Technical Appendix

Project name: Increasing participation in Ticket to Work through redesigned mailers
Date finalized: 3/20/2025

Appendix A – Logistical tabulations

Included in primary analyses	1,056,415
Treatment administration exclusions	2,954
At least one missing covariate value: Cohort 1	~8,005 (2.76%)
At least one missing covariate value: Cohort 2	~25,382 (7.73%)
At least one missing covariate value: Cohort 3	~55,500 (13.7%)
Passed away in the first month, pre-notice	216

Cohort #1 (n = 290,029)		
	Cardstock Ticket	Paper Ticket
Revised Notice	*n = 72,196*	*n = 72,711*
Original Notice	*n = 72,581*	*n = 72,541*
Cohort #2 (n = 328,360)		
	Cardstock Ticket	Paper Ticket
Revised Notice	*n = 82,257*	*n = 81,802*
Original Notice	*n = 81,934*	*n = 82,367*
Cohort #3 (n = 405,107)		
Revised with Cardstock	*n = 173,690*	
No Mailing	*n =231,417*	

Appendix B – Evidence on intervention administration

Omnibus F-test Summary

Test	**Sample size**	**Joint F-statistic**	**p-value**
RCT #1: Cardstock Ticket	282026	0.696	.842
RCT #1: Revised Notice	282026	0.886	.61
RCT #2: Cardstock Ticket	302981	1.014	.441
RCT #2: Revised Notice	302981	0.524	.963
RCT #3: Treatment	**349604**	**1954.4**	**<0.001**

RCT #1, cardstock Ticket, SMDs and VRs

	Control Mean	Treatment Mean	SMD	VR
Initial claim (not yet CDR; 0/1)	.1515	.152	.0015	.9986
Disabled child (0/1)	.0993	.0991	.0005	1.0007
Parent of disabled child (0/1)	.0334	.0333	.001	1.0026
Worker supporting another (0/1)	.023	.0226	.0025	1.008
SSI only (0/1)	.1795	.1788	.0018	1.0015
SSDI only (0/1)	.5528	.5555	.0055	1.0006
Age (0/1)	40.2614	40.2645	-.0003	.9991
Claim to award time (years)	1.1657	1.162	.0022	1.0069
Current adjudication (0/1)	.0286	.0292	.0036	.99
Congenital disability (0/1)	.0071	.0073	.0063	.9911
Mental disability (0/1)	.5928	.5897	.0015	.9988
Non-infectious disease (0/1)	.592	.594	.0001	1.0008
Injury (0/1)	.0538	.0542	.0018	.9965
Infectious disease (0/1)	.0131	.0129	.0016	1.0068
Other disability (0/1)	.0058	.0058	.0041	1.0008
County covid-19 deaths (per 1000)	.0588	.0585	.0049	1.0057
County unemployment rate	5.6545	5.6372	.0077	1.0053
County population (2019, log)	12.5966	12.5977	-.0007	.9964
Has a representative payee (0/1)	.1875	.187	.0013	1.0011
Female (0/1)	.4861	.4858	.0006	1
Years since onset (most recent)	2.7788	2.7758	.0008	1.0067

RCT #1, revised notice, SMDs and VRs

	Control Mean	Treatment Mean	SMD	VR
Initial claim (not yet CDR; 0/1)	.1506	.1529	.0064	.9938
Disabled child (0/1)	.099	.0994	.0012	.9984
Parent of disabled child (0/1)	.0333	.0334	.001	.9975
Worker supporting another (0/1)	.0227	.0228	.0008	.9974
SSI only (0/1)	.1776	.1806	.0079	.9934
SSDI only (0/1)	.5554	.5529	.005	.9995
Age (0/1)	40.2614	40.2646	-.0003	.9985
Claim to award time (years)	1.1642	1.1635	.0004	.9995
Current adjudication (0/1)	.0283	.0294	.0068	.981
Congenital disability (0/1)	.0073	.0071	.0004	1.0147
Mental disability (0/1)	.5911	.5913	.0025	1.0001
Non-infectious disease (0/1)	.594	.592	.0033	.9992
Injury (0/1)	.0536	.0544	.0038	.9926
Infectious disease (0/1)	.0131	.013	.0011	1.0046
Other disability (0/1)	.0057	.0059	.0041	.979
County covid-19 deaths (per 1000)	.0586	.0587	-.001	1.0127
County unemployment rate	5.6428	5.6489	-.0027	.9972
County population (2019, log)	12.5984	12.5958	.0016	1.0001
Has a representative payee (0/1)	.1875	.1871	.001	1.0008
Female (0/1)	.4864	.4855	.0017	1
Years since onset (most recent)	2.7706	2.784	-.0034	.9944

RCT #2, cardstock Ticket, SMDs and VRs

	Control Mean	Treatment Mean	SMD	VR
Initial claim (not yet CDR; 0/1)	.1759	.1767	.0021	.9982
Disabled child (0/1)	.0806	.081	.0015	.9977
Parent of disabled child (0/1)	.0363	.0372	.0047	.9886
Worker supporting another (0/1)	.0249	.0255	.0043	.9871
SSI only (0/1)	.1869	.1871	.0003	.9997
SSDI only (0/1)	.6245	.6253	.0016	1.0004
Age (0/1)	41.338	41.3262	.0011	1.0016
Claim to award time (years)	1.1904	1.1994	-.0057	.9867
Current adjudication (0/1)	.0297	.0294	.0018	1.005
Congenital disability (0/1)	.0072	.0074	.0058	.987
Mental disability (0/1)	.5842	.5871	.0023	1.001
Non-infectious disease (0/1)	.599	.5977	.0016	.9995
Injury (0/1)	.0527	.052	.0032	1.0064
Infectious disease (0/1)	.0139	.0134	.0045	1.0191
Other disability (0/1)	.0072	.007	.0026	1.0097
County covid-19 deaths (per 1000)	.058	.0579	.0021	.9955
County unemployment rate	5.7197	5.72	-.0002	.9987
County population (2019, log)	12.5914	12.5816	.0062	1.0052
Has a representative payee (0/1)	.1756	.1768	.0032	.9973
Female (0/1)	.4952	.4957	.0011	1
Years since onset (most recent)	3.5802	3.5714	.0025	1.0038

RCT #2, revised notice, SMDs and VRs

	Control Mean	Treatment Mean	SMD	VR
Initial claim (not yet CDR; 0/1)	.1764	.1762	.0006	1.0005
Disabled child (0/1)	.0811	.0805	.0019	1.003
Parent of disabled child (0/1)	.0369	.0366	.0016	1.0038
Worker supporting another (0/1)	.0251	.0253	.0011	.9968
SSI only (0/1)	.1864	.1876	.0032	.9974
SSDI only (0/1)	.6255	.6243	.0025	.9994
Age (0/1)	41.3473	41.3169	.0027	.9997
Claim to award time (years)	1.1977	1.1922	.0035	1.0119
Current adjudication (0/1)	.0298	.0293	.0028	1.0078
Congenital disability (0/1)	.0074	.0072	.0012	1.0099
Mental disability (0/1)	.5854	.5859	.0017	1.0002
Non-infectious disease (0/1)	.5994	.5974	.0025	.9992
Injury (0/1)	.0525	.0522	.0012	1.0024
Infectious disease (0/1)	.0138	.0136	.002	1.0085
Other disability (0/1)	.0072	.007	.004	1.0148
County covid-19 deaths (per 1000)	.058	.0579	.0004	1.0225
County unemployment rate	5.7195	5.7202	-.0003	.9907
County population (2019, log)	12.5855	12.5876	-.0013	1.0023
Has a representative payee (0/1)	.1768	.1756	.0031	1.0026
Female (0/1)	.4948	.4961	.0025	1
Years since onset (most recent)	3.5829	3.5686	.004	1.0071

RCT #3, SMDs and VRs

	Control Mean	Treatment Mean	SMD	VR
Initial claim (not yet CDR; 0/1)	**.1634**	**.2754**	**.273**	**.8278**
Disabled child (0/1)	.0837	.0907	.025	.964
Parent of disabled child (0/1)	**.0096**	**.039**	**.1919**	**.5036**
Worker supporting another (0/1)	**.0005**	**.0246**	**.2186**	**.138**
SSI only (0/1)	.2594	.2079	.1218	1.08
SSDI only (0/1)	.6334	.6892	.1183	1.0412
Age (0/1)	41.3891	41.6666	-.0236	1.0834
Claim to award time (years)	1.3752	1.3451	.0154	1.2267
Current adjudication (0/1)	.0417	.0309	.0579	1.1556
Congenital disability (0/1)	.0149	.0077	.0539	1.3878
Mental disability (0/1)	.5726	.5991	.0684	1.0094
Non-infectious disease (0/1)	.5936	.5846	.0209	.9967
Injury (0/1)	.0472	.0503	.0142	.9708
Infectious disease (0/1)	.0124	.0129	.0039	.9832
Other disability (0/1)	.0069	.0087	.0184	.8893
County covid-19 deaths (per 1000)	.0578	.0586	-.0104	.9861
County unemployment rate	5.6514	5.6637	-.0054	1.0021
County population (2019, log)	12.5793	12.5647	.0092	1.0041
Has a representative payee (0/1)	.2319	.1954	.0891	1.0643
Female (0/1)	.4849	.4973	.0249	.9996
Years since onset (most recent)	5.0054	4.844	.0401	1.1245

Appendix C - Exploratory analysis results: Factorial interaction

RCT #1 factorial interaction for Ticket assignments

	(1) Ticket (0/1)	(2) Ticket (0/1)	(3) Ticket (0/1)	(4) Ticket (0/1)
Revised notice	0.0008	0.0007	0.0008	0.0008
	(0.2132)	(0.2480)	(0.2318)	(0.2245)
Card ticket	0.0001	0.0001	0.0001	0.0001
	(0.8365)	(0.8928)	(0.8881)	(0.8640)
Revised x Card	-0.0006	-0.0005	-0.0006	-0.0007
	(0.5219)	(0.5626)	(0.5013)	(0.4743)
Intercept	0.0145***	0.0146***	0.0130**	0.0146***
	(<0.001)	(<0.001)	(0.0093)	(<0.001)
N	290029	282026	282026	282026
Complete	No	Yes	Yes	Yes
Covariates	No	No	Yes	Yes
FEs: LSDV	No	No	Yes	No
FEs: Lin	No	No	No	Yes

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Model 1: Unadjusted, all cases
Model 2: Complete case analysis (drop cases with missingness on any covariate)
Model 3: Lin (2013) covariate adjustment, and LSDV FEs (State/Month)
Model 4: Lin (2013) adjustment for covariates and FEs (State/Month)

RCT #1 factorial interaction for Helpline calls

	(1) Call (0/1)	(2) Call (0/1)	(3) Call (0/1)	(4) Call (0/1)
Revised notice	0.0025***	0.0024***	0.0023**	0.0024**
	(0.0007)	(0.0009)	(0.0013)	(0.0013)
Card ticket	-0.0001	-0.0003	-0.0003	-0.0003
	(0.9106)	(0.7173)	(0.6347)	(0.6437)
Revised x Card	0.0006	0.0008	0.0009	0.0009
	(0.5419)	(0.4545)	(0.3939)	(0.3957)
Intercept	0.0183***	0.0182***	0.0152**	0.0183***
	(<0.001)	(<0.001)	(0.0065)	(<0.001)
N	290029	282026	282026	282026
Complete	No	Yes	Yes	Yes
Covariates	No	No	Yes	Yes
FEs: LSDV	No	No	Yes	No
FEs: Lin	No	No	No	Yes

