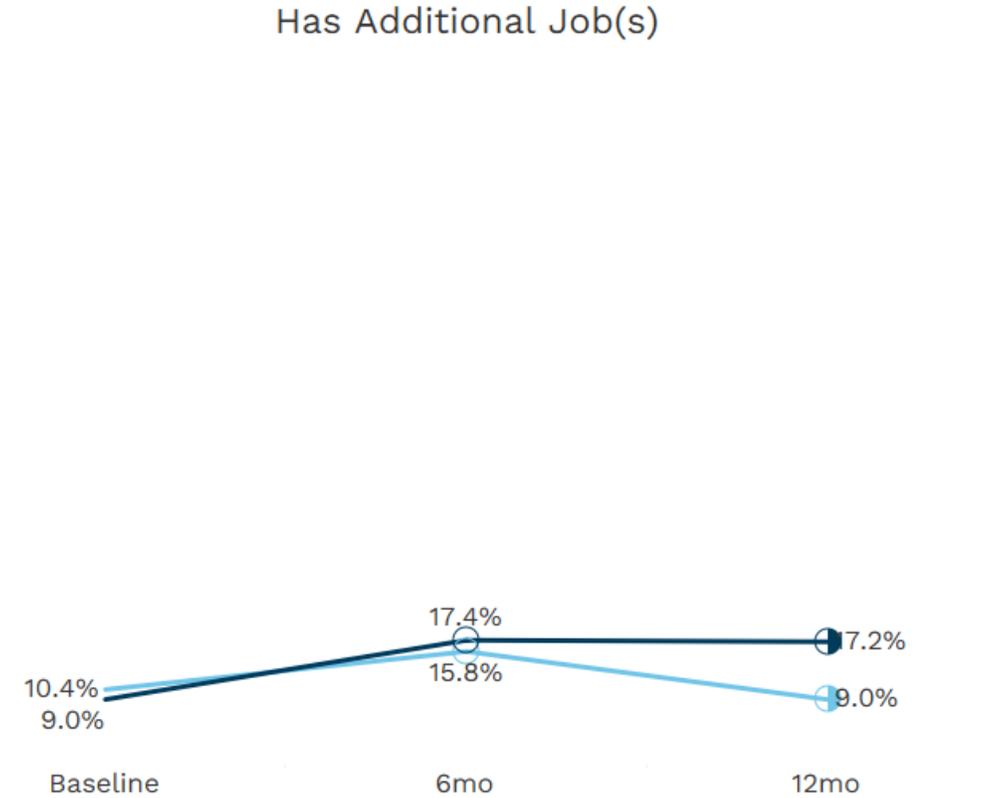
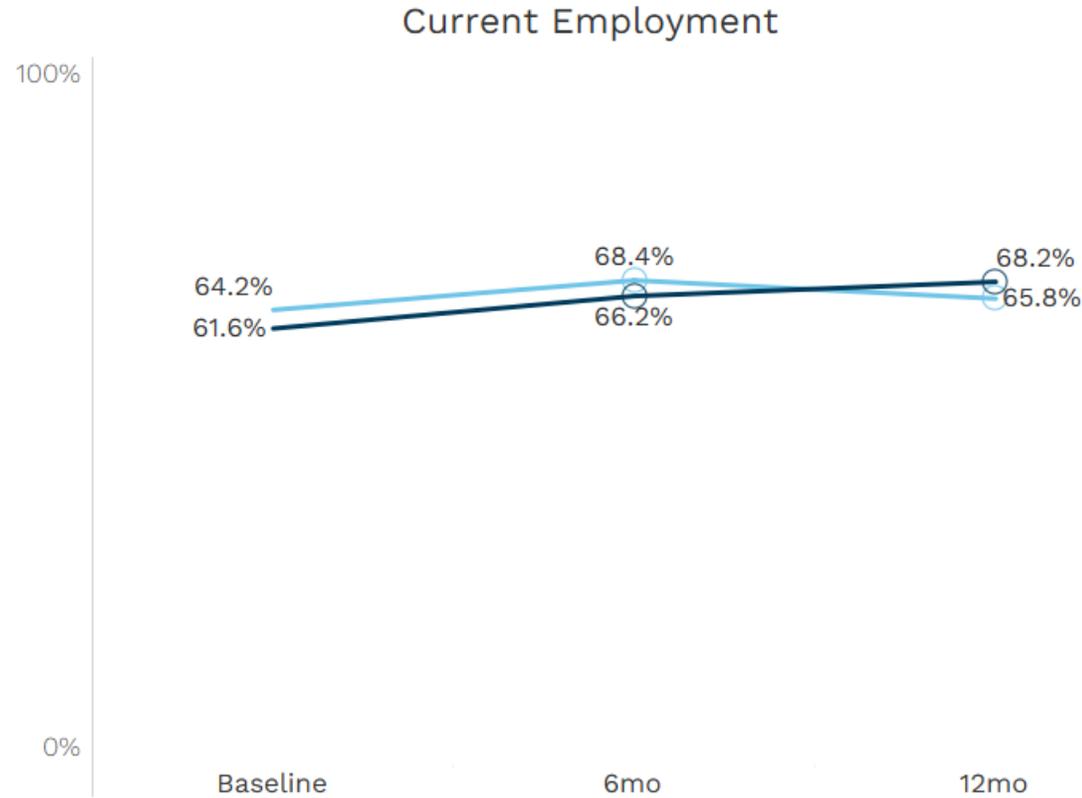


APPENDIX



EXPLORATORY OUTCOMES

CUMULATIVE RESULTS: EXPLORATORY OUTCOMES (slide 1 of 6)



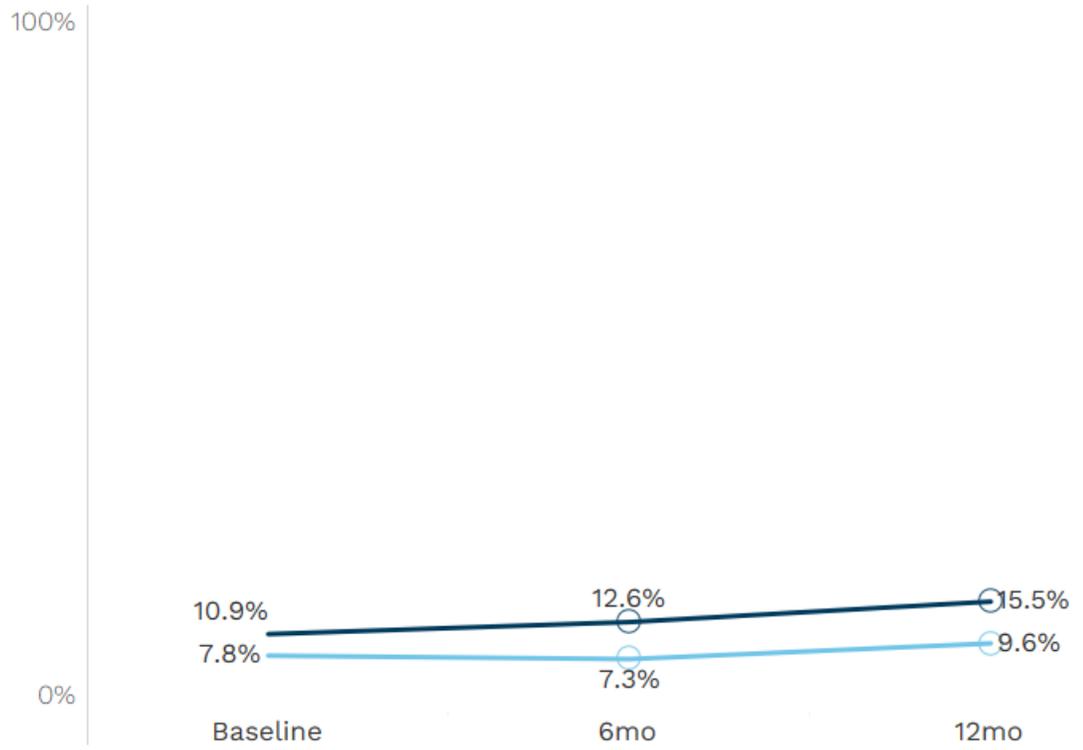
- Payment group
- Statistically significant difference between groups at this timepoint
- Survey group
- Difference suggestively significant
- Difference not statistically significant

Showing responses over time from participants who responded to the twelve-month survey and who had been verified to have been study-eligible as of that time; future results may show small changes

