

Leonard M. Lopoo, Colleen Heflin, and Joseph Boskovski (2020, Journal of Behavioral Public Administration):

Testing behavioral interventions designed to improve on-time SNAP recertification

**Online Appendix**

**Table A1: Descriptive Statistics**

Variable	Full Sample	Treatment 1: Hennepin Autodialer	Treatment 2: Texting	Treatment 3: Texting and Hennepin Autodialer	Control: No message
Female	0.594 (0.491)	0.598 (0.490)	0.586 (0.493)	0.595 (0.491)	0.594 (0.491)
African American	0.497 (0.500)	0.500 (0.500)	0.486 (0.500)	0.503 (0.500)	0.495 (0.500)
White	0.324 (0.468)	0.322 (0.467)	0.340 (0.474)	0.315 (0.464)	0.325 (0.468)
Other race	0.179 (0.383)	0.178 (0.383)	0.174 (0.379)	0.182 (0.386)	0.180 (0.384)
Age	51.25 (16.44)	51.30 (16.48)	51.39 (16.46)	50.97 (16.42)	51.35 (16.41)
Family size	1.830 (1.363)	1.833 (1.371)	1.806 (1.344)	1.850 (1.371)	1.826 (1.359)
English spoken at home	0.780 (0.414)	0.779 (0.414)	0.782 (0.413)	0.783 (0.413)	0.779 (0.415)
U.S. citizen	0.926 (0.262)	0.922 (0.269)	0.937*** (0.243)	0.926 (0.261)	0.923 (0.266)
Education: less than high school	0.324 (0.468)	0.328 (0.469)	0.320 (0.467)	0.323 (0.468)	0.322 (0.467)
Education: high school	0.503 (0.500)	0.500 (0.500)	0.508 (0.500)	0.504 (0.500)	0.502 (0.500)
Education: some college	0.118 (0.322)	0.117 (0.321)	0.114 (0.318)	0.118 (0.323)	0.120 (0.325)
Education: college graduate (plus)	0.056 (0.229)	0.055 (0.229)	0.057 (0.233)	0.055 (0.228)	0.055 (0.228)
Married	0.088 (0.284)	0.087 (0.281)	0.079** (0.270)	0.092 (0.288)	0.091 (0.288)
Married, living apart	0.133 (0.339)	0.135 (0.342)	0.130 (0.336)	0.133 (0.339)	0.132 (0.338)

Never	0.554	0.554	0.554	0.555	0.552
married	(0.497)	(0.497)	(0.497)	(0.497)	(0.497)
Divorced	0.161	0.160	0.164	0.161	0.160
	(0.367)	(0.366)	(0.370)	(0.367)	(0.367)
Other	0.065	0.064	0.073	0.059	0.065
married	(0.246)	(0.245)	(0.260)	(0.236)	(0.246)
N	23,756	7,316	3,756	5,357	7,318

Source: Administrative SNAP data from Hennepin County, MN

Notes: \*  $p < 0.10$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ ; We ran balancing tests (a t-test) comparing the mean value in each treatment arm to mean value for the control group. Of the 54 different tests, only two were statistically significant suggesting that we effectively randomized the treatment and control groups.

**Table A2: RCT Comparing Hennepin County Autodialer to Behaviorally-Informed Autodialer**

	Full Sample	Education				Age	
		< HS	HS	Some College Education	College Plus	Under 60	60 and older
Behaviorally-Informed Autodialer	0.012 (0.009)	0.021 (0.016)	0.016 (0.013)	-0.025 (0.027)	0.007 (0.042)	0.015 (0.012)	0.008 (0.015)
Female	0.020* (0.010)	0.000 (0.019)	0.042** (0.014)	0.023 (0.031)	-0.036 (0.044)	0.023* (0.014)	0.024 (0.016)
African American	-0.025** (0.011)	-0.066*** (0.024)	-0.009 (0.015)	-0.001 (0.030)	-0.056*** (0.053)	-0.017 (0.014)	-0.032* (0.018)
Other race	-0.033 (0.015)	-0.075*** (0.028)	-0.018 (0.021)	0.065 (0.050)	-0.155*** (0.075)	-0.042** (0.019)	-0.009 (0.025)
Age	0.020*** (0.002)	0.015*** (0.003)	0.024*** (0.003)	0.028*** (0.007)	0.008 (0.009)	0.018*** (0.005)	-0.005 (0.014)
Age squared	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000 (0.000)	-0.000* (0.000)	0.000 (0.000)
Family size	-0.002 (0.005)	0.001 (0.008)	-0.001 (0.007)	-0.015 (0.014)	-0.027 (0.025)	-0.004 (0.005)	0.016 (0.015)
English spoken at home	-0.069*** (0.014)	-0.060*** (0.021)	-0.085*** (0.022)	-0.073 (0.071)	-0.177* (0.093)	-0.082*** (0.020)	- 0.056*** (0.021)
U.S. citizen	0.018 (0.019)	0.021 (0.026)	0.043 (0.032)	-0.059 (0.077)	-0.075 (0.121)	0.006 (0.023)	0.102** (0.042)
Education: less than high school	0.021 (0.023)						
Education: high school	0.017 (0.022)						
Education: some college	-0.020 (0.025)						
Married	0.049 (0.027)	0.052 (0.040)	0.059 (0.041)	-0.081 (0.099)	0.031 (0.134)	0.043 (0.049)	0.034 (0.040)
Married, living apart	0.001 (0.023)	-0.012 (0.034)	0.018 (0.035)	-0.006 (0.090)	-0.088 (0.115)	-0.007 (0.047)	0.005 (0.027)
Never married	0.023 (0.022)	-0.002 (0.033)	0.050 (0.033)	-0.021 (0.082)	-0.106 (0.104)	0.021 (0.045)	0.000 (0.026)
Divorced	0.010 (0.023)	-0.007 (0.037)	0.028 (0.034)	-0.036 (0.083)	-0.127 (0.104)	-0.014 (0.047)	0.013 (0.026)
Mean SNAP Approval On-Time Rate	0.625	0.647	0.620	0.583	0.643	0.571	0.741
R <sup>2</sup>	0.058	0.043	0.074	0.097	0.058	0.051	0.012