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Model 1: Unadjusted, all cases
Model 2: Complete case analysis (drop cases with missingness on any covariate)
Model 3: Lin (2013) covariate adjustment, and LSDV FEs (State/Month)
Model 4: Lin (2013) adjustment for covariates and FEs (State/Month)

RCT #2 factorial interaction for Ticket assignments

	(1) Ticket (0/1)	(2) Ticket (0/1)	(3) Ticket (0/1)	(4) Ticket (0/1)
Revised notice	-0.0001	-0.0003	-0.0003	-0.0003
	(0.8432)	(0.5710)	(0.6026)	(0.6096)
Card ticket	0.0001	0.0001	0.0001	0.0001
	(0.9039)	(0.9140)	(0.8726)	(0.9040)
Revised x Card	0.0008	0.0010	0.0010	0.0009
	(0.2927)	(0.2503)	(0.2617)	(0.2565)
Intercept	0.0126***	0.0133***	0.0197**	0.0133***
	(<0.001)	(<0.001)	(0.0016)	(<0.001)
N	328360	302981	302981	302981
Complete	No	Yes	Yes	Yes
Covariates	No	No	Yes	Yes
FEs: LSDV	No	No	Yes	No
FEs: Lin	No	No	No	Yes

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Model 1: Unadjusted, all cases
Model 2: Complete case analysis (drop cases with missingness on any covariate)
Model 3: Lin (2013) covariate adjustment, and LSDV FEs (State/Month)
Model 4: Lin (2013) adjustment for covariates and FEs (State/Month)

RCT #2 factorial interaction for Helpline calls

	(1) Call (0/1)	(2) Call (0/1)	(3) Call (0/1)	(4) Call (0/1)
Revised notice	0.0034***	0.0037***	0.0036***	0.0036***
	(<0.001)	(<0.001)	(<0.001)	(<0.001)
Card ticket	-0.0006	-0.0004	-0.0003	-0.0004
	(0.2784)	(0.5173)	(0.6721)	(0.5191)
Revised x Card	0.0003	-0.0000	-0.0001	-0.0000
	(0.7014)	(0.9789)	(0.9109)	(0.9904)
Intercept	0.0140***	0.0137***	0.0178**	0.0137***
	(<0.001)	(<0.001)	(<0.001)	(<0.001)
N	290029	282026	282026	282026
Complete	No	Yes	Yes	Yes
Covariates	No	No	Yes	Yes
FEs: LSDV	No	No	Yes	No
FEs: Lin	No	No	No	Yes

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Model 1: Unadjusted, all cases
Model 2: Complete case analysis (drop cases with missingness on any covariate)
Model 3: Lin (2013) covariate adjustment, and LSDV FEs (State/Month)
Model 4: Lin (2013) adjustment for covariates and FEs (State/Month)

Appendix D - Exploratory analysis results: Multinomial logit

RCT #1 change in predicted probabilities, based on a multinomial logit (no covariate adjustment)

	(1) Pr(Neither)	(2) Pr(Both)	(3) Pr(Assign only)	(4) Pr(Call only)
Revised notice	-0.0030***	0.0003*	0.0002	0.0025***
	(<0.001)	(0.0863)	(0.6432)	(<0.001)
Card ticket	<0.001	0.0001	-0.0003	0.0001
	(0.9583)	(0.5407)	(0.5118)	(0.7987)
N	290029	290029	290029	290029

*p<0.1, **p<0.05, ***p<0.001. P-values are also in parentheses.
Change in Pr(Y=?) due to a given treatment, on a proportion scale. E.g., 0.002 = +0.2 percentage points.

RCT #1 change in predicted probabilities, based on a multinomial logit (with additive covariate and FE adjustment)

	(1) Pr(Neither)	(2) Pr(Both)	(3) Pr(Assign only)	(4) Pr(Call only)
Revised notice	-0.0029***	0.0004*	0.0001	0.0025***
	(<0.001)	(0.0538)	(0.7692)	(<0.001)
Card ticket	0.0002	0.0001	-0.0003	0.0000
	(0.7669)	(0.6219)	(0.4478)	(0.9521)
N	282026	282026	282026	282026

*p<0.1, **p<0.05, ***p<0.001. P-values are also in parentheses.
Change in Pr(Y=?) due to a given treatment, on a proportion scale. E.g., 0.002 = +0.2 percentage points.

RCT #2 change in predicted probabilities, based on a multinomial logit (no covariate adjustment)

	(1) Pr(Neither)	(2) Pr(Both)	(3) Pr(Assign only)	(4) Pr(Call only)
Revised notice	-0.0035***	0.0004**	-0.0001	0.0032***
	(<0.001)	(0.0272)	(0.8829)	(<0.001)
Card ticket	-0.0001	-0.0000	0.0005	-0.0004
	(0.9142)	(0.8149)	(0.1491)	(0.2960)
N	328360	328360	328360	328360

*p<0.1, **p<0.05, ***p<0.001. P-values are also in parentheses.
Change in Pr(Y=?) due to a given treatment, on a proportion scale. E.g., 0.002 = +0.2 percentage points.

RCT #2 change in predicted probabilities, based on a multinomial logit (with additive covariate and FE adjustment)

	(1) Pr(Neither)	(2) Pr(Both)	(3) Pr(Assign only)	(4) Pr(Call only)
Revised notice	-0.0034***	0.0003*	-0.0002	0.0033***
	(<0.001)	(0.0541)	(0.6202)	(<0.001)
Card ticket	-0.0003	-0.0001	0.0007*	-0.0002
	(0.5526)	(0.6735)	(0.0810)	(0.5512)
N	302981	302981	302981	302981

*p<0.1, **p<0.05, ***p<0.001. P-values are also in parentheses.
Change in Pr(Y=?) due to a given treatment, on a proportion scale. E.g., 0.002 = +0.2 percentage points.

RCT #3 change in predicted probabilities, based on a multinomial logit (no covariate adjustment)

	(1) Pr(Neither)	(2) Pr(Both)	(3) Pr(Assign only)	(4) Pr(Call only)
Revised notice	-0.0071***	0.0009***	-0.0008**	0.0070***
	(<0.001)	(<0.001)	(0.0081)	(<0.001)
N	405107	405107	405107	405107

*p<0.1, **p<0.05, ***p<0.001. P-values are also in parentheses.
Change in Pr(Y=?) due to a given treatment, on a proportion scale. E.g., 0.002 = +0.2 percentage points.

RCT #3 change in predicted probabilities, based on a multinomial logit (with additive covariate and FE adjustment)

	(1) Pr(Neither)	(2) Pr(Both)	(3) Pr(Assign only)	(4) Pr(Call only)
Revised notice	-0.0071***	0.0010***	-0.0004	0.0066***
	(<0.001)	(<0.001)	(0.2288)	(<0.001)
N	349604	349604	349604	349604

*p<0.1, **p<0.05, ***p<0.001. P-values are also in parentheses.
Change in Pr(Y=?) due to a given treatment, on a proportion scale. E.g., 0.002 = +0.2 percentage points.

	Rate: Cohort #1 (n = 290,029)	Rate: Cohort #2 (n = 328,360)	Rate: Cohort #3 (n = 405,107)
Ticket (No), Helpline (No)	96.8% ≈ 280,748	97.39% ≈ 319,789	98.18% ≈ 397,734
Ticket (Yes), Helpline (Yes)	0.24% ≈ 696	0.21% ≈ 690	0.13% ≈ 527
Ticket (Yes), Helpline (No)	1.24% ≈ 3,596	1.06% ≈ 3,481	0.93% ≈ 3,767
Ticket (No), Helpline (Yes)	1.72%≈ 4,988	1.34% ≈ 4,399	0.76% ≈ 3,079

Appendix E - Exploratory analysis results: Helpline capacity interaction

RCT #1 Helpline capacity interaction, Ticket assignments

	(1) Ticket (0/1)	(2) Ticket (0/1)	(3) Ticket (0/1)	(4) Ticket (0/1)
Revised notice	-0.0012	-0.0019	0.0011	0.0013
	(0.6399)	(0.4963)	(0.1792)	(0.1840)
Card ticket	0.0013	0.0011	0.0001	-0.0001
	(0.6273)	(0.6987)	(0.9366)	(0.8952)
Capacity	-0.0002**	-0.0001	0.0034*	-0.0004
	(0.0343)	(0.1782)	(0.0787)	(0.8609)
Revised x Capacity	0.0001	0.0001	-0.0019	-0.0027
	(0.4809)	(0.3760)	(0.3861)	(0.3206)
Card x Capacity	-0.0001	-0.0001	-0.0007	-0.0003
	(0.6017)	(0.6546)	(0.7625)	(0.9178)
Intercept	0.0191***	0.0178***	0.0135***	0.0149***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
N	275177	267467	290029	282026
Helpline staffing	Yes	Yes	No	No
Dropped call rate	No	No	Yes	Yes
State FEs	No	Yes	No	Yes
Covariates	No	Yes	No	Yes

*<0.1, **<0.05, ***<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2 errors.
Estimated for eligible recipients in the contiguous US (excluding US territories).
Fixed effects: State
Covariates: All covariates from confirmatory analyses

RCT #1 Helpline capacity interaction, Helpline calls

	(1) Call (0/1)	(2) Call (0/1)	(3) Call (0/1)	(4) Call (0/1)
Revised notice	0.0001	-0.0010	0.0038***	0.0045***
	(0.9833)	(0.7500)	(0.0005)	(0.0002)
Card ticket	0.0003	0.0004	0.0007	0.0005
	(0.9105)	(0.8892)	(0.5294)	(0.6732)
Capacity	0.0014***	0.0012***	-0.0194***	-0.0153***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Revised x Capacity	0.0001	0.0002	-0.0031	-0.0052*
	(0.3617)	(0.2274)	(0.2354)	(0.0872)
Card x Capacity	-0.0000	-0.0000	-0.0014	-0.0012
	(0.9613)	(0.9169)	(0.5813)	(0.7031)
Intercept	-0.0101***	-0.0071**	0.0246***	0.0231***
	(0.0001)	(0.0074)	(0.0000)	(0.0000)
N	275177	267467	290029	282026
Helpline staffing	Yes	Yes	No	No
Dropped call rate	No	No	Yes	Yes
State FEs	No	Yes	No	Yes
Covariates	No	Yes	No	Yes

*<0.1, **<0.05, ***<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2 errors.
Estimated for eligible recipients in the contiguous US (excluding US territories).
Fixed effects: State
Covariates: All covariates from confirmatory analyses

RCT #2 Helpline capacity interaction, Ticket assignments

	(1) Ticket (0/1)	(2) Ticket (0/1)	(3) Ticket (0/1)	(4) Ticket (0/1)
Revised notice	0.0003	0.0018	-0.0000	-0.0008
	(0.9024)	(0.4979)	(0.9647)	(0.3569)
Card ticket	-0.0028	-0.0018	0.0016**	0.0016*
	(0.2145)	(0.4757)	(0.0233)	(0.0722)
Agents taking calls	-0.0003**	-0.0002*	0.0040**	0.0006
	(0.0022)	(0.0717)	(0.0149)	(0.7806)
Revised x Agents	-0.0000	-0.0001	0.0011	0.0030
	(0.9831)	(0.5033)	(0.5856)	(0.2178)
Card x Agents	0.0002	0.0001	-0.0036*	-0.0033
	(0.1433)	(0.3611)	(0.0639)	(0.1782)
Intercept	0.0183***	0.0170***	0.0111***	0.0129***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
N	312293	287900	328360	302981
Helpline staffing	Yes	Yes	No	No
Dropped call rate	No	No	Yes	Yes
State FEs	No	Yes	No	Yes
Covariates	No	Yes	No	Yes

