

**Supplementary Appendix for
“Concentrated Burdens:
How Self-Interest and Partisanship Shape Opinion on
Opioid Treatment Policy”**

A Survey Sample Characteristics

Our survey sample was collected by the nonpartisan research organization NORC at the University of Chicago. NORC recruits a probability-based survey panel called AmeriSpeak that is designed to be representative of the US household population. NORC’s AmeriSpeak panelists participate in studies on behalf of academic and government research as well as for-profit marketing research.

Our survey was conducted on the web only using a general population of US adults age 18 and over between August 2 and September 6, 2018. During this study period, NORC sent 7 email reminders and 2 SMS reminders to non-respondents between August 4 and September 5. Panelists were offered the cash equivalent of \$1 for completing the study, and those respondents who completed the survey took a median of 1 minute to complete it. The weighted cumulative AAPOR RR3 response rate was 8.5%.

In Table A1 below, we show the demographic characteristics of the sample that eventually completed our survey.

Table A1: Descriptive Characteristics of AmeriSpeak Survey Sample

Statistic	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Age	48.399	16.735	18	34	62	90
% Above Median Overdose Rate	0.466	0.499	0	0	1	1
% Above State Median Income	0.511	0.500	0	0	1	1
% Female	0.536	0.499	0	0	1	1
% Democrat	0.494	0.500	0.000	0.000	1.000	1.000
% Liberal	0.348	0.476	0.000	0.000	1.000	1.000
% College Degree	0.494	0.500	0	0	1	1
% Married	0.505	0.500	0	0	1	1
% White	0.663	0.473	0	0	1	1
% Black	0.112	0.315	0	0	0	1
% Hispanic	0.151	0.359	0	0	0	1
% Homeowner	0.678	0.467	0.000	0.000	1.000	1.000
% Know Someone with Addiction	0.536	0.499	0	0	1	1

In order to further assess *who* is most affected by the opioid crisis, we also analyzed the predictors of someone answering the question on survey about whether they knew someone struggling with addiction. First, in Figure A1 we show the number of people answering reporting each response option for this question. Second, in Table A2 we show the results of a regression predicting a positive response to any of these categories of personal exposure on demographic characteristics. People who are personally in contact with someone struggling with addiction are more likely to be younger, less likely to be black, less likely to be a homeowner, more likely to be a political independent or Republican, less likely to be conservative, less educated, and more likely to be in the Northeast or the West.

