



# No evidence that collective-good appeals best promote COVID-related health behaviors

Nathaniel Rabb<sup>a,1</sup> , David Glick<sup>a,b</sup>, Attiyya Houston<sup>a</sup>, Jake Bowers<sup>a,c</sup> , and David Yokum<sup>a</sup>

Invoking the good of the community is common guidance for promoting public health behaviors. Korn et al. (1) suggest emphasizing the collective nature of vaccination to promote uptake after finding that people treat vaccination like a social contract transcending in-group/out-group dynamics. Similar recommendations appear in COVID-19 policy briefs (2, 3) and popular press articles (4). If appeals beyond narrow self-interest can increase willingness to vaccinate, lives will be saved since intent-to-vaccinate levels hover below that required for herd immunity. Also, the rationale for this strategy is clear: Public health emergencies require collective effort, so motivating individual contributions with community appeals is intuitive and rhetorically uncontroversial.

Unfortunately, we have found no direct evidence that collective-good appeals work for vaccinations and considerable related evidence suggesting they should not. COVID-19 behavioral studies show no effect of such appeals on intended social distancing (5–7) or self-reported staying at home (8), a small effect on intended mask-wearing that vanished with demographic controls (5), and a reverse effect—self and family appeals faring better than community appeals—for intended staying at home (8) and real information seeking (choosing to read Centers for Disease Control and Prevention guidelines; ref. 9). Only one experiment in one paper (7) showed an unqualified increase in intended preventive behaviors. An earlier, hypothetical vaccination experiment (10) also showed no main effect of collective framing.

As part of The Policy Lab's regular surveys on COVID beliefs and attitudes, we tested community- versus family-based appeals for vaccination in a randomized

survey experiment (500 Rhode Island residents, YouGov, code/data: <https://github.com/thepolicylab/COVID-YouGovSurveyAnalysis>) conducted after the Pfizer-BioNTech vaccine received emergency authorization (11 to 23 December 2020). We measured vaccination interest by offering people the option to read their state's vaccination plan and hence learn "which groups are likely to receive the coronavirus vaccine first." A statement preceding the option read "Getting vaccinated against the coronavirus is important for the health and wellbeing of your [family/community]." We reasoned that taking time for additional reading after a long survey indicated vaccination interest with minimal social desirability bias. Respondents who clicked the link saw a real infographic issued by the department of health.

Most people (75%) did not read the plan. However, consistent with ref. 9, more who did were in the family (29%) than in the community condition (22%; Cochran–Mantel–Haenszel test,  $\chi^2 = 3.7$ ,  $P = 0.06$ ). The result remains for the subset of greatest concern, those who did not report definite intentions to vaccinate ( $n = 273$ ; 26% vs. 13%,  $\chi^2 = 7.5$ ,  $P = 0.009$ ). Neither baseline vaccine intention (1-to-5 scale:  $M_{\text{Family}} = 3.45$ ,  $M_{\text{Community}} = 3.66$ ,  $t[498] = -1.6$ ,  $P = 0.109$ ) nor any other demographic variable (overall balance test with 26 terms,  $P = 0.3$ ) differed by experimental condition.

The balance of evidence suggests, counterintuitively, that common-good appeals have limited utility. Although our data cannot show whether they are better than no message at all, we caution against relying on them to encourage high-cost behaviors like vaccination. Health message interventions may be most successful by appealing to the well-being of people's families.

**1** L. Korn, R. Böhm, N. W. Meier, C. Betsch, Vaccination as a social contract. *Proc. Natl. Acad. Sci. U.S.A.* **117**, 14890–14899 (2020).

**2** National Academies of Sciences, Engineering, and Medicine, *Encouraging Adoption of Protective Behaviors to Mitigate the Spread of COVID-19: Strategies for Behavior Change* (National Academies Press, Washington, DC, 2020).

**3** ideas42, Behavioral science tips for COVID-19 communications. [http://www.ideas42.org/wp-content/uploads/2020/05/I42-1226\\_uPennCOVID\\_Tipsheet\\_comms\\_4.pdf](http://www.ideas42.org/wp-content/uploads/2020/05/I42-1226_uPennCOVID_Tipsheet_comms_4.pdf). Accessed 21 December 2020.

<sup>a</sup>The Policy Lab, Brown University, Providence, RI 02903; <sup>b</sup>Department of Political Science, Boston University, Boston, MA 02215; and <sup>c</sup>Department of Political Science, University of Illinois at Urbana–Champaign, Urbana, IL 61801

Author contributions: N.R., D.G., A.H., and D.Y. designed research; N.R. and A.H. performed research; N.R., D.G., and J.B. analyzed data; and N.R., D.G., A.H., J.B., and D.Y. wrote the paper.

The authors declare no competing interest.

Published under the [PNAS license](#).

<sup>1</sup>To whom correspondence may be addressed. Email: natrabb@gmail.com.

Published March 24, 2021.

**4** S. Roberts, The pandemic is a prisoner's dilemma game. *NY Times*, 20 December 2020. <https://www.nytimes.com/2020/12/20/health/virus-vaccine-game-theory.html>. Accessed 21 December 2020.

**5** V. Capraro, H. Barcelo, The effect of messaging and gender on intentions to wear a face covering to slow down COVID-19 transmission. *PsyArXiv* [Preprint] (2020). <https://psyarxiv.com/tg7vz/>. Accessed 12 May 2020.

**6** N. Favero, M. J. Pedersen, How to encourage "Togetherness by Keeping Apart" amid COVID-19? The ineffectiveness of prosocial and empathy appeals. *J. Behav. Public Admin.* **3**, 1–18. (2020).

**7** J. Jordan, E. Yoeli, D. G. Rand, Don't get it or don't spread it? Comparing self-interested versus prosocial motivations for COVID-19 prevention behaviors. *PsyArXiv* [Preprint] (2020). <https://psyarxiv.com/yuq7x/>. Accessed 8 April 2020.

**8** P. Falco, S. Zaccagni, Promoting social distancing in a pandemic: Beyond the good intentions. *OSF* [Preprint] (2020). <https://osf.io/a2nys/>. Accessed 11 May 2020.

**9** S. Bunker, J. Park, Evaluating prosocial COVID-19 messaging frames: Evidence from a field study on Facebook. *Judgm. Decis. Mak.* **15**, 1037–1043 (2020).

**10** C. Betsch, R. Böhm, L. Korn, C. Holtmann, On the benefits of explaining herd immunity in vaccine advocacy. *Nat. Hum. Behav.* **1**, 1–6. (2017).