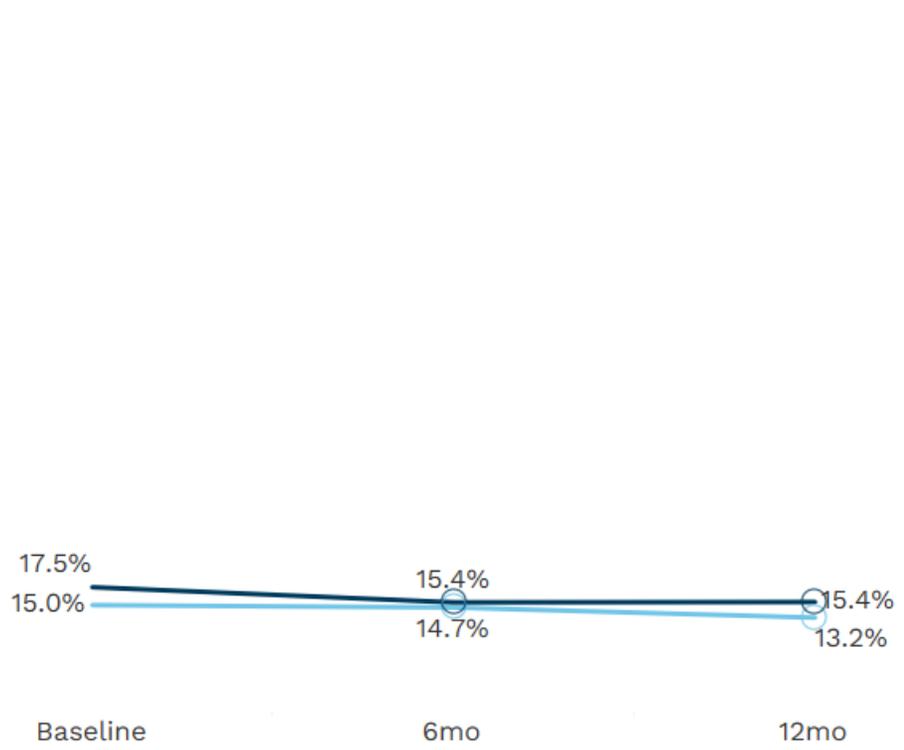


CUMULATIVE RESULTS: EXPLORATORY OUTCOMES (slide 2 of 6)

Would Pay a \$400 Expense with Cash



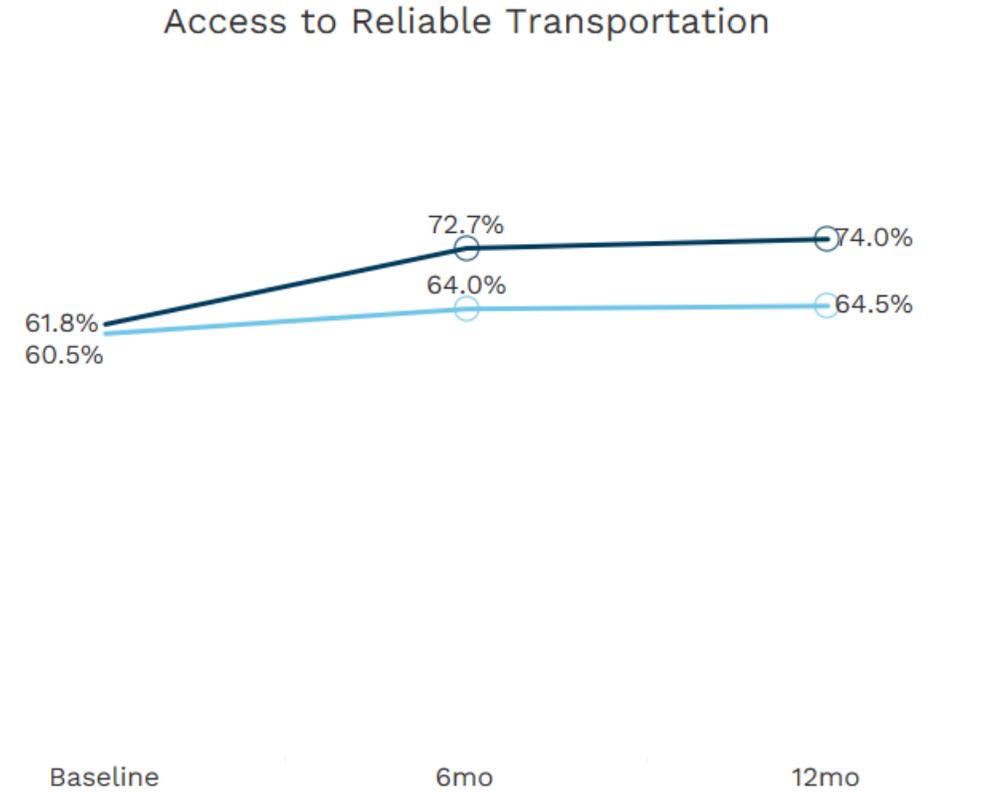
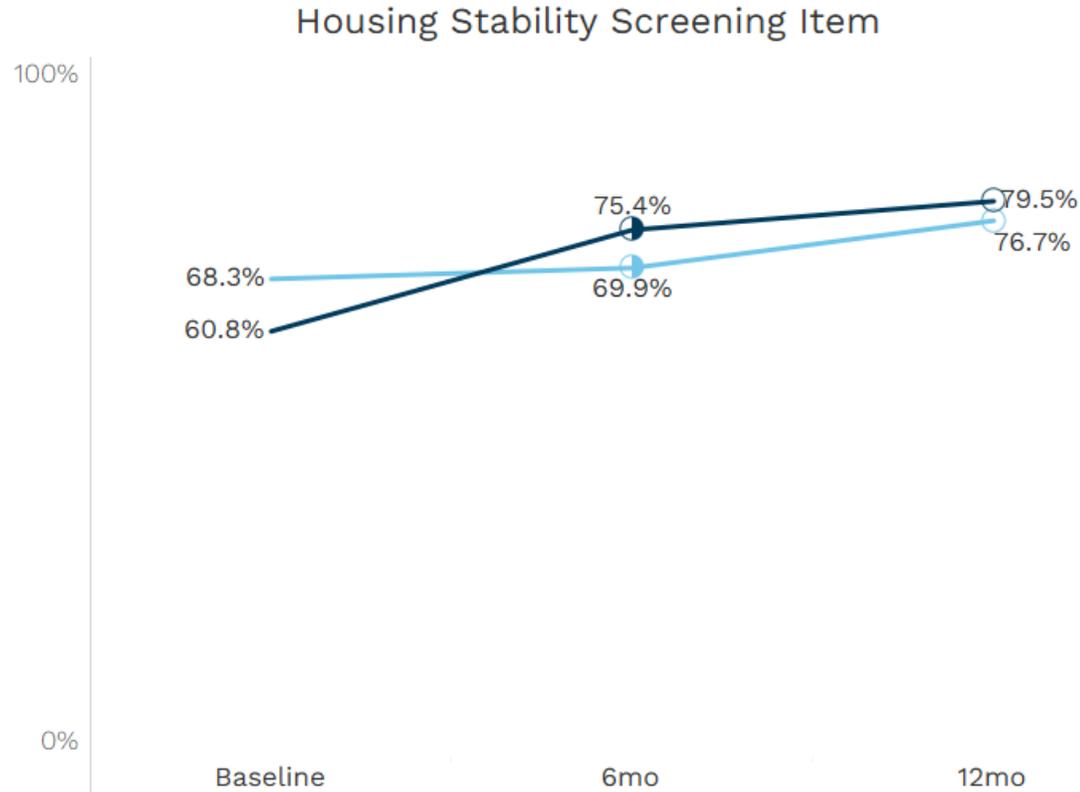
Providing Support to Others



- Payment group
- Survey group
- Statistically significant difference between groups at this timepoint
- ◐ Difference suggestively significant
- Difference not statistically significant

Showing responses over time from participants who responded to the twelve-month survey and who had been verified to have been study-eligible as of that time; future results may show small changes