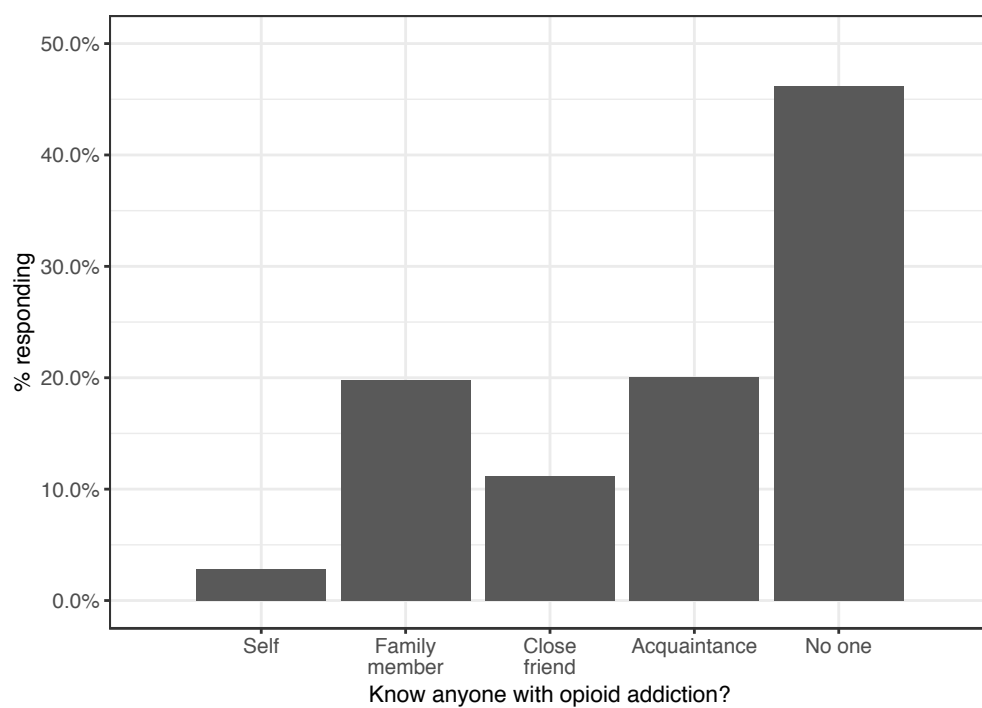


Figure A1: Personal exposure to the opioid crisis

Table A2: Predictors of Personal Exposure to Opioid Addiction

	<i>Dependent variable:</i>
	Know Someone w/ Addiction
Age	−0.002*** (0.001)
Female	−0.012 (0.024)
Black	−0.075* (0.042)
Hispanic	−0.033 (0.036)
Homeowner	−0.051* (0.029)
Party: Independent	0.097** (0.041)
Party: Republican	0.117*** (0.036)
Ideology: Moderate	−0.051 (0.033)
Ideology: Conservative	−0.082** (0.039)
College Degree	−0.068*** (0.025)
Married	−0.030 (0.026)
Income >50k	−0.038 (0.027)
Region: Northeast	0.105*** (0.039)
Region: South	0.046 (0.031)
Region: West	0.078** (0.034)
Constant	0.701*** (0.052)
Observations	1,749
Adjusted R ²	0.025
F Statistic	3.945***
<i>Note:</i> *p<0.1; **p<0.05; ***p<0.01 Omitted category for partisanship is 'Democrat', for ideology is 'Liberal', and for Region is 'Midwest'	

B Demographic Balance Across Experimental Conditions

In this section, we assess demographic balance across the two experimental conditions in our experiment. The only observable demographic characteristic on which we observe a statistically distinguishable imbalance is age, though the substantive size of this difference is quite small, as shown in Table A3. However, to ensure that this slight imbalance does not affect our estimated experimental treatment effects, we include models with covariates in our main analyses alongside the raw treatment effects.

Table A3: Experimental Balance on Covariates

	Mean[Near condition]	Mean[Far condition]	p-value of difference
Age	47.61	49.15	0.04
% Above Median Overdose Rate	0.46	0.47	0.55
% Above State Median Income	0.49	0.53	0.16
% Female	0.53	0.54	0.46
% Democrat	0.49	0.50	0.83
% Republican	0.33	0.35	0.29
% Liberal	0.31	0.31	0.82
% Conservative	0.32	0.31	0.86
% Income >50k	0.55	0.57	0.31
% College Degree	0.48	0.50	0.39
% Married	0.51	0.50	0.92
% White	0.66	0.66	0.90
% Black	0.11	0.11	0.80
% Hispanic	0.15	0.15	0.81
% Homeowner	0.65	0.67	0.42
% Know Someone w/ Addiction	0.54	0.53	0.61

C Descriptive Results in Tabular Form

In this section, we first present our treatment policy funding results in tabular form, displaying the mean support for the two split-sample treatment funding options, *income-based* redistributive funding and *overdose rate-based* funding, as well as for the clinic construction proposal across various subgroups, as presented in Figure 1 in the main text. Within each subgroup, we find no evidence of floor or ceiling effects that might bias our main results.