*<0.1, **<0.05, ***<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2 errors.
Estimated for eligible recipients in the contiguous US (excluding US territories).
Fixed effects: State
Covariates: All covariates from confirmatory analyses

RCT #2 Helpline capacity interaction, Helpline calls

	(1)	(2)	(3)	(4)
	Call (0/1)	Call (0/1)	Call (0/1)	Call (0/1)
Revised notice	0.0040	0.0041	0.0042***	0.0037***
	(0.1160)	(0.1307)	(0.0000)	(0.0002)
Card ticket	-0.0041	-0.0034	0.0005	0.0010
	(0.1065)	(0.2193)	(0.5585)	(0.3234)
Agents taking calls	0.0002*	0.0001	-0.0030	-0.0012
	(0.0677)	(0.3261)	(0.1092)	(0.5875)
Revised x Agents	-0.0000	-0.0000	-0.0019	-0.0001
	(0.8598)	(0.8215)	(0.3788)	(0.9560)
Card x Agents	0.0002	0.0001	-0.0030	-0.0042
	(0.1459)	(0.2592)	(0.1721)	(0.1151)
Intercept	0.0102***	0.0116***	0.0149***	0.0141***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
N	312293	287900	328360	302981
Helpline staffing	Yes	Yes	No	No
Dropped call rate	No	No	Yes	Yes
State FEs	No	Yes	No	Yes
Covariates	No	Yes	No	Yes

*<0.1, **<0.05, ***<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2 errors.
Estimated for eligible recipients in the contiguous US (excluding US territories).
Fixed effects: State
Covariates: All covariates from confirmatory analyses

RCT #3 Helpline capacity interaction, Ticket assignments

	(1) Ticket (0/1)	(2) Ticket (0/1)	(3) Ticket (0/1)	(4) Ticket (0/1)
Treat	-0.0003	0.0019	0.0008	0.0006
	(0.8531)	(0.4039)	(0.1968)	(0.4465)
Agents taking calls	-0.0002***	-0.0002**	0.0049***	0.0021
	(0.0001)	(0.0040)	(0.0000)	(0.1252)
Treat x Agents	0.0000	-0.0001	-0.0021	-0.0003
	(0.7824)	(0.5414)	(0.1907)	(0.8750)
Intercept	0.0153***	0.0153***	0.0089***	0.0107***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
N	383347	330659	405107	349604
Helpline staffing	Yes	Yes	No	No
Dropped call rate	No	No	Yes	Yes
State FEs	No	Yes	No	Yes
Covariates	No	Yes	No	Yes

*<0.1, **<0.05, ***<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2 errors.
Estimated for eligible recipients in the contiguous US (excluding US territories).
Fixed effects: State
Covariates: All covariates from confirmatory analyses

RCT #3 Helpline capacity interaction, Helpline calls

	(1) Call (0/1)	(2) Call (0/1)	(1) Call (0/1)	(2) Call (0/1)
Treat	0.0019	0.0017	0.0095***	0.0087***
	(0.3057)	(0.4210)	(0.0000)	(0.0000)
Agents taking calls	-0.0002***	-0.0002***	0.0034***	0.0036***
	(0.0001)	(0.0003)	(0.0000)	(0.0000)
Treat x Agents	0.0003***	0.0003**	-0.0048**	-0.0040**
	(0.0008)	(0.0043)	(0.0028)	(0.0492)
Intercept	0.0088***	0.0087***	0.0044***	0.0043***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
N	383347	330659	405107	349604
Helpline staffing	Yes	Yes	No	No
Dropped call rate	No	No	Yes	Yes
State FEs	No	Yes	No	Yes
Covariates	No	Yes	No	Yes

*<0.1, **<0.05, ***<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2 errors.
Estimated for eligible recipients in the contiguous US (excluding US territories).
Fixed effects: State
Covariates: All covariates from confirmatory analyses

Marginal effects for select interactions above

	(1) Call (0/1)
(Model 2) Treatment effect at…	
Agents = 14	0.0056***
	(p<0.001)
Agents = 18	0.0067***
	(p<0.001)
Agents = 22	0.0078***
	(p<0.001)
Agents = 26	0.0089***
	(p<0.001)
N	330659

*p<0.1, **p<0.05, ***p<0.001
Marginal effects of the mailing by helpline staffed, observed values approach.
P-values in parentheses, calculated using the delta method.
Based on OLS models with Lin (2013) adjustment for covariates and FEs, and county clustered errors.

Appendix F - ICC estimates

ICC estimates (evaluate within-partition clustering)

Test	ICC
RCT #1: Ticket	0.0000728
RCT #1: Call	0.000103
RCT #2: Ticket	0.0000685
RCT #2: Call	0.0000529
RCT #3: Ticket	0.0000553
RCT #3: Call	0.0000510

Appendix G - Multiple imputation

Table A24: MICE results, RCT #1

	(1) Ticket (0/1)	(2) Call (0/1)
Revised notice	0.0005	0.0028***
	(0.3044)	(<0.001)
Card ticket	-0.0002	0.0001
	(0.6343)	(0.8298)
Intercept	0.0130**	0.0150**
	(0.0089)	(0.0074)
N	282026	282026

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Models use multiple imputation (MICE) to account for any missingness in any covariates (k = 10).
Adjustment for covariates and State/Month-Year fixed effects (LSDV approach).

Table A25: MICE results, RCT #2

	(1) Ticket (0/1)	(2) Call (0/1)
Revised notice	0.0001	0.0036***
	(0.7390)	(0.0000)
Card ticket	0.0006	-0.0003
	(0.1635)	(0.4802)
Intercept	0.0194**	0.0177**
	(0.0019)	(0.0017)
N	302981	302981

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Models use multiple imputation (MICE) to account for any missingness in any covariates (k = 10).
Adjustment for covariates and State/Month-Year fixed effects (LSDV approach).

Table A26: MICE results, RCT #3

	(1) Ticket (0/1)	(2) Call (0/1)
Revised notice	0.0005	0.0076***
	(0.2278)	(0.0000)
Intercept	0.0072**	0.0067*
	(0.0458)	(0.0926)
N	349604	349604

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Models use multiple imputation (MICE) to account for any missingness in any covariates (k = 10).
Adjustment for covariates and State/Month-Year fixed effects (LSDV approach).

Appendix H - Full tables for primary confirmatory models

Confirmatory models, Ticket assignments, RCT #1

	(1) Ticket (0/1)	(2) Ticket (0/1)	(3) Ticket (0/1)	(4) Ticket (0/1)
Revised notice	0.0005	0.0005	0.0005	0.0005
	(0.2610)	(0.2896)	(0.3064)	(0.3146)
Card ticket	-0.0002	-0.0002	-0.0002	-0.0002
	(0.7258)	(0.6968)	(0.6298)	(0.6210)
Intercept	0.0146***	0.0148***	0.0131**	0.0148***
	(0.0000)	(0.0000)	(0.0085)	(0.0000)
N	290029	282026	282026	282026
Complete	No	Yes	Yes	Yes
Covariates	No	No	Yes	Yes
FEs: LSDV	No	No	Yes	No
FEs: Lin	No	No	No	Yes

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Model 1: Unadjusted
Model 2: Complete case analysis (drop cases with missingness on any covariate)
Model 3: Lin (2013) covariate adjustment, and LSDV FEs (State/Month)
Model 4: Lin (2013) adjustment for covariates and FEs (State/Month)

Confirmatory models, Helpline calls, RCT #1

	(1) Call (0/1)	(2) Call (0/1)	(3) Call (0/1)	(4) Call (0/1)
Revised notice	0.0028***	0.0028***	0.0028***	0.0028***
	(<0.001)	(<0.001)	(<0.001)	(<0.001)
Card ticket	0.0002	0.0001	0.0001	0.0001
	(0.6482)	(0.7993)	(0.8348)	(0.8337)
Intercept	0.0181***	0.0180***	0.0151**	0.0180***
	(0.0000)	(0.0000)	(0.0071)	(0.0000)
N	290029	282026	282026	282026
Complete	No	Yes	Yes	Yes
Covariates	No	No	Yes	Yes
FEs: LSDV	No	No	Yes	No
FEs: Lin	No	No	No	Yes

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Model 1: Unadjusted
Model 2: Complete case analysis (drop cases with missingness on any covariate)
Model 3: Lin (2013) covariate adjustment, and LSDV FEs (State/Month)
Model 4: Lin (2013) adjustment for covariates and FEs (State/Month)

Confirmatory models, Ticket assignments, RCT #2

	(1)	(2)	(3)	(4)
	Ticket (0/1)	Ticket (0/1)	Ticket (0/1)	Ticket (0/1)
Revised notice	0.0003	0.0001	0.0001	0.0002
	(0.4383)	(0.7215)	(0.8077)	(0.6826)
Card ticket	0.0005	0.0005	0.0006	0.0005
	(0.2220)	(0.1928)	(0.1674)	(0.2005)
Intercept	0.0124***	0.0130***	0.0196**	0.0130***
	(0.0000)	(0.0000)	(0.0017)	(0.0000)
N	328360	302981	302981	302981
Complete	No	Yes	Yes	Yes
Covariates	No	No	Yes	Yes
FEs: LSDV	No	No	Yes	No
FEs: Lin	No	No	No	Yes

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Model 1: Unadjusted
Model 2: Complete case analysis (drop cases with missingness on any covariate)
Model 3: Lin (2013) covariate adjustment, and LSDV FEs (State/Month)
Model 4: Lin (2013) adjustment for covariates and FEs (State/Month)

Confirmatory models, Helpline calls, RCT #2

	(1)	(2)	(3)	(4)
	Call (0/1)	Call (0/1)	Call (0/1)	Call (0/1)
Revised notice	0.0036***	0.0036***	0.0036***	0.0036***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Card ticket	-0.0005	-0.0004	-0.0003	-0.0004
	(0.2897)	(0.3751)	(0.4871)	(0.3829)
Intercept	0.0139***	0.0137***	0.0178**	0.0137***
	(0.0000)	(0.0000)	(0.0016)	(0.0000)
N	328360	302981	302981	302981
Complete	No	Yes	Yes	Yes
Covariates	No	No	Yes	Yes
FEs: LSDV	No	No	Yes	No
FEs: Lin	No	No	No	Yes

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Model 1: Unadjusted
Model 2: Complete case analysis (drop cases with missingness on any covariate)
Model 3: Lin (2013) covariate adjustment, and LSDV FEs (State/Month)
Model 4: Lin (2013) adjustment for covariates and FEs (State/Month)

Confirmatory models, Ticket assignments, RCT #3

	(1)	(2)	(3)	(4)
	Ticket (0/1)	Ticket (0/1)	Ticket (0/1)	Ticket (0/1)
Treatment	0.0001	0.0005	0.0005	0.0005
	(0.8331)	(0.1873)	(0.1944)	(0.2446)
Intercept	0.0106***	0.0115***	0.0071**	0.0113***
	(0.0000)	(0.0000)	(0.0492)	(0.0000)
N	405107	349604	349604	349604
Complete	No	Yes	Yes	Yes
Covariates	No	No	Yes	Yes
FEs: LSDV	No	No	Yes	No
FEs: Lin	No	No	No	Yes