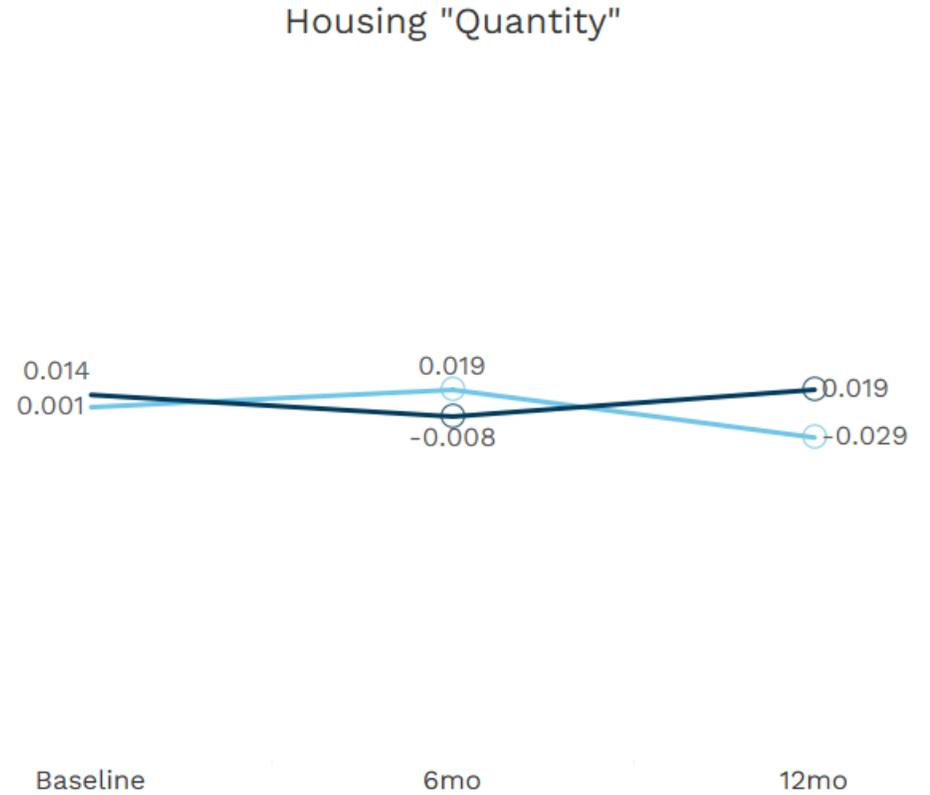
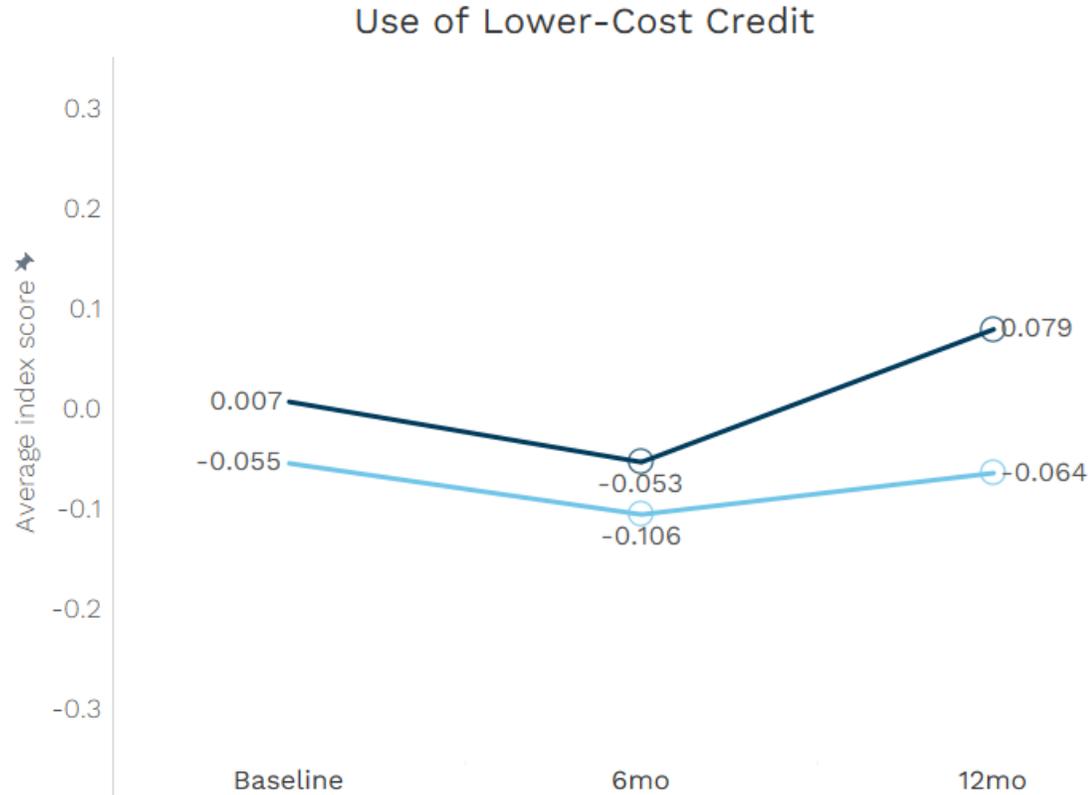
CUMULATIVE RESULTS: EXPLORATORY OUTCOMES (slide 3 of 6)



- Payment group
- Survey group
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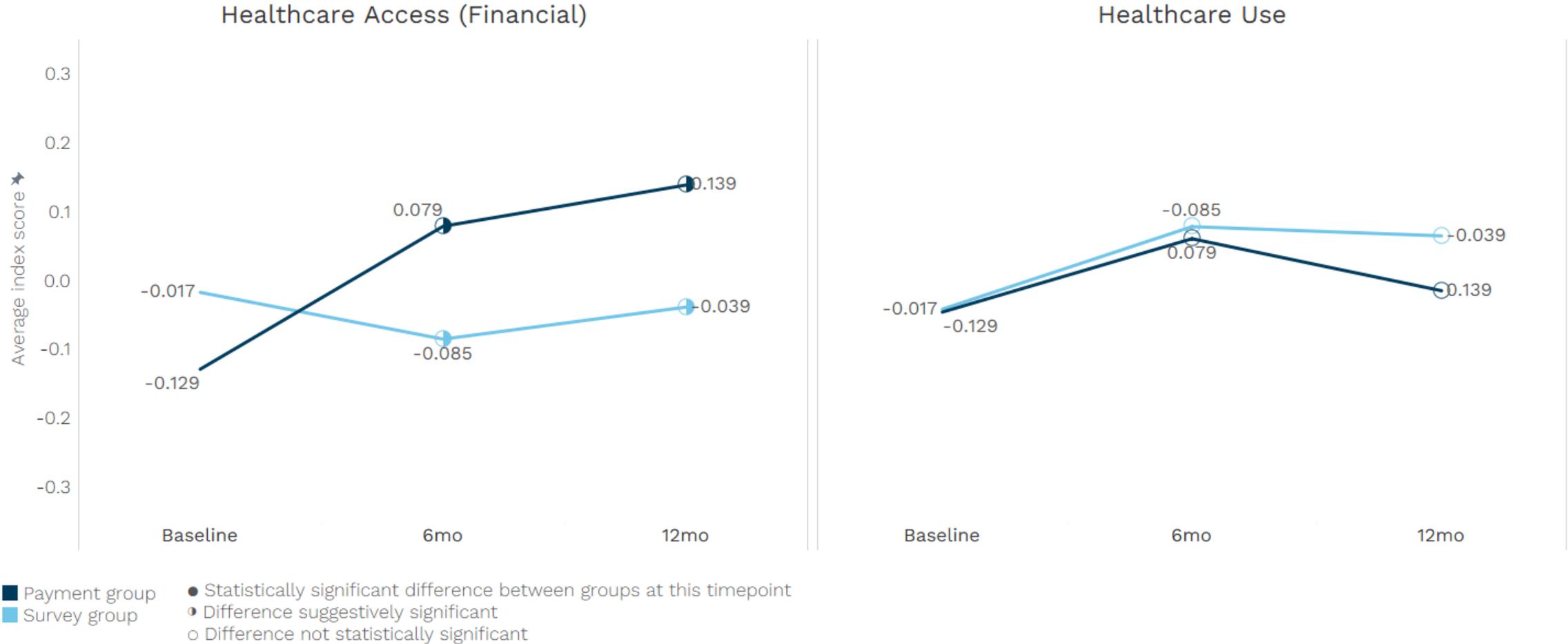
CUMULATIVE RESULTS: EXPLORATORY OUTCOMES (slide 4 of 6)



- Payment group
- Survey group
- Statistically significant difference between groups at this timepoint
- ◐ Difference suggestively significant
- Difference not statistically significant