Table A4: Policy Support Among Demographic Subgroups

Subgroup	Redistributive			Overdose rate-based			Clinic Construction		
	Mean	SD	n	Mean	SD	n	Mean	SD	n
All Respondents	0.558	(0.497)	991	0.442	(0.497)	1012	0.457	(0.498)	2000
Democrats	0.693	(0.462)	499	0.508	(0.5)	488	0.562	(0.496)	987
Independents	0.425	(0.496)	174	0.423	(0.496)	163	0.427	(0.495)	337
Republicans	0.416	(0.494)	317	0.359	(0.48)	359	0.316	(0.465)	673
Liberals	0.755	(0.431)	314	0.578	(0.495)	308	0.602	(0.49)	621
Moderates	0.500	(0.501)	268	0.414	(0.493)	273	0.460	(0.499)	541
Conservatives	0.447	(0.498)	284	0.385	(0.487)	343	0.320	(0.467)	625
Below Median Income	0.600	(0.49)	507	0.385	(0.487)	475	0.491	(0.5)	982
Above Median Income	0.514	(0.5)	484	0.492	(0.5)	537	0.424	(0.494)	1018
Below Median Overdose Rate	0.553	(0.498)	533	0.481	(0.5)	536	0.454	(0.498)	1067
Above Median Overdose Rate	0.563	(0.497)	458	0.397	(0.49)	476	0.461	(0.499)	933
Know Someone w/ Addiction	0.598	(0.491)	547	0.479	(0.5)	528	0.501	(0.5)	1074
Don't Know Someone w/ Addiction	0.509	(0.5)	444	0.401	(0.491)	484	0.406	(0.491)	926

D Treatment Funding Results in Tabular Form

In this section, we present our main effects of financial self-interest (Table A5) both as differences in means and when modeled with demographic covariates, as presented graphically in Figure 2. Across each specification, the covariate-adjusted effect of self-interest differs only in magnitude from the difference-in-means tests.

Finally, we test for heterogeneous effects of financial self-interest among different respondent groups for each of the two policy funding options by interacting the measure of financial self-interest with demographic covariates. We present these results in Table A6, with the redistributive funding model in columns 1-4 and the overdose rate-based funding model in columns 5-8. These results are shown graphically in Figure A2 as well, with support for the redistributive funding model in the left panel and for the overdose rate-based funding model in the right panel. This demonstrates that the effect of self-interest on support for the redistributive funding model for Republicans manifests as a boost in support among low-income individuals that closes the distance between partisans by more than half.

Table A5: Financial Self-Interest Effects

	Support for:					
	Redistributive Policy			Needs-based Policy		
	(1)	(2)	(3)	(4)	(5)	(6)
Above State Median Income	-0.085*** (0.031)	-0.111*** (0.036)			0.086** (0.036)	
Above Median Overdose Rate		-0.011 (0.032)		-0.084*** (0.031)	-0.067** (0.033)	
Age		0.002* (0.001)			0.002** (0.001)	
Female		-0.034 (0.032)			-0.084** (0.033)	
Black		-0.121** (0.056)			-0.102* (0.058)	
Hispanic		-0.081* (0.046)			-0.040 (0.050)	
Homeowner		-0.089** (0.039)			-0.038 (0.040)	
Independent		-0.253*** (0.055)	-0.268*** (0.042)		-0.011 (0.057)	-0.085* (0.045)
Republican		-0.201*** (0.049)	-0.277*** (0.034)		-0.118** (0.050)	-0.149*** (0.034)
Moderate		-0.151*** (0.044)			-0.123*** (0.046)	
Conservative		-0.145*** (0.053)			-0.130** (0.055)	
College Degree		0.071** (0.034)			-0.001 (0.034)	
Married		-0.017 (0.035)			-0.002 (0.036)	
Constant	0.600*** (0.022)	0.812*** (0.067)	0.693*** (0.021)	0.481*** (0.021)	0.553*** (0.068)	0.508*** (0.022)
Observations	991	842	990	1,012	902	1,010
Adjusted R ²	0.006	0.121	0.074	0.006	0.048	0.017
F Statistic	7.317***	9.879***	40.605***	7.301***	4.499***	9.577***

Note:

*p<0.1; **p<0.05; ***p<0.01

Omitted category for partisanship is 'Democrat'
and for ideology is 'Liberal'

Table A6: Financial Self-Interest Effect: Heterogeneity by Respondent Characteristics

