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Rapid-Cycle Experimentation With State and Federal Policymakers for Optimizing the Reach of Racial Equity Research

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Abstract

Racial disparities and racism are pervasive public health threats that have been exacerbated by the COVID-19 pandemic. Thus, it is critical and timely for researchers to communicate with policymakers about strategies for reducing disparities. From April through July 2020, across four rapid-cycle trials disseminating scientific products with evidence-based policy recommendations for addressing disparities, we tested strategies for optimizing the reach of scientific messages to policymakers. By getting such research into the hands of policymakers who can act on it, this work can help combat racial health disparities.

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CONTRIBUTORS

E. C. Long wrote the first and subsequent drafts of the article, with contributions and feedback from J. Pugel, J. T. Scott, N. Charlot, C. Giray, M. A. Fernandes, and D. M. Crowley. E. C. Long, J. Pugel, and J. T. Scott conceptualized the study. J. Pugel conducted data analysis and interpretation, with contributions from E. C. Long, J. T. Scott, and D. M. Crowley.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

HUMAN PARTICIPANT PROTECTION

This work was deemed exempt by the Pennsylvania State University's institutional review board because policymakers are elected public officials and the study consists of natural observation using nonintrusive monitoring mechanisms.

The American Medical Association has declared racism a public health threat,¹ recognizing that racial disparities are pervasive problems in the United States caused by systemic racism. For example, Black people are 3.73 times more likely than White people to be arrested for marijuana possession, despite similar rates of use.² Incarceration affects the detainee's physical health³ as well as their communities' social and economic conditions. Consequently, disproportionate rates of incarceration perpetuate racial health disparities.

COVID-19 has exacerbated these disparities. For instance, COVID-19 death rates are highest among people of color, with the death rate of Black Americans being 2.5 times higher than that of White Americans.⁴ Mitigation efforts also disproportionately leave racial minorities less protected (e.g., working from home is possible for only one in five Black people⁵). Given these issues and President Biden's recent executive order to advance racial equity, it has arguably never been timelier and more important for researchers to communicate with policymakers about strategies for reducing racial disparities.

INTERVENTION

We conducted four rapid-cycle randomized controlled trials to test strategies for optimizing science-policy communication.

PLACE AND TIME

We conducted trials electronically between April and July 2020 in the United States.

PERSON

Participants included state legislators, their staff, and federal staff who work on committees and issues related to health, education, children, the judiciary, and race. Our sample varied across trials because we chose participants based on distribution topic and because our sampling strategy evolved overtime. Demographic information for staff is not readily available in public databases because of high turnover. Accordingly, we are able to provide demographic information only for state legislators (see the Appendix, Table A [available as a supplement to the online version of this article at <http://www.ajph.org>]).

PURPOSE

The purpose of these trials was to improve the reach of research on racial disparities to policymakers.

IMPLEMENTATION

Across four trials, we disseminated an op-ed on marijuana legalization (trial 1), an invitation to a congressional briefing on racial and rural health disparities (trial 2), a fact sheet on employment issues Black individuals have faced during the COVID-19 pandemic (trial 3), and a second invitation to the briefing (trial 4). Trial topics were informed by previous interactions with policymakers that occurred through the Research-to-Policy Collaboration, which is a model for bridging the research-policy gap through relationships or by the

timeliness of the issue. Therefore, topics were current and relevant to policymakers' priorities.

An author of the research product, who received support in creating the product from the Research-to-Policy Collaboration, sent all e-mails. Therefore, the senders were always human names, not organization names. It was not apparent from the sender line that the sender was a researcher because it appeared as just a name, which policymakers likely perceived to be from a constituent. Because policymakers frequently receive e-mails from constituents with concerns or information, the interactions these distributions produced were typical and expected. In trials, the senders were consistent except for trial 2, which used a counterbalanced design. Between trials, senders were different. All e-mails included a brief introduction and a link to a resource for evidence-based policy recommendations to address racial disparities. In accordance with the nature of rapid-cycle trials, these trials occurred approximately two weeks apart over a two-month period.

To guide the development of subject lines, we relied on social psychology theories such as the elaboration likelihood model.⁶ This model suggests there is a peripheral route to persuasion that relies on emotion. Thus, hot-button issues (e.g., racism) may elicit strong emotions, resulting in action (e.g., opening an e-mail). Relatedly, the theory/ of automatic vigilance suggests that individuals pay more attention to negative information than positive.⁷ Negative framing (e.g., "threats," "risks") may prompt automatic vigilance and capture the recipient's attention, resulting in more e-mail opens. However, the central route to persuasion relies on logic and reasoning. Neutral framing that relies on reason (e.g., "information," "issues") may instead be more effective than emotional framing. Finding/s from each trial informed subject line development in subsequent trials (see the Appendix for more details).