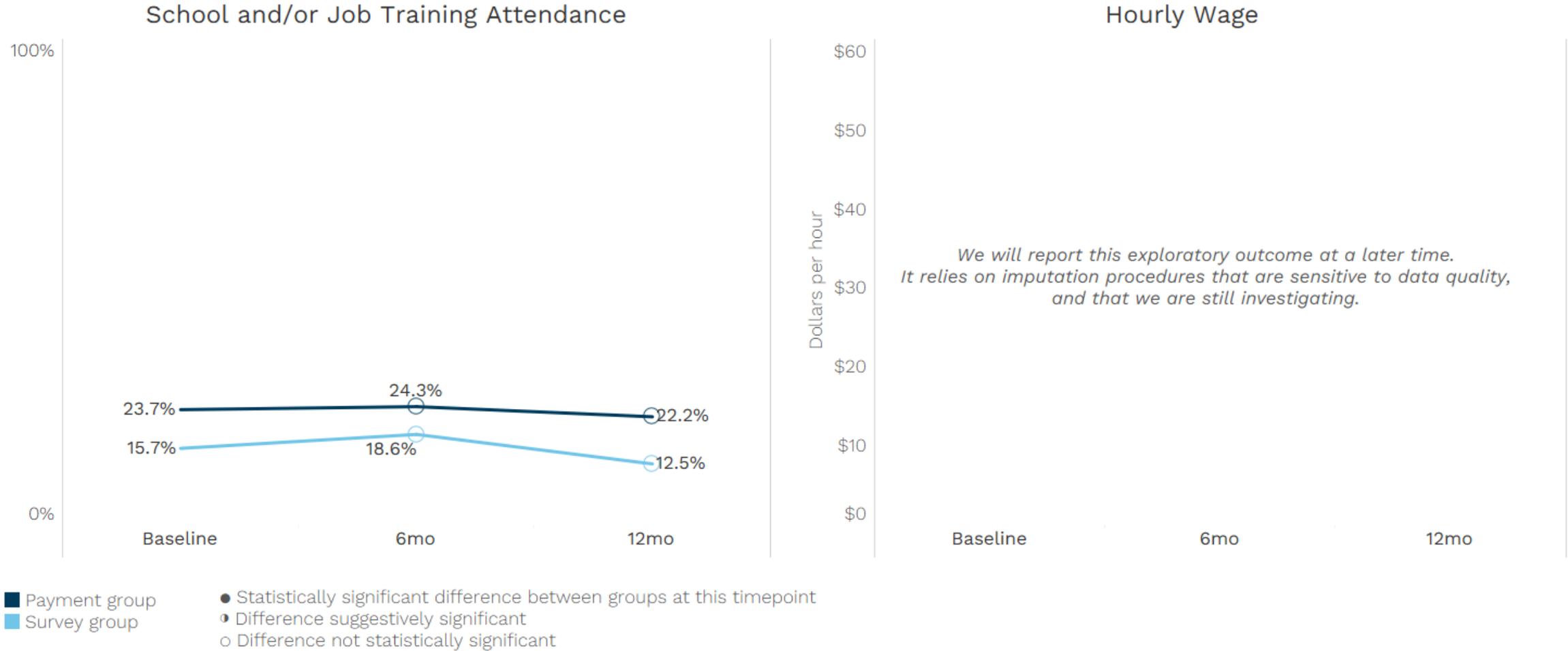
Showing responses over time from participants who responded to the twelve-month survey and who had been verified to have been study-eligible as of that time; future results may show small changes

CUMULATIVE RESULTS: EXPLORATORY OUTCOMES (slide 5 of 6)



Showing responses over time from participants who responded to the twelve-month survey **and** who had been verified to have been study-eligible as of that time; future results may show small changes

CUMULATIVE RESULTS: EXPLORATORY OUTCOMES (slide 6 of 6)



Showing responses over time from participants who responded to the twelve-month survey **and** who had been verified to have been study-eligible as of that time; future results may show small changes

FIGURE P1.

Characteristics of GBI Pilot-Eligible ZIP Codes

See Slide 6

PRE-SPECIFIED EXHIBITS

NUMBERING AND ORDERING REFLECT PRE-ANALYSIS PLAN:

[HTTPS://WWW.MINNEAPOLISFED.ORG/RESEARCH/COMMUNITY-DEVELOPMENT-WORKING-PAPERS/EVALUATION-PLAN-MINNEAPOLIS-GUARANTEED-BASIC-INCOME-PILOT](https://www.minneapolisfed.org/research/community-development-working-papers/evaluation-plan-minneapolis-guaranteed-basic-income-pilot)

TABLE P1.

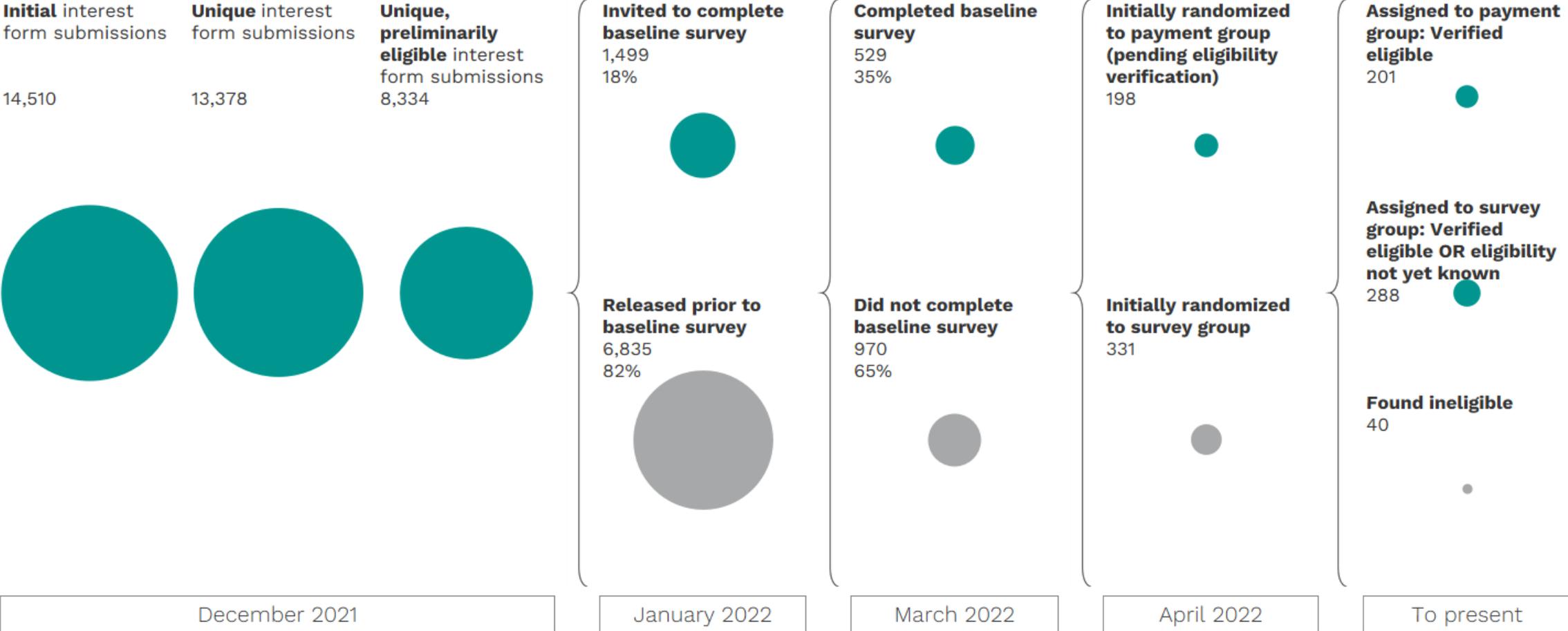
GBI Pilot Household Income Eligibility Thresholds by Household Size

Household size	Income
1	\$36,725
2	\$41,975
3	\$47,225
4	\$52,450
5	\$56,646
6	\$60,842
7	\$65,038
8	\$69,234
9	\$73,425
10	\$77,625
11	\$81,825
12	\$86,025

Source: U.S. Department of Housing and Urban Development (2021), <https://www.huduser.gov/portal/datasets/il.html>

FIGURE P2.