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Model 1: Unadjusted
Model 2: Complete case analysis (drop cases with missingness on any covariate)
Model 3: Lin (2013) covariate adjustment, and LSDV FEs (State/Month)
Model 4: Lin (2013) adjustment for covariates and FEs (State/Month)

Confirmatory models, Helpline calls, RCT #3

	(1)	(2)	(3)	(4)
	Call (0/1)	Call (0/1)	Call (0/1)	Call (0/1)
Treatment	0.0079***	0.0078***	0.0075***	0.0073***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Intercept	0.0055***	0.0054***	0.0067*	0.0056***
	(0.0000)	(0.0000)	(0.0956)	(0.0000)
N	405107	349604	349604	349604
Complete	No	Yes	Yes	Yes
Covariates	No	No	Yes	Yes
FEs: LSDV	No	No	Yes	No
FEs: Lin	No	No	No	Yes

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.
Model 1: Unadjusted
Model 2: Complete case analysis (drop cases with missingness on any covariate)
Model 3: Lin (2013) covariate adjustment, and LSDV FEs (State/Month)
Model 4: Lin (2013) adjustment for covariates and FEs (State/Month)

Appendix I - Benjamini-Hochberg adjustment

BH critical values, cardstock Ticket

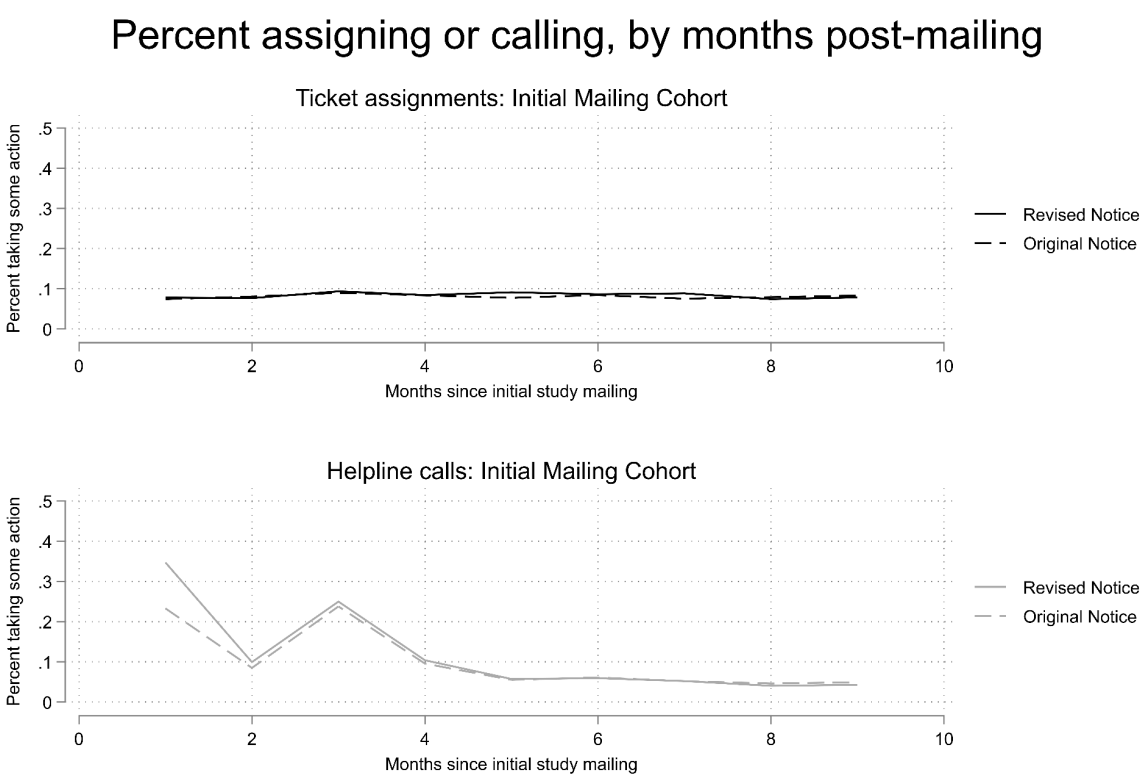
Test	p-value (RCT #1)	BH value (RCT #1)	p-value (RCT #2)	BH value (RCT #2)
Model 1: Assignment	0.725805	0.03125	0.222021	0.025
Model 2: Assignment	0.696797	0.025	0.192775	0.0125
Model 3: Assignment	0.629755	0.0125	0.167398	0.00625
Model 4: Assignment	0.620993	0.00625	0.200533	0.01875
Model 1: Call	0.648207	0.01875	0.28967	0.03125
Model 2: Call	0.799309	0.0375	0.375104	0.0375
Model 3: Call	0.834753	0.05	0.487112	0.05
Model 4: Call	0.833664	0.04375	0.38287	0.04375

BH critical values, revised notice (and RCT #3 treatment)

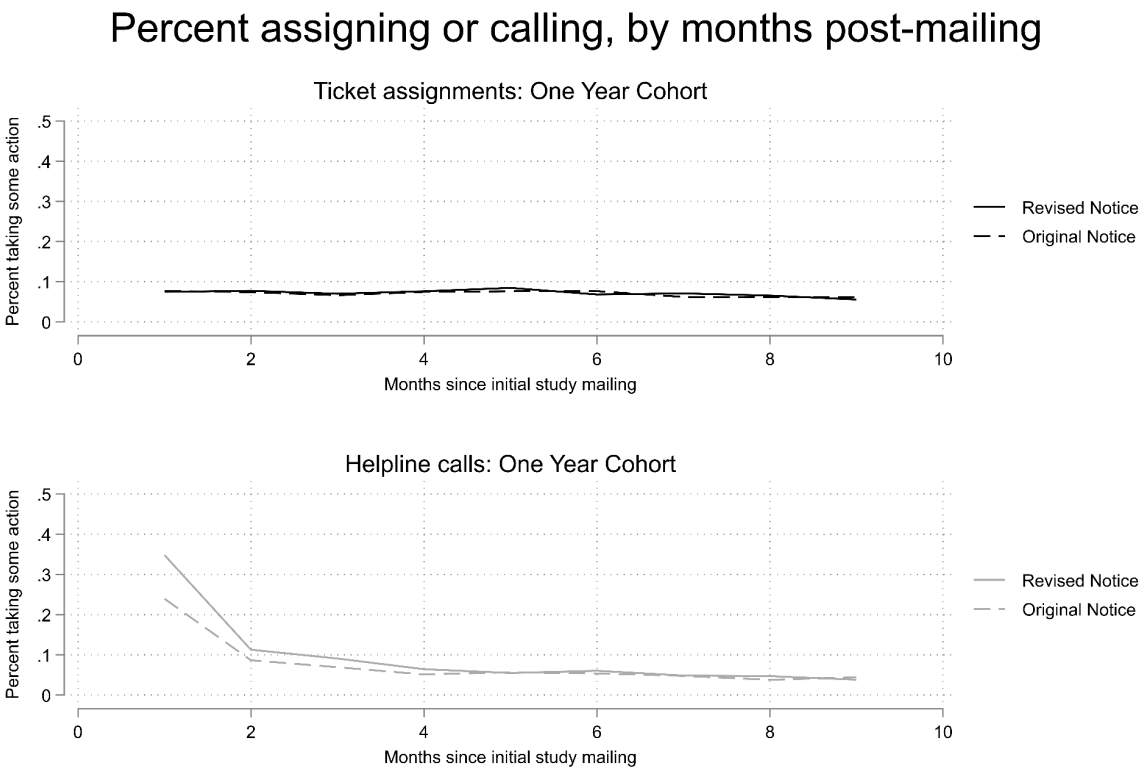
Test	p-value (RCT #1)	BH value (RCT #1)	p-value (RCT #2)	BH value (RCT #2)	p-value (RCT #3)	BH value (RCT #3)
Model 1: Assignment	0.261	0.03125	0.438281	0.03125	0.833054	0.05
Model 2: Assignment	0.289565	0.0375	0.721506	0.04375	0.18732	0.03125
Model 3: Assignment	0.306402	0.04375	0.807694	0.05	0.194412	0.0375
Model 4: Assignment	0.314613	0.05	0.682562	0.0375	0.244625	0.04375
Model 1: Call	7.39E-08	0.0125	6.9E-17	0.00625	1.4E-136	0.00625
Model 2: Call	5.94E-08	0.00625	3.42E-16	0.0125	1.4E-115	0.0125
Model 3: Call	7.75E-08	0.01875	5.43E-14	0.025	1.3E-100	0.01875
Model 4: Call	8.06E-08	0.025	4.25E-16	0.01875	1.03E-81	0.025