	Support for:			
	Redistributive Policy		Needs-based Policy	
	(1)	(2)	(3)	(4)
Above Median Income	0.019 (0.042)	-0.035 (0.065)		0.083 (0.053)
Party = Independent	-0.175*** (0.053)	-0.156** (0.070)	-0.079 (0.061)	0.013 (0.072)
Party = Republican	-0.162*** (0.050)	-0.106* (0.062)	-0.177*** (0.047)	-0.139** (0.060)
Above Median Overdose Rate $\times$ Party = Independent			-0.025 (0.089)	-0.065 (0.107)
Above Median Overdose Rate $\times$ Party = Republican			0.046 (0.069)	0.047 (0.071)
Above Median Overdose Rate		-0.010 (0.032)	-0.107** (0.044)	-0.077* (0.046)
Above Median Income $\times$ Party = Independent	-0.262*** (0.087)	-0.214** (0.101)		
Above Median Income $\times$ Party = Republican	-0.208*** (0.068)	-0.175** (0.071)		
Constant	0.684*** (0.030)	0.580*** (0.100)	0.562*** (0.032)	0.437*** (0.099)
Demographic controls		✓		✓
Observations	990	842	1,010	902
Adjusted R ²	0.092	0.126	0.024	0.045
F Statistic	21.135***	8.112***	5.861***	3.496***

Note:

*p<0.1; **p<0.05; ***p<0.01
Omitted category for partisanship is 'Democrat'

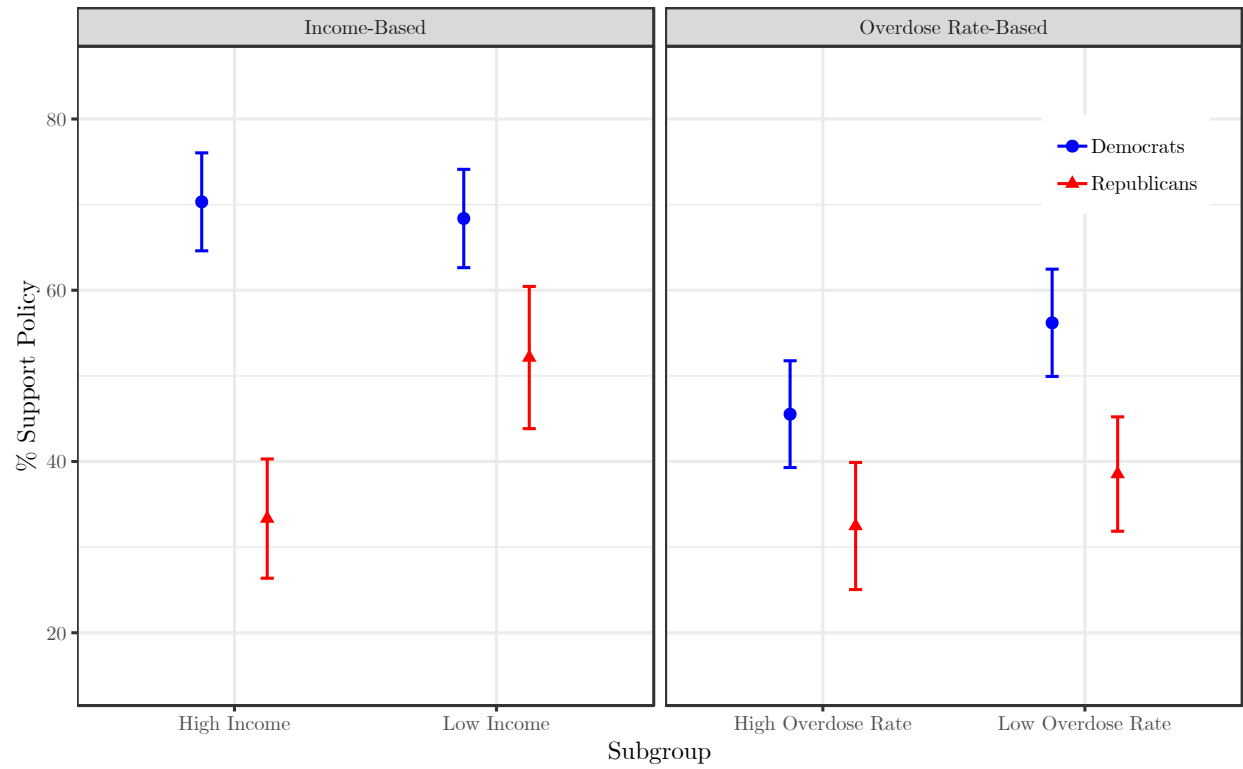


Figure A2: Treatment funding policy support and 95%-confidence intervals by respondent characteristics.