Stages of Recruitment



Counts reflect a duplicate baseline survey submission discovered during eligibility verification. Updated 10/15/2023

TABLE P2R. (SLIDE 1 OF 2)

Balance Test in the Full Study Sample

Outcome	Control mean (s.d.)	Treatment mean (s.d.)	Difference Treatment-Control (s.d.)
i. Education			
Share less than high school	0.13 (0.32)	0.177 (0.345)	0.0475 (0.333)
Share high school grad	0.254 (0.434)	0.248 (0.431)	-0.00649 (0.432)
Share some college	0.312 (0.465)	0.267 (0.445)	-0.0443 (0.455)
Share post-secondary	0.287 (0.434)	0.298 (0.443)	0.0111 (0.439)
ii. Gender			
Share male	0.259 (0.405)	0.258 (0.413)	-0.00155 (0.409)
Share other gender	0.0241 (0.107)	0.0458 (0.119)	0.0217 (0.113)
Share female	0.71 (0.412)	0.691 (0.415)	-0.0193 (0.414)
iii. Age			
Age	38.4 (10.8)	38.5 (10.8)	0.136 (10.8)
iv. Household size and distribution of children			
Household size	2.87 (1.35)	2.85 (1.24)	-0.0241 (1.30)
Number kids under 18	1.38 (0.789)	1.44 (0.814)	0.0658 (0.802)
Number kids under 5	0.439 (0.512)	0.367 (0.461)	-0.0718 (0.487)
v. Cumulative Income Distribution			
HH income < \$5,000	0.138 (0.239)	0.174 (0.241)	0.0357 (0.240)
HH income < \$7,500	0.217 (0.275)	0.239 (0.276)	0.0220 (0.275)
HH income < \$10,000	0.283 (0.279)	0.309 (0.275)	0.0259 (0.277)
HH income < \$12,500	0.353 (0.245)	0.4 (0.232)	0.0468 (0.238)
HH income < \$15,000	0.438 (0.3)	0.44 (0.245)	0.00245 (0.273)
HH income < \$20,000	0.54 (0.288)	0.551 (0.269)	0.0105 (0.278)



TABLE P2R. (SLIDE 2 OF 2)

Outcome	Control mean (s.d.)	Treatment mean (s.d.)	Difference Treatment-Control (s.d.)
v. Cumulative Income Distribution (cont'd)			
HH income < \$25,000	0.64 (0.285)	0.642 (0.272)	0.00196 (0.279)
HH income < \$30,000	0.722 (0.277)	0.707 (0.28)	-0.0145 (0.279)
HH income < \$35,000	0.81 (0.229)	0.819 (0.278)	0.00904 (0.255)
HH income < \$40,000	0.867 (0.187)	0.884 (0.209)	0.0172 (0.199)
HH income < \$50,000	0.946 (0.138)	0.955 (0.101)	0.00931 (0.121)
HH income < \$75,000	0.997 (0.0199)	1 (0)	0.00303 (0.0141)
vi. Outcome Indices			
Credit Use Index	-0.00588 (0.508)	0.014 (0.531)	0.0199 (0.520)
Financial Security Index	-0.0412 (0.381)	-0.026 (0.427)	0.0152 (0.404)
Food Security Index	0.338 (0.464)	0.288 (0.458)	-0.0501 (0.461)
Healthcare Access Index	-0.0268 (0.724)	-0.0656 (0.684)	-0.0387 (0.705)
Housing Quantity Index	-0.0133 (0.579)	-0.0482 (0.499)	-0.0349 (0.540)
Housing Stability Index	-0.0799 (0.487)	-0.0856 (0.478)	-0.00566 (0.483)
Healthcare Utilization Index	-0.0294 (0.583)	-0.0741 (0.571)	-0.0446 (0.577)
Psychological Distress Index	25 (9.32)	24.4 (10.8)	-0.571 (10.1)
Labor Supply Index	-0.263 (0.687)	-0.303 (0.655)	-0.0404 (0.671)
Wellbeing Index	-0.0748 (0.798)	-0.116 (0.766)	-0.0414 (0.782)
<i>Joint p-value</i>		0.675	



FIGURE P3.

Distribution of Sampled Households Across Strata

Assignment to **payment** and **survey** groups

	ZIP Group 0 (55405, 55411, 55412, 55413, 55430)		ZIP Group 1 (55403, 55404, 55407, 55454)	
	No kids under 18	Yes kids under 18	No kids under 18	Yes kids under 18
At or above poverty threshold	15 (payment) 15 (survey)	46 (payment) 32 (survey)	23 (payment) 13 (survey)	32 (payment) 18 (survey)
Below poverty threshold	16 (payment) 10 (survey)	26 (payment) 22 (survey)	29 (payment) 20 (survey)	14 (payment) 9 (survey)

Counts reflect verified ever-eligibility as of 10/23/2023

TABLE P2C. (SLIDE 1 OF 3)

Balance Test in the Confirmed-Eligible Sample

Outcome	Control mean (s.d.)	Treatment mean (s.d.)	Difference Treatment-Control (s.d.)
i. Education			
Share less than high school	0.0820 (0.222)	0.148 (0.319)	0.0663 (0.275)
Share high school grad	0.249 (0.410)	0.232 (0.420)	-0.0176 (0.415)
Share some college	0.319 (0.467)	0.300 (0.464)	-0.0185 (0.466)
Share post-secondary	0.337 (0.448)	0.310 (0.457)	-0.0266 (0.452)
ii. Gender			
Share male	0.201 (0.354)	0.268 (0.421)	0.0663 (0.389)
Share other gender	0.0335 (0.102)	0.0382 (0.112)	0.00467 (0.107)
Share female	0.759 (0.378)	0.685 (0.426)	-0.0744 (0.403)
iii. Age			
Age	38.9 (10.9)	37.6 (10.9)	-1.30 (10.9)
iv. Household size and distribution of children			
Household size	2.74 (1.02)	2.81 (1.18)	0.0752 (1.11)
Number kids under 18	1.36 (0.745)	1.43 (0.785)	0.0734 (0.765)
Number kids under 5	0.462 (0.503)	0.389 (0.461)	-0.0727 (0.483)
v. Cumulative Income Distribution			
HH income < \$5,000	0.149 (0.247)	0.172 (0.244)	0.0238 (0.246)
HH income < \$7,500	0.227 (0.283)	0.222 (0.273)	-0.00527 (0.278)
HH income < \$10,000	0.287 (0.289)	0.297 (0.274)	0.0101 (0.282)
HH income < \$12,500	0.367 (0.251)	0.384 (0.210)	0.0171 (0.231)
HH income < \$15,000	0.443 (0.315)	0.433 (0.262)	-0.0101 (0.290)
HH income < \$20,000	0.561 (0.260)	0.548 (0.266)	-0.0135 (0.263)



TABLE P2C. (SLIDE 2 OF 3)

Outcome	Control mean (s.d.)	Treatment mean (s.d.)	Difference Treatment-Control (s.d.)
v. Cumulative Income Distribution (cont'd)			
HH income < \$25,000	0.653 (0.294)	0.646 (0.280)	-0.00729 (0.287)
HH income < \$30,000	0.725 (0.247)	0.716 (0.278)	-0.00855 (0.263)
HH income < \$35,000	0.826 (0.204)	0.844 (0.268)	0.0179 (0.238)
HH income < \$40,000	0.902 (0.144)	0.893 (0.206)	-0.00874 (0.178)
HH income < \$50,000	0.973 (0.0926)	0.970 (0.0928)	-0.00357 (0.0927)
HH income < \$75,000	1.00 (0.00)	1.00 (0.00)	0.00 (0.00)
vi. Outcome Indices			
Credit Use Index	-0.0343 (0.507)	0.0264 (0.498)	0.0607 (0.503)
Financial Security Index	-0.0780 (0.379)	-0.0458 (0.407)	0.0322 (0.394)
Food Security Index	0.324 (0.473)	0.264 (0.440)	-0.0608 (0.457)
Healthcare Access Index	0.0155 (0.668)	-0.0729 (0.679)	-0.0884 (0.673)
Housing Quantity Index	-0.00505 (0.548)	-0.0418 (0.509)	-0.0368 (0.529)
Housing Stability Index	-0.0337 (0.425)	-0.107 (0.482)	-0.0729 (0.455)
Healthcare Utilization Index	-0.0230 (0.614)	-0.0420 (0.563)	-0.0191 (0.589)
Psychological Distress Index	25.4 (9.46)	24.9 (10.1)	-0.446 (9.76)
Labor Supply Index	-0.345 (0.653)	-0.268 (0.691)	0.0770 (0.672)
Wellbeing Index	-0.113 (0.764)	-0.143 (0.733)	-0.0301 (0.748)



TABLE P2. BALANCE TEST (SLIDE 3 OF 3)

