

The Hazards of Correcting Myths about Health Care Reform

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ABSTRACT

Context: Misperceptions are a major problem in debates about health care reform and other controversial health issues.

Methods: We conducted an experiment to determine if more aggressive media fact-checking could correct the false belief that the Affordable Care Act would create “death panels.”

Participants from an opt-in Internet panel were randomly assigned to either a control group in which they read an article on Sarah Palin’s claims about “death panels” or an intervention group in which the article also contained corrective information refuting Palin.

Findings: The correction reduced belief in death panels and strong opposition to the reform bill among those who view Palin unfavorably and those who view her favorably but have low political knowledge. However, it backfired among politically knowledgeable Palin supporters, who were *more* likely to believe in death panels and to strongly oppose reform if they received the correction.

Conclusions: These results underscore the difficulty of reducing misperceptions about health care reform among individuals with the motivation and sophistication to reject corrective information.

Keywords: health care reform, Patient Protection and Affordable Care Act, public opinion, policy

Introduction

Public opinion often plays an important role in the success or failure of health care policies. Such opinion is frequently influenced by misinformation, which plagues health policy debates (see, e.g., Sigal 1996, Freed et al. 2010, Gollust and Lantz 2009, Nyhan 2010, Poland and Spier 2010). For instance, a recent poll (Kaiser 2012) found that misinformation about health care reform continues to persist more than two years after enactment of the Affordable Care Act (ACA). One reason for these problems, many argue, is the media's failure to counter misinformation about health policy. If the media were more aggressive, would such corrections be effective?

Unfortunately, it may be difficult to overcome “motivated reasoning” – people's biases toward their pre-existing attitudes and beliefs (Zunda 1990, Molden and Higgins 2005), which often lead them to accept pro-attitudinal claims uncritically while resisting counter-attitudinal information (Lord, Ross, and Lepper 1979; Edwards and Smith 1996; Munro and Ditto 1997; Taber and Lodge 2006). In politics, people are more likely to accept unsupported claims that are consistent with their partisan or ideological views (Ramsay et al. 2010, Nyhan and Reifler 2012) while resisting counter-attitudinal corrections (Nyhan and Reifler 2010).

Perhaps the most prominent example of misinformation about health reform was former Alaska governor Sarah Palin's August 7, 2009 claim that President Obama's plan would create a “death panel” in which bureaucrats decide whether seniors are “worthy of health care” (Palin 2009). This claim received extensive coverage despite being widely debunked (Nyhan 2010, FactCheck.org 2009, PolitiFact.com 2009, Media Matters 2009). Just a week later, a Pew poll found that 86% of Americans had heard the claim and that 30% believed it, including 47% of Republicans. These beliefs have persisted – for instance, a February 29-March 5, 2012 Kaiser

poll found that 36% of Americans believe that ACA would “[a]llow a government panel to make decisions about end-of-life care for people on Medicare.”

We seek to answer two questions in this study. First, would media corrections reduce misperceptions about “death panels” or is motivated reasoning too difficult to overcome? Second, would correcting misperceptions about “death panels” reduce opposition to health care reform? To answer these questions, which have important implications for our understanding of public beliefs about controversial health issues, we created a mock news article about Palin’s statement and experimentally varied respondents’ exposure to corrective information, allowing us to isolate its effect on beliefs about “death panels” and support for reform.

Methods

Participants for the study, which was conducted from March 7-17, 2011, were recruited from the SurveySpot opt-in panel. While this convenience sample is not representative of the U.S. population, SurveySpot contains more than one million U.S. adults and has been shown to provide results that are comparable to more representative samples (Lacey, Smith, and Ubel 2006). We validate our sample by comparing control group responses to poll results from the same period below.

Experimental design

Respondents were randomly assigned to one of two versions (including or omitting corrective information) of a realistic article on the Palin claim dated August 2009. The correction was a paragraph at the end of the article explaining why “non-partisan health care experts have concluded that Palin is wrong.” This paragraph was omitted for the control group. (See appendix

for screenshot.) The story was modeled on the original Associated Press article on Palin’s claim but attributed to the fictional “Breakingnews.com.”