Appendix J - Exploratory analysis results: Outcome timeline

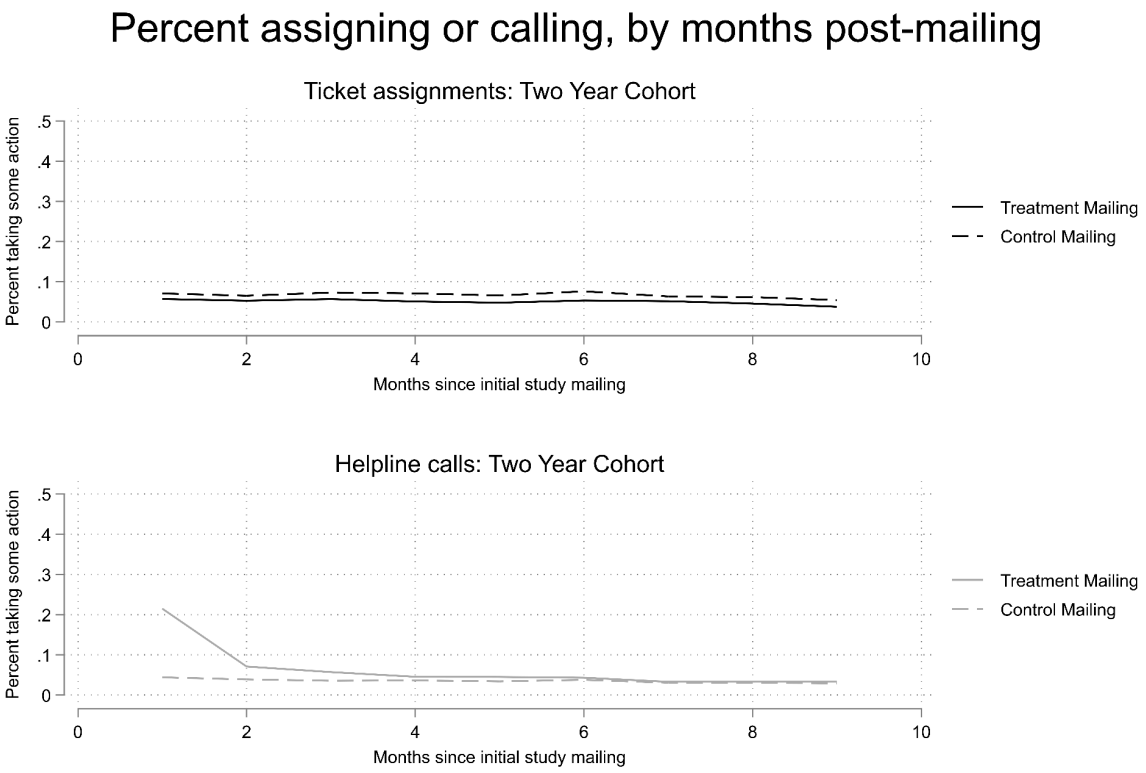
Outcomes by post-mailing month, RCT #1



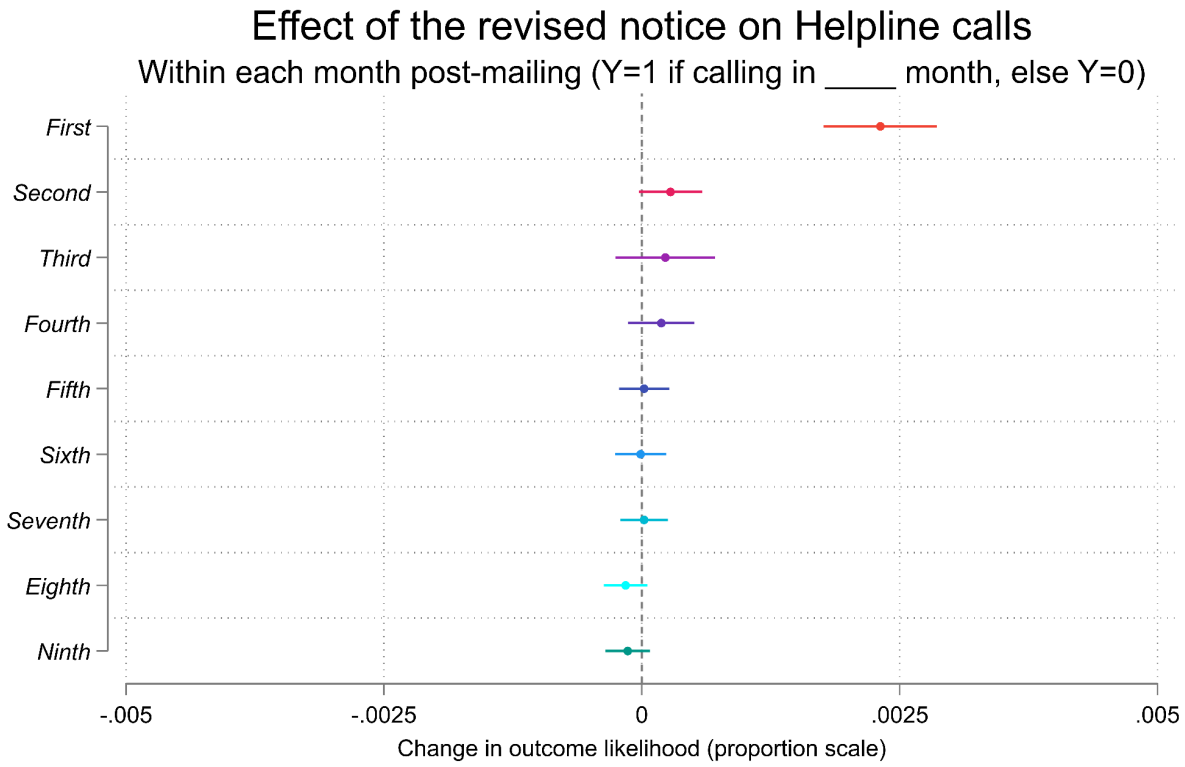
Outcomes by post-mailing month, RCT #2



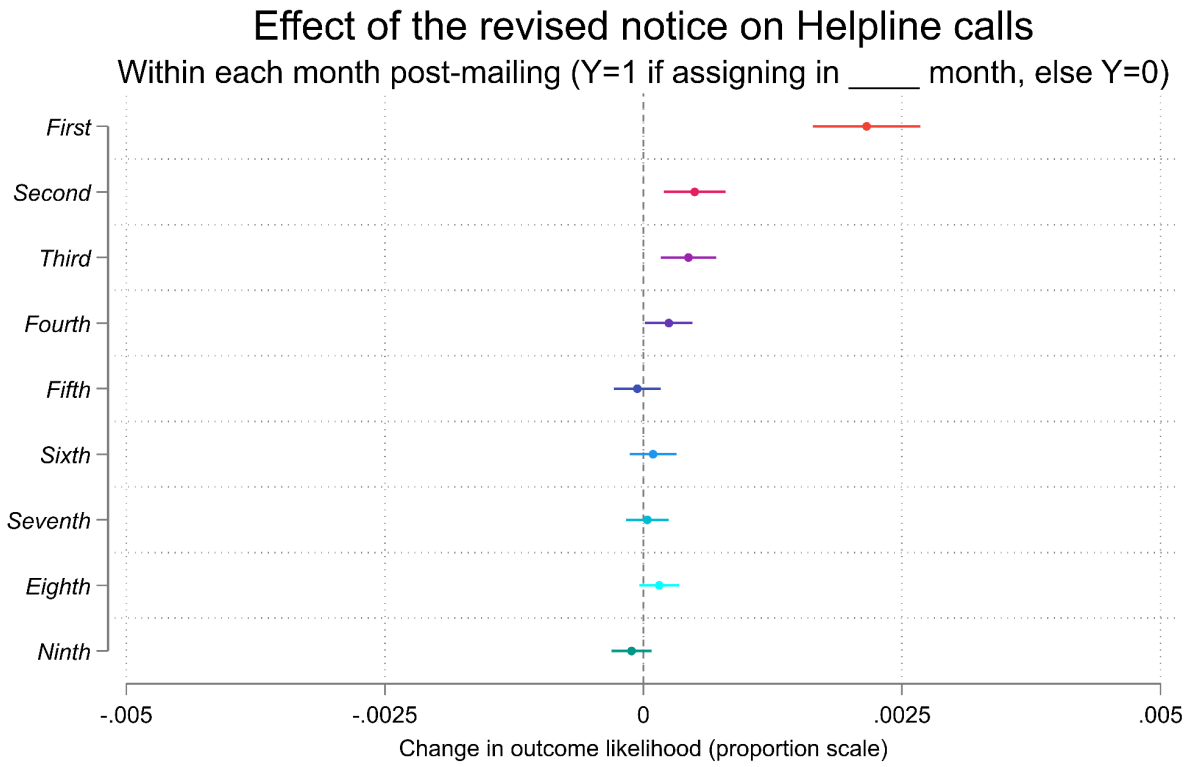
Outcomes by post-mailing month, RCT #3



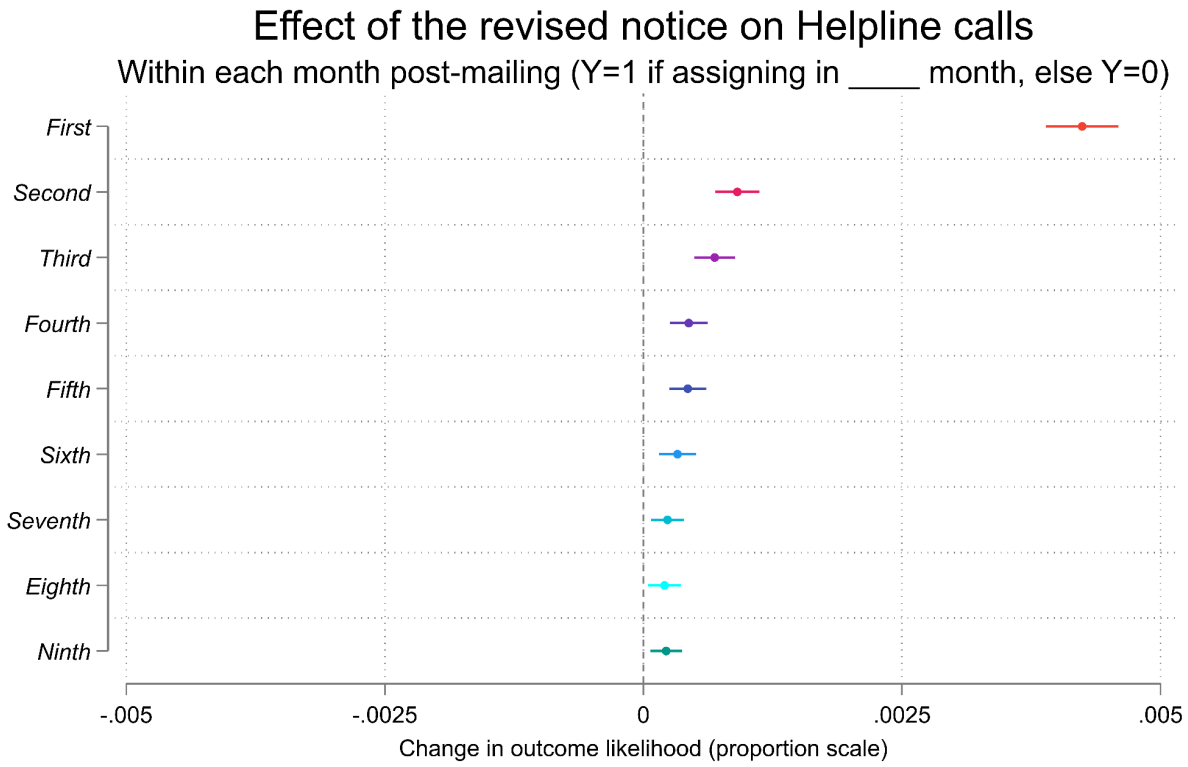
Effects by post-mailing month, RCT #1



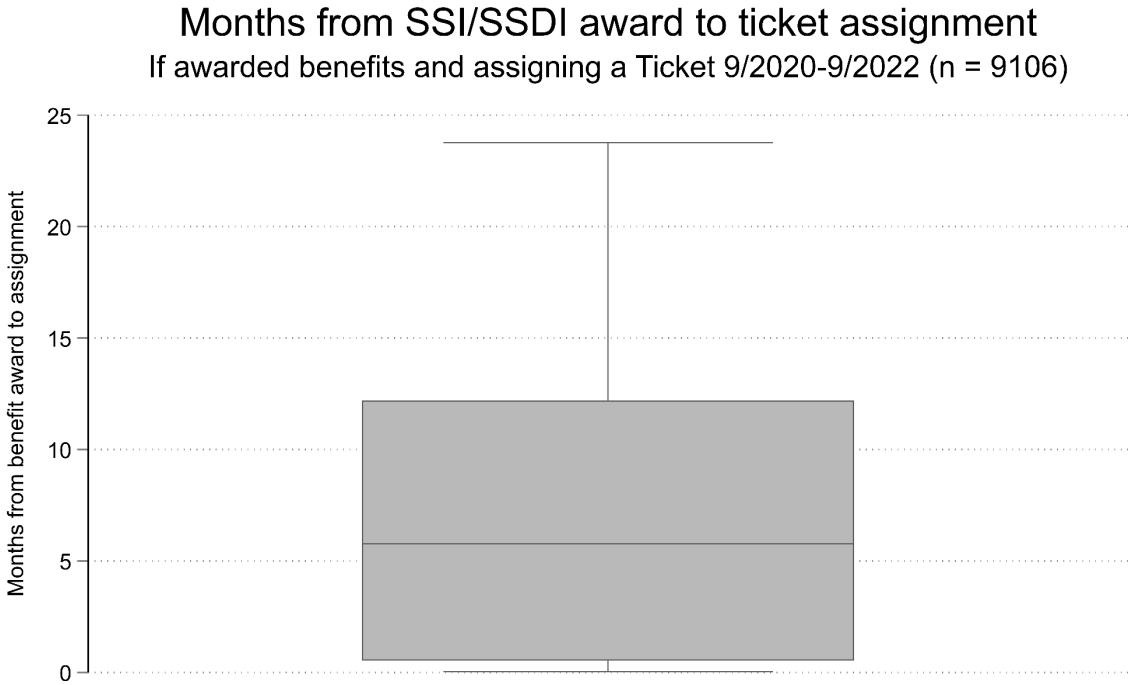
Effects by post-mailing month, RCT #2



Effects by post-mailing month, RCT #3

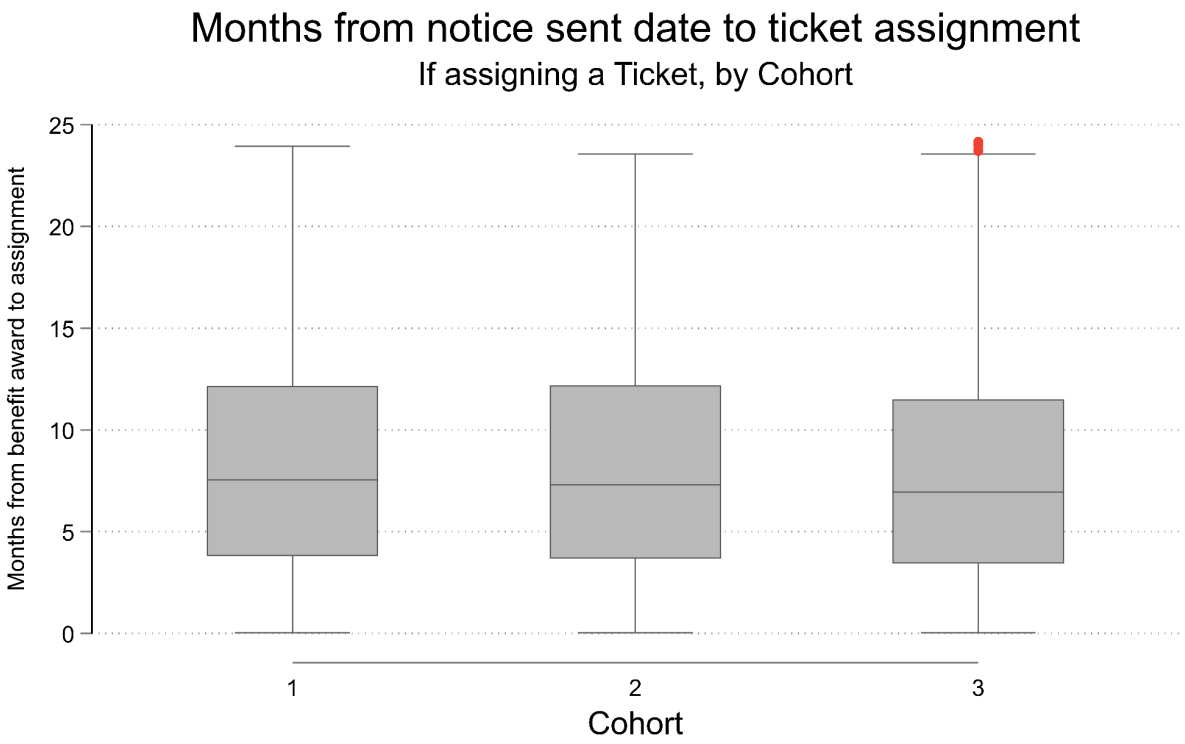


Box plot of time from SSI/SSDI award to Ticket assignment