E NIMBY Experiment in Tabular Form

In this section, we present the results for our clinic construction policy proposal. First, we present our main treatment effect both with and without demographic controls in Table A7. Across each specification the covariate-adjusted effect of self-interest differs only in magnitude from the difference-in-means tests.

Table A7: Spatial Self-Interest Effects

	Support for:	
	Clinic Construction	
	(1)	(2)
Distance Condition	−0.142*** (0.022)	−0.154*** (0.023)
Above State Median Income		−0.041 (0.025)
Above Median Overdose Rate		−0.013 (0.023)
Age		0.001 (0.001)
Female		−0.053** (0.023)
Black		0.0002 (0.040)
Hispanic		0.023 (0.034)
Homeowner		−0.094*** (0.028)
Independent		−0.081** (0.039)
Republican		−0.133*** (0.035)
Moderate		−0.095*** (0.031)
Conservative		−0.163*** (0.038)
College Degree		0.003 (0.024)
Married		−0.034 (0.025)
Constant	0.526*** (0.015)	0.777*** (0.050)
Observations	2,000	1,741
Adjusted R ²	0.020	0.096
F Statistic	41.280***	14.176***

Note:

*p<0.1; **p<0.05; ***p<0.01

Omitted category for partisanship is 'Democrat'
and for ideology is 'Liberal'

Additionally, in Table A8 we display the mean support among respondents in the *near* treatment and among those in the *far* treatment for various subgroups of respondent characteristics, along with the experimental treatment effect of spatial self-interest. In Figure A3 we show these subgroup treatment effects across ideology, income, personal contact with someone struggling with addiction, local overdose rates, and race.

Finally, in Table A9 we more formally test for heterogeneity in our treatment effect of spatial self-interest by interacting our treatment indicator with various demographic characteristics. Across income, partisanship, and personal knowledge of someone with addiction, we find no statistically distinguishable differences in the size of the effect of spatial self-interest, for both the raw treatment effects and the covariate-adjusted effects. We do find that the negative treatment effect of spatial self-interest is smaller for respondents who live in areas with above-median overdose rates ($p < 0.10$). Specifically, as shown by the interaction terms in columns (3) and (4), the magnitude of the effect of spatial self-interest among respondents live in areas with higher overdose rates is approximately half the size of the effect among people who live in areas with lower overdose rates. This interaction lacks a clear theoretical explanation. As shown in Table A8 and Figure A5, respondents in high overdose areas expressed both *less* support for clinics ‘far’ from them and *more* support for clinics ‘near’ them. At the same time, the treatment effect of spatial self-interest is consistent across groups personally exposed to someone struggling with addiction: the effects shown in Figure A7 are similar across groups that did and did not report knowing someone with opioid addiction issues. Future research should more fully explore this heterogenous effect.