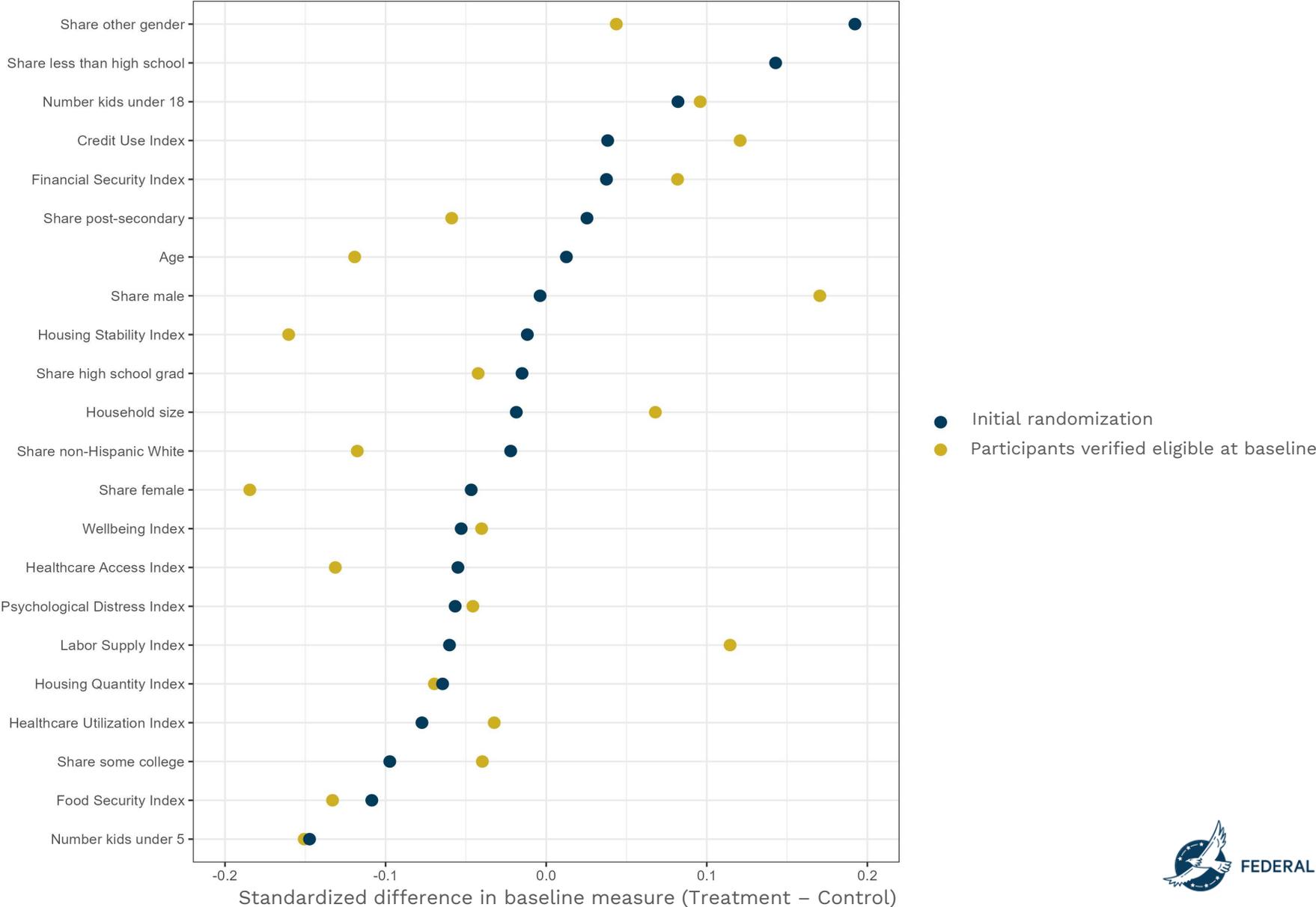


TABLE P3A.

Response Rates by Outcome Domain, Wave, and Treatment Assignment

Outcome Domain	6-month		12-month	
	Control (%)	Treatment (%)	Control (%)	Treatment (%)
Credit Use Index	41.7%	74.0%	41.1%	68.3%
Financial Security Index	41.7%	74.0%	41.1%	68.3%
Food Security Index	41.7%	74.0%	41.1%	68.3%
Healthcare Access Index	41.4%	73.6%	40.7%	67.8%
Housing Quantity Index	41.7%	74.0%	41.1%	67.8%
Housing Stability Index	41.7%	74.0%	41.1%	68.3%
Healthcare Utilization Index	41.7%	74.0%	41.1%	68.3%
Psychological Distress Index	41.7%	74.0%	41.1%	68.3%
Labor Supply Index	41.7%	73.6%	41.1%	67.8%
Wellbeing Index	41.7%	73.6%	41.1%	67.8%
Differential attrition test: Effect of treatment assignment on response rate (coef, s.e.)	0.322 (0.041)		0.271 (0.042)	

TABLE P3B.

Response and Eligibility Verification Counts by Treatment Assignment

			Baseline	6-month		12-month	
			Responded	Responded	Did not respond	Responded	Did not respond
Initially randomized to control group	Assigned to control group	TOTAL	298	149	149	128	170
		Ineligible	29	3	27	0	32
		Unverified	134	24	110	8	126
		Eligible	135	122	12	120	12
	Assigned to treatment group	TOTAL	33	27	6	24	9
		Ineligible	2	0	2	0	2
		Eligible	31	27	4	24	7
Initially randomized to treatment group	Assigned to control group	TOTAL	19	7	12	5	14
		Unverified	15	3	12	1	14
		Eligible	4	4	0	4	0
	Assigned to treatment group	TOTAL	179	141	38	131	48
		Ineligible	9	0	11	0	12
		Eligible	170	141	27	131	36

TABLE P4. (SLIDE 1 OF 2)

Selective Attrition Tests at Baseline

Index (Formal Outcomes)	Wave	Baseline means				p-values			
		Control Respondents	Control Attritors	Treatment Respondents	Treatment Attritors	Unconditional IV-P test (Assumption 1)	Unconditional IV-R test (Assumption 2)	Conditional IV-P Test (Assumption 1X)	Conditional IV-R Test (Assumption 2X)
Financial Security	6-month	-0.0849	0.0152	-0.0696	0.0196	0.338	0.463	0.583	0.871
	12-month	-0.114	0.0347	-0.0639	-0.00863	0.324	0.550	0.472	0.749
Food Security	6-month	0.310	0.364	0.256	0.390	0.000295	0.121	0.144	0.457
	12-month	0.298	0.371	0.271	0.333	0.00575	0.0493	0.555	0.460
Housing Stability	6-month	-0.0123	-0.0902	-0.107	-0.135	2.33E-05	0.00278	0.102	0.283
	12-month	-0.00654	-0.0933	-0.103	-0.137	7.38E-06	0.0293	0.0465	0.731
Psychological Distress	6-month	25.8	23.7	25.6	23.3	0.189	0.781	0.154	0.535
	12-month	25.4	24.0	25.7	23.4	0.379	0.883	0.562	0.832
Labor Supply	6-month	-0.317	-0.244	-0.281	-0.268	0.185	0.333	0.00322	0.0916
	12-month	-0.299	-0.258	-0.263	-0.310	0.299	0.395	0.0113	0.101
Wellbeing	6-month	-0.150	-0.0143	-0.187	0.0824	0.0405	0.670	0.0283	0.156
	12-month	-0.138	-0.0242	-0.192	0.0448	0.045	0.477	0.0339	0.135



TABLE P4. (SLIDE 2 OF 2)

Index (Exploratory Outcomes)	Wave	Baseline means				p-values			
		Control Respondents	Control Attriters	Treatment Respondents	Treatment Attriters	Unconditional IV-P test (Assumption 1)	Unconditional IV-R test (Assumption 2)	Conditional IV-P Test (Assumption 1X)	Conditional IV-R Test (Assumption 2X)
Credit Use	6-month	-0.0644	0.0517	0.0118	-0.0337	0.0914	0.139	0.125	0.371
	12-month	-0.0546	0.0436	0.00683	-0.0147	0.022	0.0883	0.0833	0.460
Healthcare Access	6-month	0.0243	-0.0509	-0.0803	-0.044	2.30E-08	0.00261	0.100	0.104
	12-month	-0.0174	-0.0209	-0.129	0.0552	0.0013	0.0483	0.240	0.136
Housing Quantity	6-month	0.00145	-0.0233	-0.025	-0.0988	0.0301	0.0743	0.061	0.459
	12-month	0.00148	-0.023	0.0137	-0.167	0.0304	0.0289	0.0512	0.142
Healthcare Utilization	6-month	-0.0544	-0.0377	-0.053	-0.0366	0.012	0.365	0.0668	0.561
	12-month	-0.0417	-0.0468	-0.046	-0.0546	0.0273	0.402	0.0416	0.511





TABLE P5.