Approx. 63.6% assigned within 9 months, and approx. 70% within a year.

Box plot of time from TTW notice to Ticket assignment, by RCT



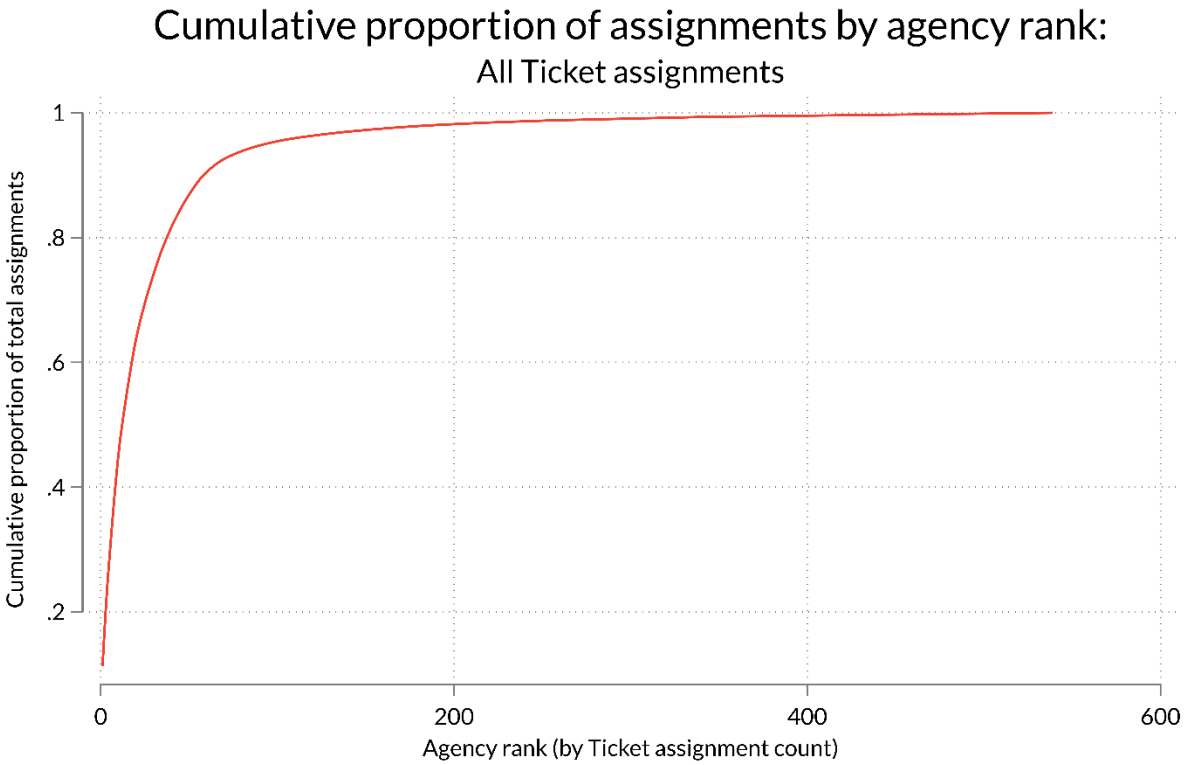
Approx. 60.5% assigned within 9 months, and approx. 80% within a year.

Appendix K - Descriptive results: EN/VR search

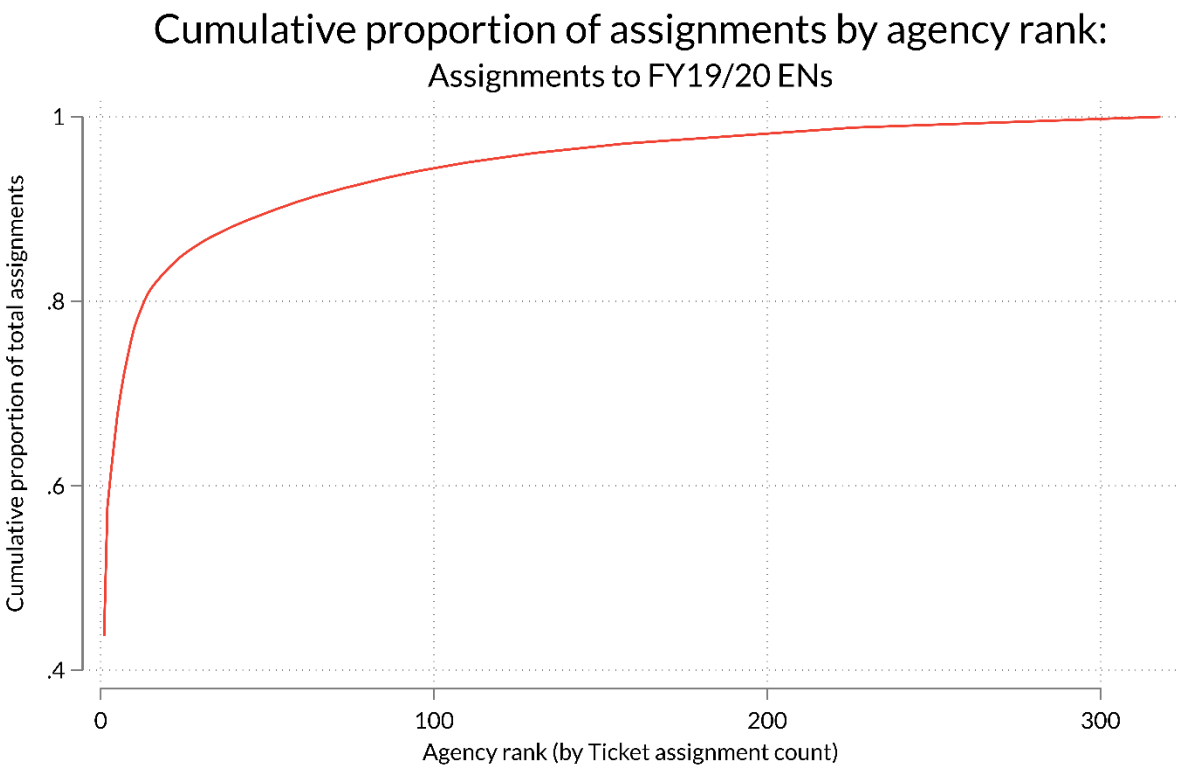
Table A34: Select EN/VR Ticket Assignment Statistics

	Estimate
Number of Tickets	
Overall (A)	30908
FY19-20 EN (B)	7913
FY19-20 EN + Same State (C)	1601
Top 10 ENs (D)	6099
Top EN (E)	3461
Top 35 DUNS (F)	24013
Top 10 DUNS (G)	13848
Proportion	
B/A	0.256
C/B	0.202
D/B	0.771
E/B	0.437
F/A	0.777
G/A	0.448