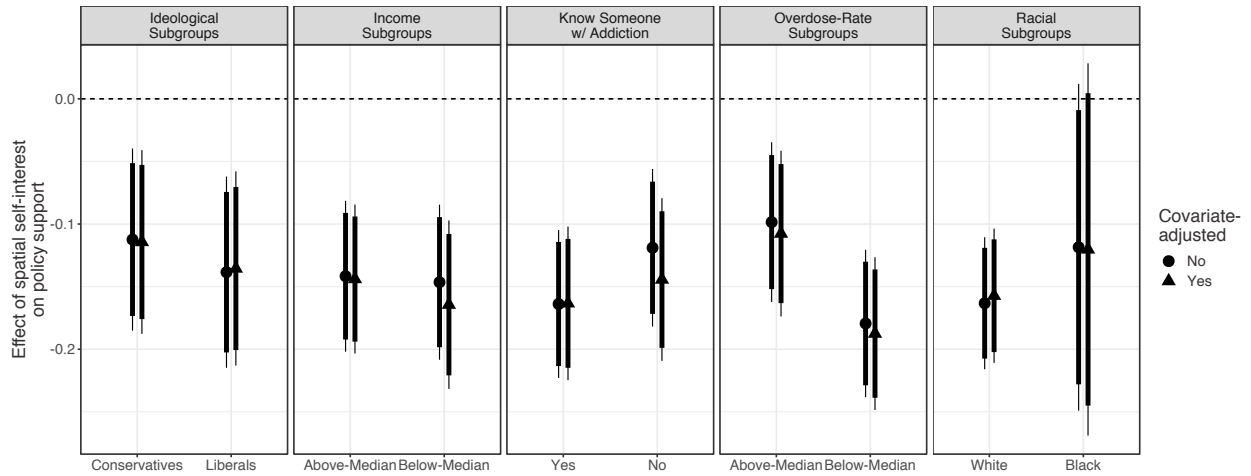


Figure A3: Clinic construction policy support and 95%-confidence intervals by respondent characteristics.

Table A8: Spatial Burden Subgroup Means and Treatment Effects

Subset	Mean[Far]	Mean[Near]	Treatment effect (CI)	p-value of difference
All Respondents	0.526	0.385	-0.142 (-0.185, -0.099)	0
n	1024	984		
Above Median Income	0.492	0.35	-0.142 (-0.202, -0.082)	0
n	539	487		
Below Median Income	0.565	0.419	-0.146 (-0.208, -0.084)	0
n	485	497		
Above Median Overdose Rate	0.508	0.41	-0.098 (-0.162, -0.035)	0.003
n	484	452		
Below Median Overdose Rate	0.543	0.363	-0.179 (-0.238, -0.121)	0
n	540	532		
Democratic Respondents	0.634	0.486	-0.148 (-0.209, -0.086)	0
n	508	483		
Republican Respondents	0.39	0.235	-0.155 (-0.224, -0.086)	0
n	356	320		
Know Someone with Addiction	0.582	0.418	-0.164 (-0.223, -0.105)	0
n	543	533		
Don't Know Someone with Addiction	0.463	0.345	-0.119 (-0.182, -0.056)	0
n	481	451		

Table A9: Spatial Self-Interest Treatment Effect: Heterogeneity by Respondent Characteristics

	<i>Dependent variable:</i>							
	Clinic Construction Support							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment Condition = Near	-0.146*** (0.031)	-0.164*** (0.034)	-0.179*** (0.030)	-0.188*** (0.031)	-0.119*** (0.032)	-0.142*** (0.033)	-0.148*** (0.031)	-0.164*** (0.032)
Above Median Income	-0.073** (0.031)	0.00003 (0.044)						
Treatment Condition = Near $\times$ Above Median Income	0.005 (0.044)	0.021 (0.046)						
Above Median Overdose Rate			-0.035 (0.031)	-0.052 (0.032)				
Treatment Condition = Near $\times$ Above Median Overdose Rate			0.081* (0.044)	0.077* (0.046)				
Know Someone w/ Addiction					0.119*** (0.031)	0.099*** (0.032)		
Treatment Condition = Near $\times$ Know Someone w/ Addiction					-0.045 (0.044)	-0.022 (0.045)		
Party = Independent							-0.150*** (0.044)	-0.118** (0.054)
Party = Republican							-0.245*** (0.033)	-0.141*** (0.042)
Treatment Condition = Near $\times$ Party = Independent							0.040 (0.061)	0.070 (0.072)
Treatment Condition = Near $\times$ Party = Republican							-0.007 (0.048)	0.007 (0.050)
Constant	0.565*** (0.022)	0.601*** (0.071)	0.543*** (0.021)	0.613*** (0.069)	0.463*** (0.022)	0.519*** (0.070)	0.634*** (0.021)	0.677*** (0.068)
Demographic controls	✓		✓		✓		✓	
Observations	2,000	1,741	2,000	1,741	2,000	1,741	1,997	1,741
Adjusted R ²	0.024	0.097	0.020	0.099	0.029	0.105	0.068	0.098
F Statistic	17.287***	12.748***	14.904***	12.956***	20.675***	13.782***	30.188***	12.795***

Note:

*p<0.1; **p<0.05; ***p<0.01

Omitted category for partisanship is 'Democrat'. Controls include age, income, gender, partisanship, ideology, college degree, marital status, race, and homeownership.