Measures

Our study assessed two outcome variables – (1) belief in the death panels myth and (2) ACA approval (“strongly disapprove” [1] to “strongly approve” [5]). The measure of death panels belief asked participants whether they agreed that “Obama’s original health care reform proposal would have created government panels with the power to deny care to individual elderly patients” (“strongly disagree” [1] to “strongly agree” [5]). The wording and response scales of these measures are similar to previous public polls.

In addition to our outcome variables, we collected two measures that we expected to moderate the effect of the correction on respondents’ beliefs and opinions. First, we recorded a pre-intervention measure of Palin feelings on a 0-100 feeling thermometer (a standard measure in political science) where higher values represent warmer feelings. We expected respondents who viewed Palin more favorably to be more likely to reject corrective information about her.

Second, people who are more knowledgeable or sophisticated are generally better able to resist unwelcome information (Taber and Lodge 2006, Zaller 1992), which can lead them to be *more* likely to hold certain misperceptions than we might otherwise expect (Nyhan 2010). We therefore asked participants to answer a five-item political knowledge scale that is frequently used in political science research (Delli Carpini and Keeter 1996; see appendix.) Respondents were given thirty seconds per question to limit their ability to look up answers online. We predicted that motivated reasoning would be more pronounced among knowledgeable respondents who were predisposed to resist the correction.

Analysis

Because our dependent variables are Likert scales, we analyzed our results using ordered probit models. Each model included an indicator for the correction, a Palin feeling thermometer, and a political knowledge score, as well as two- and three-way interactions between these variables, which allow for the effect of the treatment to vary depending on both respondent knowledge and feelings toward Palin. To improve efficiency, we also included demographic controls (indicators for respondents who were 65 years old as well as for male and black respondents) and indicators for respondents who identified as Democrats or Republicans (including those who “lean” toward one party). All analyses were conducted in Stata 11; predicted probabilities and marginal effects were calculated using SPost (2006).

Results

Among our 948 respondents, 53% were male; 78% were non-Hispanic whites, 14% were black, and 8% were Hispanic. The median age was 51. Politically, 45% identified as Democrats and 35% as Republicans (including leaners). Mean feelings about Palin were 35 on a 0-100 scale (20 among Democrats, 54 among Republicans). The median number of correct responses to our political knowledge scale was 2 (distribution: 0 [5%], 1 [21%], 2 [30%], 3 [26%], 4 [16%], 5 [3%]) and college graduates made up 34% of the sample. The experimental groups did not differ significantly in any of these characteristics (all p -values $> .20$ in two-sided t -tests).

To validate our sample, we compare our control group with national polls. In the control group, 36% said they either “strongly agree” (15%) or “somewhat agree” (21%) with Palin’s death panel claim. This proportion is similar to the 40% of Americans who reported in a

December 2010 Kaiser poll that the ACA would “allow a government panel to make decisions about end-of-life care for people on Medicare.” Not surprisingly, there were wide partisan differences among controls. Almost three in five Republicans agreed (22% strongly, 36% somewhat) compared with fewer than one in five Democrats (8% strongly, 10% somewhat).

Overall, 59% of control group respondents disapproved of the ACA (36% “strongly,” 23% “somewhat”), while 41% approved (17% “strongly,” 23% “somewhat”). These results are remarkably consistent with national polling conducted while our experiment was in the field – a March 11-13, 2011 CNN/Opinion Research poll reported that 59% opposed the law, while a March 8-13, 2011 Kaiser poll found that 42% of Americans had a favorable view of the ACA. As with “death panels,” we found stark partisan differences in ACA approval. More than two-thirds of control-group Democrats approved (67%) compared with 11% of Republicans.

Table 1 shows the results of our ordered probit models of death panel beliefs (left column) and ACA approval (right column), which include an indicator for receiving the correction, Palin feelings, political knowledge, and two- and three-way interactions between those variables. Positive coefficients indicate a positive association with greater belief in death panels (left column) and greater approval of ACA (right column); the signs are therefore typically reversed between models.