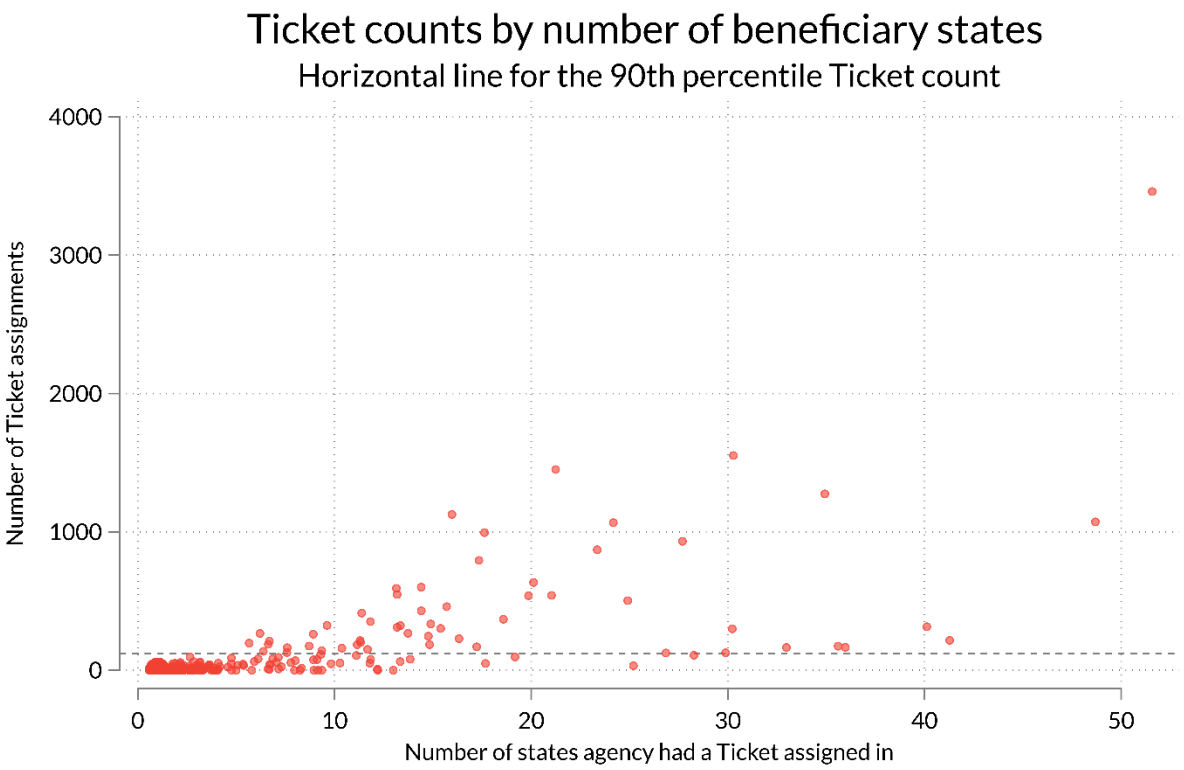
Overall cumulative assignments by agency rank



FY19/20 EN cumulative assignments by agency rank



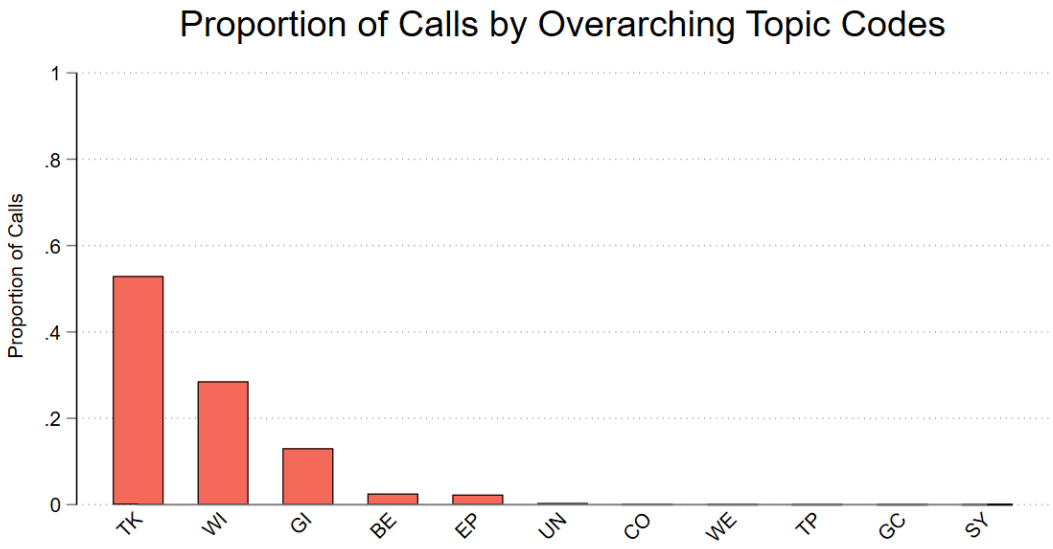
Scatterplot of Ticket assignments against client state counts



Appendix L - Exploratory analysis results: Work incentive calls

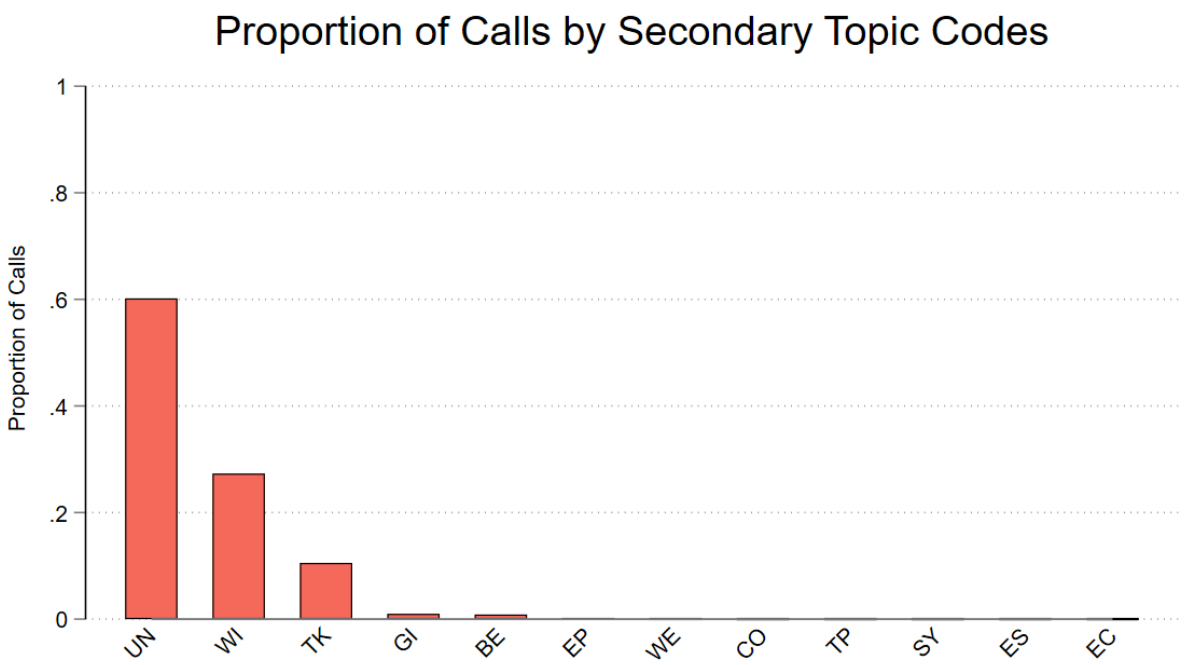
Unique TTW Helpline call records	34,943
Unique beneficiaries	26,613
Percent WI-related Helpline calls within 9 months of notice receipt	59.07%

Proportion of call records by primary topic code



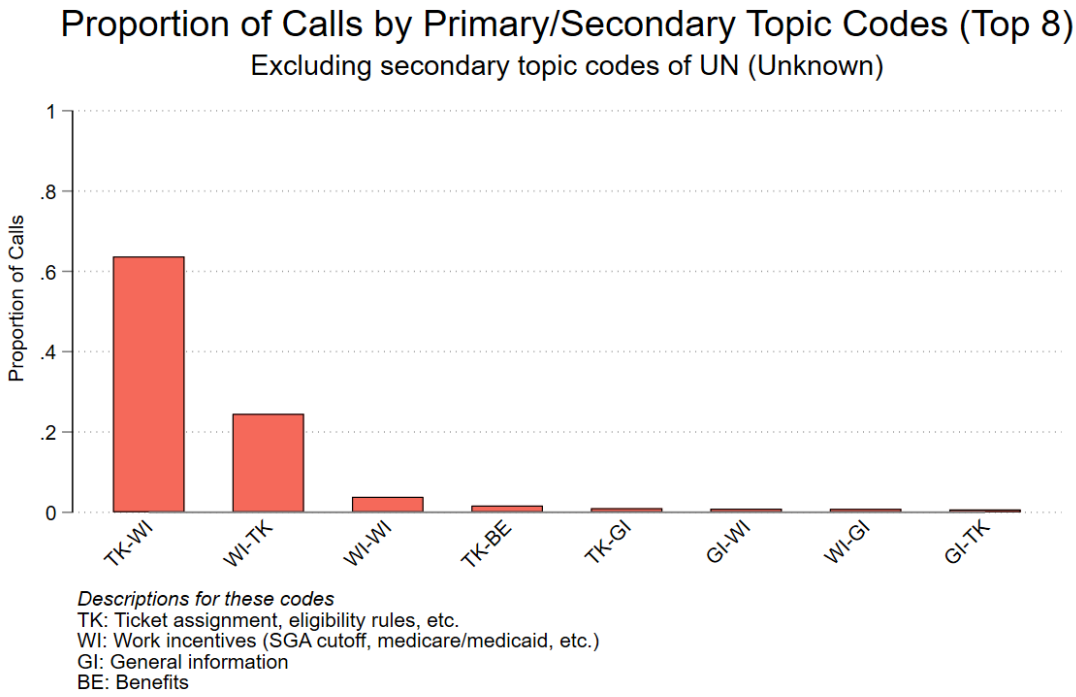
Descriptions for the more common codes
TK = Ticket assignment, elibility questions, general info, etc.
WI = Work incentives (expenses, Medicare/Medicaid, SGA cutoff, etc.).
GI = General information
BE = Benefits
EP = EN Payments

Proportion of call records by secondary topic code



Descriptions for the more common codes
TK = Ticket assignment, elibility questions, general info, etc.
WI = Work incentives (expenses, Medicare/Medicaid, SGA cutoff, etc.).
UN = Unknownn

Proportion of call records by primary/secondary code pairs



Descriptions for these codes
TK: Ticket assignment, eligibility rules, etc.
WI: Work incentives (SGA cutoff, medicare/medicaid, etc.)
GI: General information
BE: Benefits

Probability of Ticket assignment among callers, by call classification

	(1) Ticket (0/1)	(2) Ticket (0/1)	(3) Ticket (0/1)	(4) Ticket (0/1)	(5) Ticket (0/1)	(6) Ticket (0/1)
WI Call	-0.0006	-0.0041	-0.0435***	-0.0423***	-0.0786***	-0.0778***
	(0.9494)	(0.6413)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Intercept	0.1243***	0.1044***	0.1659***	0.1779***	0.1994***	0.1742***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
N	5700	5700	5089	5089	3615	3615
RCT	1	1	2	2	3	3
Month-year FEs	No	Yes	No	Yes	No	Yes

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. P-values in parentheses based on HC2-robust errors.

SUR regression results, RCT #1

	(1) Unadjusted	(2) Adjusted
Y: WI Calls		
Revised notice	0.0013***	0.0014***
	(0.0004)	(0.0003)
Cardstock ticket	-0.0002	-0.0003
	(0.6038)	(0.3940)
Intercept	0.0100***	0.0078**
	(0.0000)	(0.0396)
Y: Non-WI Calls		
Revised notice	0.0014***	0.0014***
	(0.0000)	(0.0001)
Cardstock ticket	0.0004	0.0004
	(0.2193)	(0.2161)
Intercept	0.0081***	0.0072*
	(0.0000)	(0.0815)
p: Revised Notice	*.854*	*.9*
p: Cardstock Ticket	*.227*	*.145*
N	290029	282026

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. HC-robust p-values in parentheses.
Model 2 adjusts for covariates and state/month-year fixed effects (all mean-centered).
P-values in the footer are for tests of different effects across outcomes.