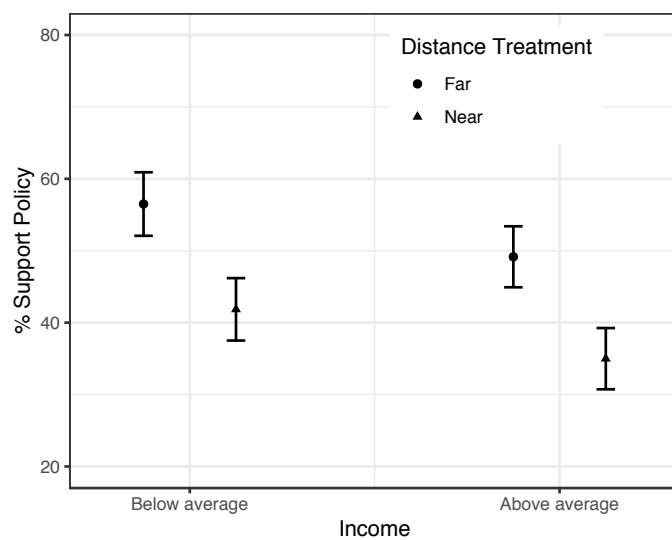


Figure A4: Clinic construction policy support and 95%-confidence intervals by respondent income compared to median income within respondent's state.

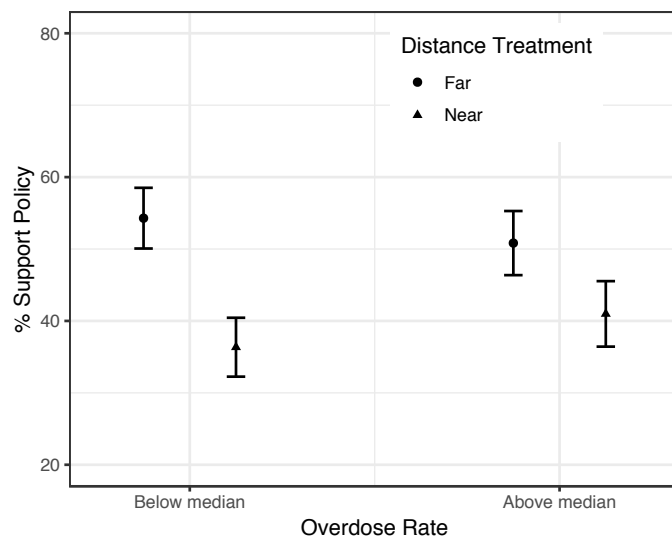


Figure A5: Clinic construction policy support and 95%-confidence intervals by respondent's county's overdose rate compared to median overdose rate within respondent's state.

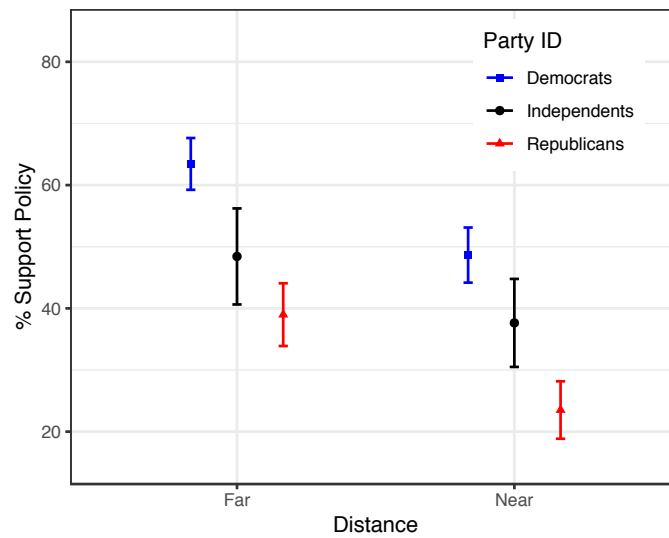


Figure A6: Clinic construction policy support and 95%-confidence intervals by respondent partisanship.