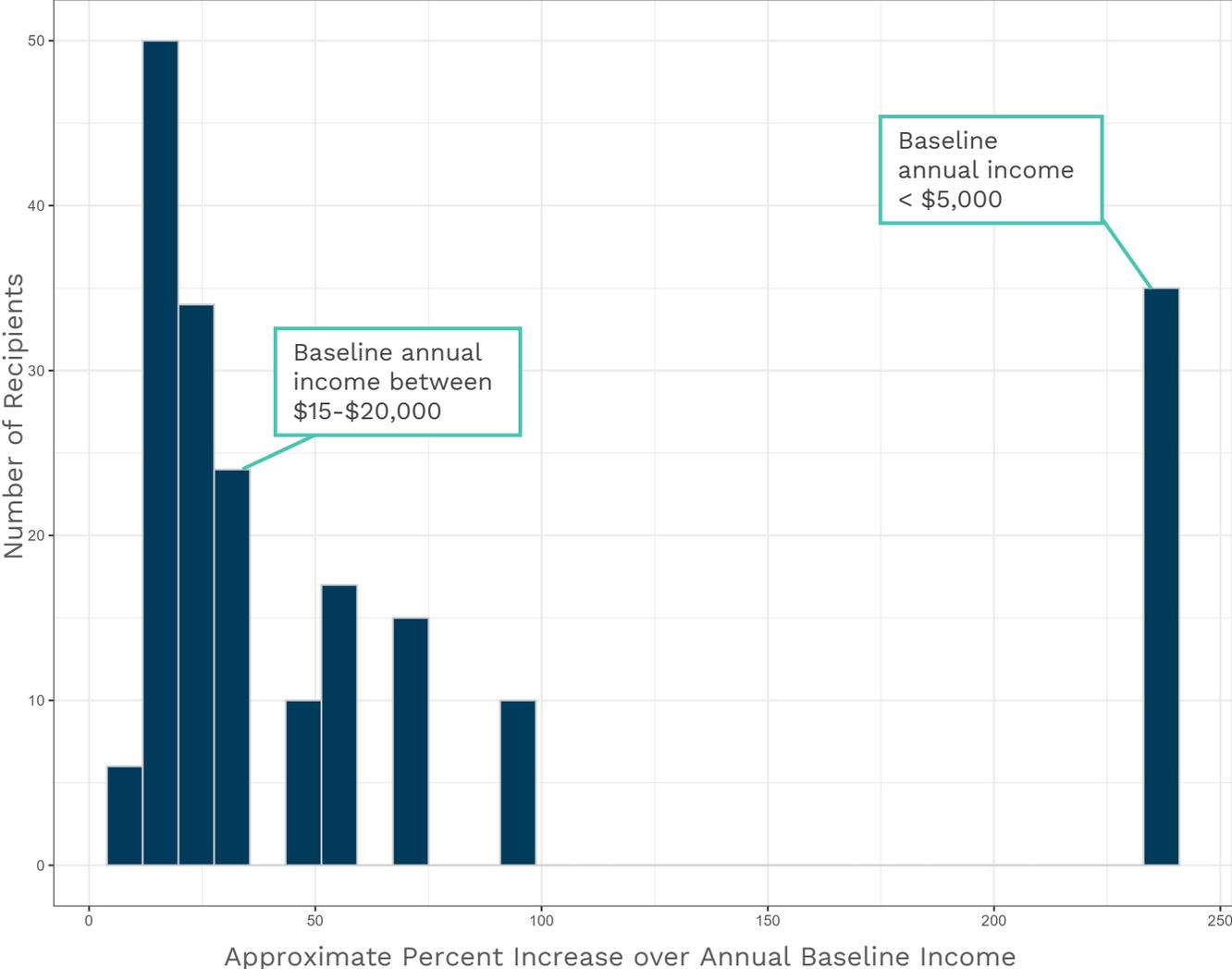
Distribution of Respondents Across Strata and Stratum Treatment Probabilities

Strata	Kids	ZIP	Poverty	Respondents (Treatment Probability)		
				Baseline	6 months	12 months
1	No children	ZIP group 0	Not experiencing	49 (39%)	31 (48%)	25 (60%)
2	No children	ZIP group 0	Experiencing	44 (36%)	24 (42%)	22 (36%)
3	Children	ZIP group 0	Not experiencing	71 (38%)	52 (44%)	45 (49%)
4	Children	ZIP group 0	Experiencing	112 (42%)	75 (52%)	64 (53%)
5	No children	ZIP group 1	Not experiencing	69 (45%)	45 (58%)	44 (55%)
6	No children	ZIP group 1	Experiencing	61 (39%)	33 (61%)	27 (67%)
7	Children	ZIP group 1	Not experiencing	38 (39%)	23 (52%)	21 (52%)
8	Children	ZIP group 1	Experiencing	85 (39%)	41 (56%)	40 (58%)



FIGURE P4.

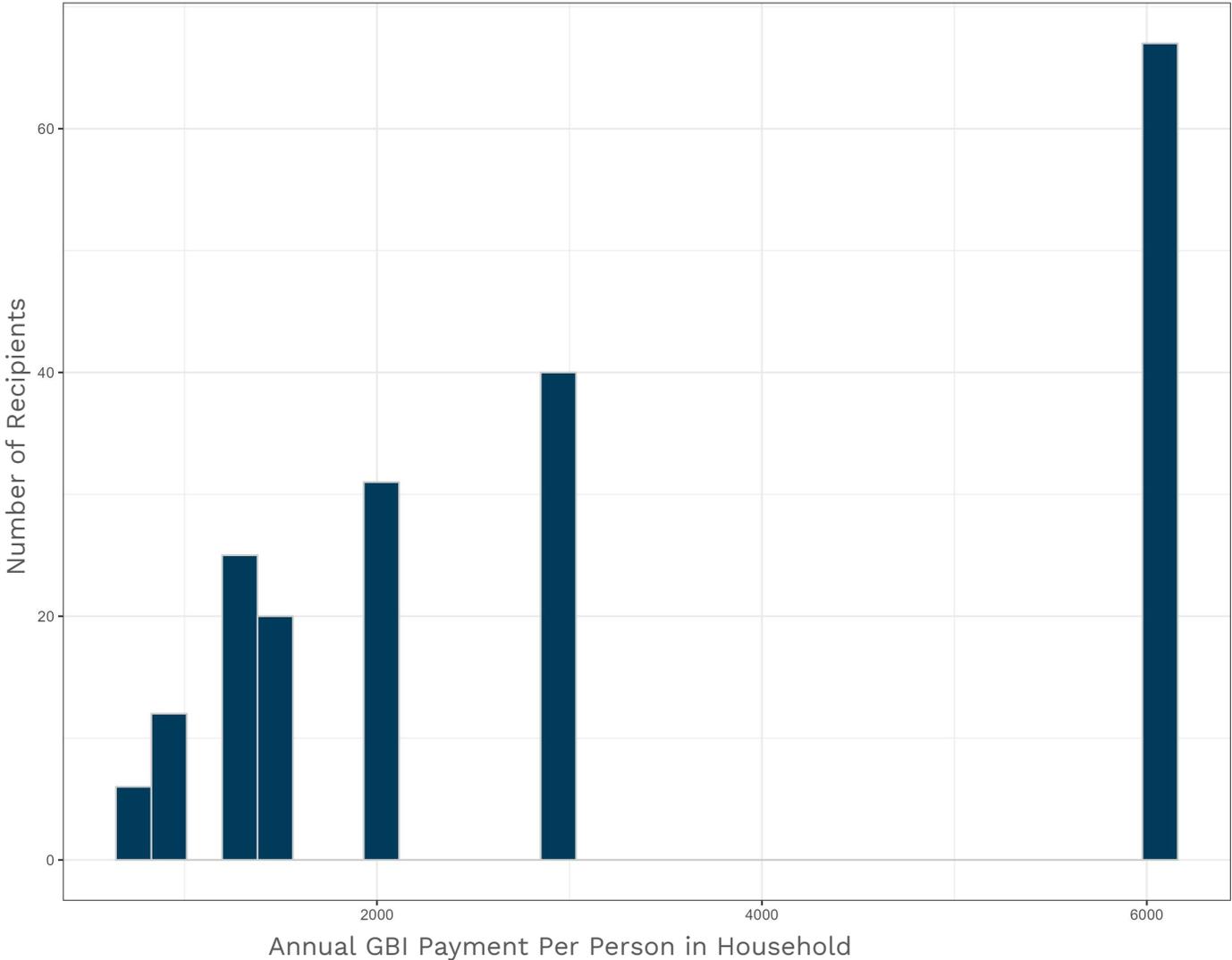
Distribution of the Percent Increase Over Annual Baseline Income from Annual GBI Payments in the Treatment Group



For the median participant, GBI payments represented a 34 percent increase over annual baseline income.