SUR regression results, RCT #2

	(1) Unadjusted	(2) Adjusted
Y: WI Calls		
Revised notice	0.0022***	0.0023***
	(0.0000)	(0.0000)
Cardstock ticket	-0.0002	-0.0002
	(0.6182)	(0.5504)
Intercept	0.0088***	0.0107**
	(0.0000)	(0.0169)
Y: Non-WI Calls		
Revised notice	0.0014***	0.0013***
	(0.0000)	(0.0000)
Cardstock ticket	-0.0003	-0.0002
	(0.2765)	(0.5089)
Intercept	0.0051***	0.0064*
	(0.0000)	(0.0643)
p: Revised Notice	*.064*	*.019*
p: Cardstock Ticket	*.795*	*.90*
N	328360	302981

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. HC-robust p-values in parentheses.
Model 2 adjusts for covariates and state/month-year fixed effects (all mean-centered).
P-values in the footer are for tests of different effects across outcomes.

SUR regression results, RCT #3

	(1) Unadjusted	(2) Adjusted
Y: WI Calls		
Revised notice	0.0049***	0.0047***
	(0.0000)	(0.0000)
Intercept	0.0037***	0.0063*
	(0.0000)	(0.0778)
Y: Non-WI Calls		
Revised notice	0.0029***	0.0026***
	(0.0000)	(0.0000)
Intercept	0.0019***	0.0011
	(0.0000)	(0.5561)
p: Revised Notice	*<0.001*	*<0.001*
N	405107	349604

*p<0.1, **p<0.05, ***p<0.001
All models are OLS linear regressions. HC-robust p-values in parentheses.
Model 2 adjusts for covariates and state/month-year fixed effects (all mean-centered).
P-values in the footer are for tests of different effects across outcomes.

Appendix M – Exploratory analysis: unemployment interaction

Unemployment interaction results, RCT 3

	(1) Ticket (0/1)	(2) Ticket (0/1)
Treatment	-0.0011	-0.0027*
	(0.2544)	(0.0837)
Unemployment	-0.0004***	-0.0005***
	(0.0001)	(0.0003)
Treatment x Unemployment	0.0002	0.0006**
	(0.1774)	(0.0359)
Intercept	0.0129***	0.0141***
	(0.0000)	(0.0000)
N	404714	349604
State/Month/Dose Fixed Effects	No	Yes
Covariates	No	Yes

*<0.1, **<0.05, ***<0.001

All models are OLS linear regressions. P-values in parentheses based on primary-county clustered errors.
Estimated for eligible recipients in the contiguous US (excluding US territories) with zip codes available.
Fixed effects: State, Month-Year, and Dosage (if applicable)
Covariates: All covariates from confirmatory analyses except unemployment and covid-19 deaths

Unemployment interaction marginal effects, RCT 3

	(1) Ticket (0/1)	(1) Ticket (0/1)
Unemployment = 2	-0.0007	-0.0016
	(0.3135)	(0.1338)
Unemployment = 6	0.0001	0.0007*
	(0.6428)	(0.0816)
Unemployment = 10	0.0010	0.0029**
	(0.1596)	(0.0173)
Unemployment = 14	0.0018	0.0052**
	(0.1568)	(0.0228)
N	404714	349604

*p<0.1, **p<0.05, ***p<0.001

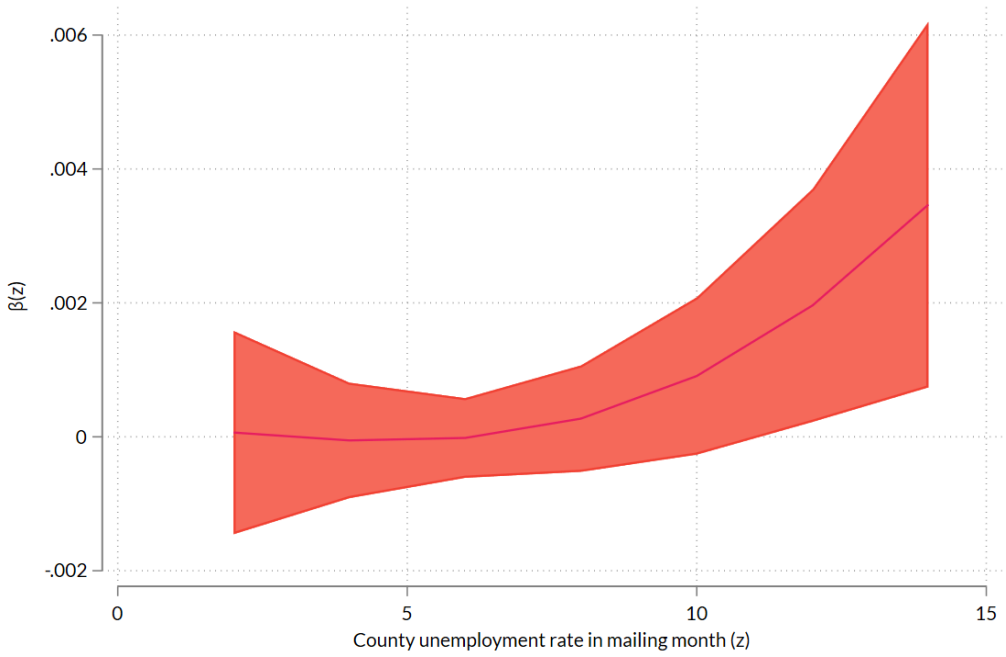
Marginal effects of the revised notice by county unemployment rate, observed values approach.

P-values in parentheses, calculated using the delta method.

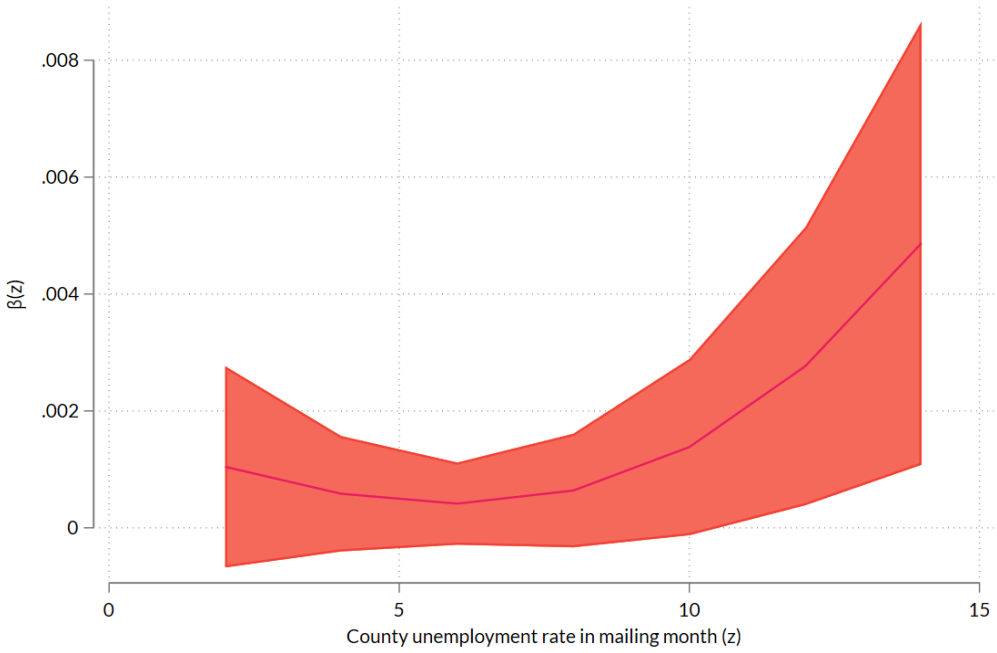
Model 1 is based on an unadjusted OLS model with county clustered errors.

Model 2 is based on an OLS model with Lin (2013) adjustment for covariates/FEs, and clustered errors.

VC model unemployment interaction plot (no covariate adjustment), RCT 3



VC model unemployment interaction plot (covariate adjustment), RCT 3



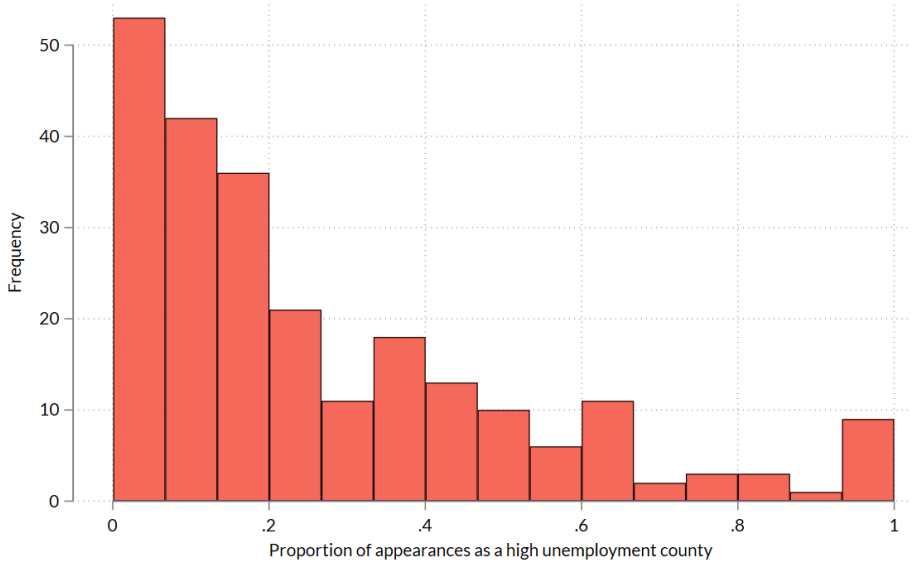
Received mailing (or would have) with local unemployment rate at least 10%	6.41%
Percent of those beneficiaries in a large central metro (difference test: p<0.05)	66.47%
Counties in sample with 10%+ unemployment rate at least once	7.69%
Difference in SSI-only rate, counties with and without unemployment 10%+	8.79pp

Unemployment interaction marginal effects, RCT 3

	(1) Ticket (0/1)	(2) Ticket (0/1)
Large central metro beneficiaries		
Treatment	-0.0097***	-0.0033
	(0.0003)	(0.1941)
County unemployment	-0.0010***	-0.0006**
	(0.0005)	(0.0017)
Treatment x Unemployment	0.0022***	0.0006*
	(0.0000)	(0.0651)
Intercept	0.0190***	0.0168***
	(0.0000)	(0.0000)
Other beneficiaries		
Treatment	-0.0002	-0.0001
	(0.9229)	(0.9505)
County unemployment	-0.0004*	-0.0006***
	(0.0617)	(0.0000)
Treatment x Unemployment	0.0001	0.0001
	(0.7075)	(0.7346)
Intercept	0.0135***	0.0142***
	(0.0000)	(0.0000)
p: Treatment	<0.001	.164
Controls	Yes	No
State/Month/Dose Fixed Effects	Yes	No
N	349604	349604

*p<0.1, **p<0.05, ***p<0.001
Based on OLS linear regressions (county-clustered errors) in a SUEST framework.
The first sample is beneficiaries in large central metro counties. The second is other beneficiaries.
Model 1 adjusts for covariates and state/month-year fixed effects (all mean-centered).
Model 2 subsets to the complete cases used in Model 1.
The p-value in the footer is for a test of different interaction effects across samples.

Proportion of appearances as unemployment 10%+ county



Among 239 counties with at least one >=10% unemployment month in our sample

Percent of these counties over time