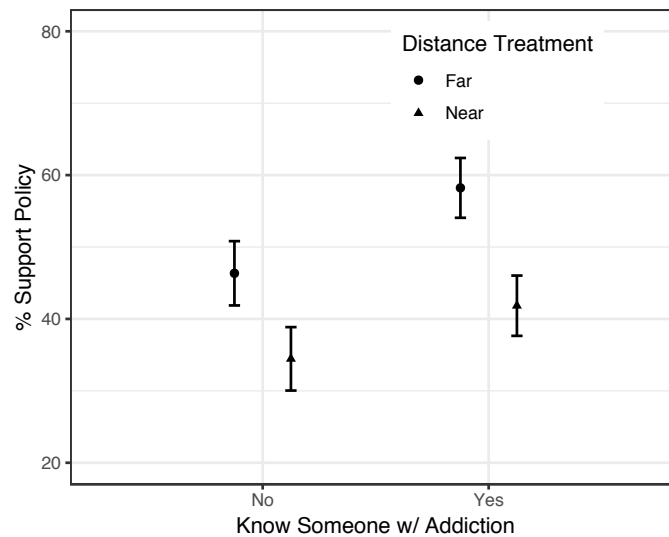


Figure A7: Clinic construction policy support and 95%-confidence intervals by respondent's personal exposure to someone who has been addicted to opioids.

F Survey Questions

The survey used in this study contained two policy proposals and one follow-up question. Each respondent answered both policy questions, and the order of the two policy questions was randomized. For the first proposed policy, respondents viewed one of two split-sample options describing the funding model of the proposed state policy to treat opioid addiction: either a needs-based or an income-based funding model. Each respondent's state was piped into the question wording using their state of residence as previously reported in the NORC AmeriSpeak intake survey. Information on the respondent's area's rate of opioid use was similarly piped in using their ZIP code. Information on whether the respondent was above or below their state's median income was also piped in using their pre-reported income. For the second policy proposal, respondents viewed one of two options that differently described the location of a proposed opioid addiction treatment clinic. Finally, all respondents answered the question on personal exposure to the opioid crisis.

Proposal 1, evenly randomized between Needs-Based Treatment and Income-Based Option

1. The [STATE] government is considering a policy to fund medication-assisted treatment programs for people with substance abuse problems across the state. The cost would be \$100 million total. These programs would help people affected by the opioid crisis. It would do this by providing needed medication and follow-up that can keep them off dangerous opioids and prevent deadly overdoses. Taxpayers in [STATE] will bear the costs of this policy, divided up in the following way.

[Local Overdose Rate-Based Option]

- Taxpayers in areas with above average rates of opioid use will pay an additional \$55 in taxes. In contrast, taxpayers in areas with below average rates of opioid use will pay an additional \$5 in taxes.¹²
- Based on your ZIP code, you live in an area with [an above/a below] average rate of opioid use.

[Income-Based Option]

- Taxpayers with an above average income will pay an additional \$55 in taxes. In contrast, taxpayers with a below average income will pay an additional \$5 in taxes.
- Based on your income, you have [an above/a below] average level of income.

Would you support or oppose this policy?

1. Strongly support
2. Somewhat support
3. Neither support nor oppose
4. Somewhat oppose
5. Strongly oppose

¹²Although the assignment is based on above/below the state's median level, we use the term 'average' for cognitive ease.

Experiment, evenly randomized between Near Treatment and Far Treatment

2. Medication-assisted treatment clinics provide help for people with substance abuse problems. They do this by providing needed medication (such as methadone) and follow-up that can keep them off dangerous opioids and prevent deadly overdoses.

[Near Treatment]

Would you support the opening of a new medication-assisted treatment clinic for opioid addiction a 1/4 mile (5 minute walk) from your home?

[Far Treatment] Would you support the opening of a new medication-assisted treatment clinic for opioid addiction 2 miles (40 minute walk) from your home?

1. Strongly support
2. Somewhat support
3. Neither support nor oppose
4. Somewhat oppose
5. Strongly oppose

Personal Exposure, descriptive/non-experimental question 3. Do you personally know anyone who has ever been addicted to opioids, including prescription painkillers or heroin?

1. Yes, me
2. Yes, a family member
3. Yes, a close friend
4. Yes, an acquaintance
5. No, I do not know anyone who has ever been addicted to opioids