FIGURE P5.

Distribution of Per-Person GBI Payment in the Treatment Group



On average, participants in the treatment group received \$3,291 per person in their household in annual GBI payments.

TABLE P6.

Experimental Results for Formal Outcomes

Multiple hypothesis test adjustments to p-values use family-wise error rate approach; see [pre-analysis plan](#) for details

Outcome	Wave	Control Mean (N)	Treatment Mean (N)	Simple Difference in Means	Model 1 (multiple hypothesis test-adjusted p-value)	Model 2 (multiple hypothesis test-adjusted p-value)	Model 3 (multiple hypothesis test-adjusted p-value)
Labor Supply	mo06	-0.244 (125)	-0.193 (166)	0.0971	0.0175 (0.857)	0.0243 (0.743)	0.0201 (0.791)
	mo12	-0.292 (122)	-0.113 (153)	0.237	0.174 (0.128)	0.154 (0.0882)	0.147 (0.106)
Housing Stability	mo06	-0.0551 (126)	0.0349 (168)	0.0985	0.146 (0.212)	0.126 (0.210)	0.184 (0.0172)
	mo12	-0.0297 (124)	0.0858 (154)	0.124	0.130 (0.186)	0.147 (0.0783)	0.204 (0.00978)
Financial Security	mo06	-0.0333 (126)	0.0952 (167)	0.135	0.151 (0.0131)	0.144 (0.0128)	0.117 (0.0799)
	mo12	-0.0292 (124)	0.115 (154)	0.163	0.166 (0.0272)	0.132 (0.0189)	0.107 (0.135)
Well-Being	mo06	-0.0432 (126)	0.121 (167)	0.162	0.225 (0.170)	0.156 (0.183)	0.180 (0.106)
	mo12	-0.0531 (124)	0.206 (155)	0.297	0.336 (0.0359)	0.297 (0.000651)	0.321 (0.000796)
Food Security	mo06	0.357 (126)	0.500 (168)	0.141	0.163 (0.0494)	0.163 (0.0136)	0.196 (0.00825)
	mo12	0.323 (124)	0.484 (155)	0.151	0.138 (0.0951)	0.159 (0.0125)	0.191 (0.0123)
Psychological Wellness (Kessler 10)	mo06	23.8 (126)	22.1 (168)	-1.78	-2.35 (0.161)	-1.25 (0.275)	-1.27 (0.359)
	mo12	24.6 (124)	21.0 (155)	-3.82	-3.81 (0.0341)	-3.77 (0.000325)	-3.82 (0.00591)



TABLE P7. (SLIDE 1 OF 2)

Experimental Results for Exploratory Outcomes

Multiple hypothesis test adjustments to p-values use Benjamini, Krieger, and Yekutieli false discovery rate approach; see [pre-analysis plan](#) for details

Exploratory Outcome	Wave	Control Mean (N)	Treatment Mean (N)	Simple Difference in Means	Model 1 (multiple hypothesis test-adjusted p-value)	Model 2 (multiple hypothesis test-adjusted p-value)	Model 3 (multiple hypothesis test-adjusted p-value)
Housing Quantity	mo06	0.0346 (126)	-0.00953 (168)	-0.0194	-0.00234 (1.00)	-0.0311 (1.00)	-0.0168 (1.00)
	mo12	-0.0288 (124)	0.0189 (153)	0.0688	0.0218 (0.720)	0.0448 (0.168)	0.0271 (0.680)
Use of Low-Cost Credit	mo06	-0.0937 (126)	-0.0196 (167)	0.0648	0.0567 (0.743)	0.0251 (1.00)	0.00911 (1.00)
	mo12	-0.0642 (124)	0.0791 (154)	0.139	0.164 (0.0573)	0.127 (0.118)	0.102 (0.362)
Healthcare Utilization	mo06	0.0690 (126)	0.0685 (167)	0.0114	0.00757 (1.00)	0.0419 (1.00)	0.0175 (1.00)
	mo12	0.0648 (123)	-0.0149 (154)	-0.0841	-0.0736 (0.543)	-0.0726 (0.168)	-0.0700 (0.536)
Healthcare Access (Financial)	mo06	-0.0862 (126)	0.0918 (166)	0.153	0.177 (0.198)	0.214 (0.0382)	0.259 (0.0407)
	mo12	-0.0388 (123)	0.139 (153)	0.173	0.188 (0.0573)	0.219 (0.0562)	0.301 (0.00806)
Current Employment	mo06	0.661 (124)	0.665 (161)	0.0313	-0.00794 (1.00)	0.0286 (1.00)	0.0332 (1.00)
	mo12	0.658 (120)	0.682 (151)	0.0477	0.0183 (0.720)	0.0561 (0.151)	0.0563 (0.362)
Has Additional Job(s)	mo06	0.150 (80)	0.163 (104)	0.0625	NA (NA)	NA (NA)	0.102 (0.426)
	mo12	0.0897 (78)	0.172 (99)	0.123	0.994 (0.00)	NA (NA)	0.170 (0.0486)

TABLE P7. (SLIDE 2 OF 2)

Experimental Results for Exploratory Outcomes

Multiple hypothesis test adjustments to p-values use Benjamini, Krieger, and Yekutieli false discovery rate approach; see [pre-analysis plan](#) for details

Exploratory Outcome	Wave	Control Mean (N)	Treatment Mean (N)	Simple Difference in Means	Model 1 (multiple hypothesis test-adjusted p-value)	Model 2 (multiple hypothesis test-adjusted p-value)	Model 3 (multiple hypothesis test-adjusted p-value)
Would Pay a \$400 Expense with Cash	mo06	0.0678 (118)	0.133 (150)	0.0748	0.0779 (0.198)	NA (NA)	0.0685 (0.316)
	mo12	0.0957 (115)	0.155 (142)	0.0561	0.0593 (0.466)	NA (NA)	0.0299 (0.536)
Hourly Wage	mo06	42.3 (72)	44.6 (90)	-19.5	NA (NA)	-32.2 (1.00)	-11.0 (1.00)
	mo12	31.1 (75)	57.3 (84)	37.0	8.38 (0.720)	42.3 (0.118)	19.6 (0.536)
Providing Support to Others	mo06	0.144 (125)	0.165 (164)	0.0305	0.0191 (1.00)	NA (NA)	0.0205 (1.00)
	mo12	0.132 (121)	0.154 (149)	0.0464	0.0204 (0.720)	NA (NA)	0.00435 (1.00)
Housing Stability Screening Item	mo06	0.686 (121)	0.759 (162)	0.0799	0.129 (0.198)	0.146 (0.0382)	0.180 (0.0407)
	mo12	0.767 (120)	0.795 (146)	0.0366	0.0374 (0.589)	0.0956 (0.118)	0.146 (0.107)
Access to Reliable Transportation	mo06	0.637 (124)	0.707 (164)	0.0950	0.127 (0.198)	NA (NA)	0.0766 (0.426)
	mo12	0.645 (121)	0.740 (154)	0.104	0.0498 (0.543)	NA (NA)	0.0857 (0.362)
School and/or Job Training Attendance	mo06	0.195 (123)	0.236 (165)	0.0497	0.0406 (0.743)	NA (NA)	-0.00885 (1.00)
	mo12	0.125 (120)	0.222 (153)	0.100	0.115 (0.0573)	NA (NA)	0.0157 (0.680)



FIGURES P6 AND P7, TABLE P8

Figure P6. Estimated Power Curves for an Index Outcome

Figure P7. Estimated Power Curves for a Binary Outcome

Table P8. Experimental Results from Stockton SEED Demonstration

Please see pre-analysis plan: <https://www.minneapolisfed.org/research/community-development-working-papers/evaluation-plan-minneapolis-guaranteed-basic-income-pilot>



[MINNEAPOLISFED.ORG/TOPIC/LABOR-MARKET-POLICIES](https://minneapolisfed.org/topic/labor-market-policies)



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