Sample Size	10,357	3,345	5,251	1,235	526	7,037	3,320
-------------	--------	-------	-------	-------	-----	-------	-------

Source: Administrative SNAP data from Hennepin County, MN

Notes: \*  $p < 0.10$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ ; Standard errors in parentheses; Controls include month of recertification.

**Table A3**  
**Three Arm RCT, June 2019 to February 2020**

Treatment	Full Sample	Education				Age	
		< HS	HS	Some College Education	College Plus	Under 60	60 and older
Hennepin County Autodialer	0.012 (0.008)	0.022 (0.014)	0.007 (0.012)	0.013 (0.023)	-0.000 (0.034)	0.011 (0.010)	0.014 (0.013)
Text	0.030*** <sup>a</sup> (0.010)	0.018 (0.017)	0.036*** <sup>a</sup> (0.014)	0.081*** <sup>b</sup> (0.029)	-0.056 (0.044)	0.038*** <sup>b</sup> (0.013)	0.010 (0.017)
Text + Autodialer	0.030*** <sup>b</sup> (0.010)	0.046*** (0.017)	0.021 (0.014)	0.036 (0.028)	0.028 (0.040)	0.037*** <sup>b</sup> (0.011)	0.015 (0.016)
Female	0.022*** (0.007)	0.041*** (0.013)	0.028*** (0.010)	0.005 (0.020)	-0.044 (0.028)	0.018** (0.009)	0.029** (0.011)
African American	-0.028*** (0.008)	-0.050*** (0.016)	-0.024** (0.010)	0.013 (0.020)	-0.057* (0.034)	-0.021** (0.009)	- 0.043*** (0.013)
Other race	-0.026** (0.010)	-0.053** (0.018)	-0.027* (0.014)	0.029 (0.031)	0.041 (0.043)	-0.035*** (0.012)	0.005 (0.017)
Age	0.018*** (0.001)	0.016*** (0.002)	0.019*** (0.002)	0.015*** (0.004)	0.026*** (0.005)	0.013*** (0.003)	0.015 (0.010)
Age squared	-0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000* (0.000)	- 0.000*** (0.000)	-0.000 (0.000)	-0.000 (0.000)
Family size	0.000 (0.003)	0.001 (0.005)	-0.000 (0.004)	-0.013 (0.009)	0.025 (0.016)	0.002 (0.004)	-0.021** (0.010)
English spoken at home	-0.069*** (0.010)	-0.060*** (0.014)	-0.081*** (0.015)	-0.086* (0.048)	-0.097* (0.056)	-0.099*** (0.013)	-0.034** (0.014)
U.S. citizen	-0.005 (0.013)	-0.020 (0.018)	0.016 (0.022)	0.046 (0.057)	0.057 (0.077)	-0.005 (0.016)	0.039 (0.026)
Education: less than high school	0.052*** (0.015)					0.077*** (0.019)	0.016 (0.023)
Education: high school	0.044*** (0.014)					0.061*** (0.018)	0.020 (0.021)
Education: some college	0.007 (0.016)					0.020 (0.020)	-0.004 (0.025)
Married	0.059*** (0.018)	0.039 (0.027)	0.064** (0.028)	0.082 (0.066)	0.043 (0.084)	0.059* (0.031)	0.047* (0.027)
Married, living apart	0.034** (0.015)	0.048** (0.022)	0.038 (0.024)	-0.000 (0.060)	-0.076 (0.075)	0.034 (0.030)	0.036* (0.016)

Never married	0.047*** (0.015)	0.034 (0.022)	0.049** (0.022)	0.029 (0.055)	0.101 (0.066)	0.044 (0.028)	0.050*** (0.018)
Divorced	0.031** (0.015)	0.006 (0.025)	0.032 (0.023)	0.028 (0.055)	0.065 (0.067)	0.031 (0.030)	0.019 (0.018)
Mean SNAP Approval On-Time Rate	0.585	0.615	0.576	0.546	0.566	0.529	0.704
R <sup>2</sup>	0.064	0.055	0.067	0.069	0.104	0.050	0.013
Sample Size	23,756	7,691	11,945	2,798	1,322	16,176	7,580

Source: Administrative SNAP data from Hennepin County, MN

Notes: \*  $p < 0.10$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ ; <sup>a</sup> represents a statistically significant difference ( $\alpha = 0.10$ ) between the reported coefficient and the coefficient for the Hennepin County autodialer; <sup>b</sup> represents a statistically significant difference ( $\alpha = 0.05$ ) between the reported coefficient and the coefficient for the Hennepin County autodialer; Standard errors in parentheses; Controls include month of recertification.