We randomized participants into equally sized groups to receive one of the following subject lines:

Trial 1: "Information on marijuana policy reform"; "Research on marijuana policy reform"; "Social disparities in marijuana policies"

Trial 2: "Briefing on racial and rural health issues"; "Briefing on racial and rural health disparities"; "Briefing on racial and rural health inequities"

Trial 3: "Black community faces more oppression during COVID"; "Compounded risks for Black people during COVID"; "Unequal threats for Black people during COVID"

Trial 4: "Briefing: New solutions for addressing health differences"; "Briefing: Threats to the health of various communities"

EVALUATION

We tracked the number of e-mail opens for 14 days to evaluate which framing was most successful. We conducted negative binomial regressions to test whether the experimental

subject lines resulted in more e-mail opens than did a control subject line (Table 1 presents results).

Trial 1 participants who received the e-mail with the “social disparities” subject line opened the e-mail 21% more times than those who received the “information” line ($P = .02$). There were no significant effects of subject line on e-mail opens in trial 2. In trial 3, those who received the subject lines with the word “oppression” opened the e-mail 18% more times than those who received the subject line with the phrase “unequal threats” ($P < .01$). Those who received the subject line with the word “threats” in trial 4 opened the e-mail 17% more than those who received the line with the phrase “new solutions” ($P = .02$). In post hoc analyses, we found no evidence of interaction between political party and messaging group.

ADVERSE EFFECTS

We are not aware of any adverse effects that occurred as a result of the trials. Observing open rates of e-mails is common practice. Responses from offices were monitored and were typically neutral or positive.

SUSTAINABILITY

Identifying ways to improve the reach of research sent via e-mail to policymakers lends itself to the increased need for safe communication when geography or public health risks restrict in-person communications. However, infrastructure for communicating with policy audiences remains lacking across scientific and medical contexts and should be strengthened.

PUBLIC HEALTH SIGNIFICANCE

The goal and subsequent public health impacts of these rapid-cycle randomized trials were to assess communication patterns that improve research access among policymakers. It is critical to identify effective ways for researchers to reach policymakers and to convey research in a way that is useful so that it can be used in policies intended to combat public health threats. Racism is one such public health threat that must be addressed through systemic public policy changes. The trials in this study elucidated several helpful communication techniques that can be used in research communication work. Notably, evoking strong emotional responses appears to increase policymakers’ access to research on racial health disparities, which can lead to evidence-driven policies that dismantle racism in health systems. Future work is needed, however, to further understand the impact of emotion-evoking framing (e.g., does it prompt action or just attention?), examine other public health contexts such as climate change, and examine how sociopolitical conditions at the time of the trials may affect results. Our work lays the foundation for future research on science–policy communication that can facilitate evidence-based policymaking and improve public health.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1.

Results of negative binomial models testing the effects of subject lines on number of opens

	N	Opens (\hat{y})	IRR (95% CI)	SE	z	P
Trial 1	3261					
Information on marijuana policy reform	1087	623 (0.57)	-	-	-	-
Research on marijuana policy reform	1089	580 (0.53)	0.93 (0.79, 1.09)	0.08	-0.90	0.37
Social disparities in marijuana policies	1085	754 (0.70)	1.21 (1.04, 1.42)	0.10	2.44	0.02
Trial 2	6933					
Briefing on racial and rural health issues	2320	1499 (0.65)	-	-	-	-
Briefing on racial and rural health disparities	2293	1520 (0.66)	1.00 (0.87, 1.14)	0.07	0.03	0.97
Briefing on racial and rural health inequities	2320	1667 (0.72)	1.01 (0.96, 1.25)	0.07	1.41	0.16
Trial 3	6959					
Black community faces more oppression during COVID	2314	2163 (0.93)	-	-	-	-
Compounded risks for Black people during COVID	2308	1763 (0.78)	0.84 (0.73, 0.97)	0.06	-2.33	0.02
Unequal threats for Black people during COVID	2337	1820 (0.75)	0.81 (0.70, 0.93)	0.06	-2.95	<0.01
Trial 4	5468					
Briefing: New solutions for addressing health differences	2737	1597 (0.58)	-	-	-	-
Briefing: Threats to the health of various communities	2731	1867 (0.68)	1.17 (1.03, 1.33)	0.08	2.39	0.02

Note. \hat{y} = predicted value of opens (the mean); IRR = incident ratio interval; CI = confidence interval; SE = standard error.