[Table 1]

The results suggest that responses to the correction varied depending on both respondents’ feelings toward Palin and political knowledge. The interactions between the correction and Palin feelings, between the correction and knowledge, and a three-way interaction are all statistically

significant in both models ($p < .05$ or better) and significantly improved model fit ($p < .01$ in likelihood-ratio tests). In addition, the direction and significance of the interaction terms are strikingly similar (with signs reversed between models), suggesting that Palin feelings and knowledge moderated the correction's effect in both cases.

Because three-way interactions are difficult to interpret in regression tables (Brambor, Clark, and Golder 2006), Figures 1 and 2 illustrate the major findings from our models using predicted probabilities. They indicate that the correction's effectiveness varied dramatically by political knowledge and Palin feelings. Among low-knowledge respondents who had warm feelings towards Palin, the correction reduced misperceptions and increased ACA support. However, the correction's effect shifted from negative to positive as knowledge increased. Specifically, among high-knowledge respondents with very positive Palin feelings, corrective information about death panels made misperceptions *worse* and opposition to ACA *stronger*.

Specifically, Figure 1 plots the predicted probability that a non-black female political independent under 65 will strongly agree with the "death panels" claim for each condition.

[Figure 1]

The left panel in Figure 1 presents predicted probabilities across the range of Palin feelings for a low-knowledge respondent (one correct answer out of five), while the right panel presents predicted probabilities for a high-knowledge respondent (four of five). The gap between the control and correction groups is shaded for ranges of Palin feelings in which the correction's marginal effect is significant ($p < .05$). The arrow indicates the direction and magnitude of the effect.

For low-knowledge respondents with neutral or warm Palin feelings (45-100), we find that the correction reduced belief in death panels. However, we observe the opposite pattern for high-knowledge respondents – the correction decreased death panel beliefs among those with cold feelings toward Palin (0-28), but increased them among those with very warm feelings (79-100). In other words, the correction reduced misperceptions among knowledgeable Palin opponents, but *strengthened* misperceptions among knowledgeable supporters.

To make the results parallel to Figure 1, we plot the predicted probability of strong disapproval of ACA in Figure 2 using the same moderators and covariate values.

[Figure 2]

As above, we find that the correction diminishes opposition to the ACA for low-knowledge respondents who felt neutral or warmly toward Palin (47-100). However, we again see a different pattern of responses from participants who are more knowledgeable about politics. The correction significantly reduced strong disapproval to ACA among high-knowledge respondents with very cold feelings toward Palin (0-14) but *increased* strong disapproval among high-knowledge participants with very warm feelings toward her (89-100).

Discussion

These results show that corrective information can reduce health policy misinformation for some groups. Most notably, our correction decreased misperceptions about death panels and increased approval of ACA among low-knowledge respondents who viewed Palin favorably. However, the correction backfired among high-knowledge respondents who viewed Palin unfavorably,

increasing misperceptions about death panels and strong disapproval of ACA. These results demonstrate that corrective information may not be sufficient to overcome motivated reasoning among more sophisticated members of the public.

Our study has several limitations. In particular, we recruited participants from an Internet convenience sample. Nevertheless, the attitudes they expressed were quite similar to representative samples. In addition, our study involved a randomized experiment so our results cannot be attributed to sampling. Second, we only tested a textual correction. It would be worthwhile to test whether results vary depending on the correction source and mode of delivery (e.g., graphics or video). Finally, this study did not examine the specific mental processes by which people resist corrections, which can take a variety of forms (see, e.g., Nyhan and Reifler 2012).

Nonetheless, our findings raise questions about whether corrections can successfully overcome entrenched misinformation about health care reform and other controversial health issues. As we have seen with issues ranging from diabetes to vaccines, providing correct information may not be effective for members of the public who are inclined to reject the information that is being offered. It is therefore essential to improve our understanding of misperceptions and how to most effectively correct them.

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Appendix

Palin feeling thermometer

We'd like to get your feelings toward some of our political leaders and other people who are in the news these days. We will provide the name of a person and then ask you to rate that person using something we call the feeling thermometer. Ratings between 50 degrees and 100 degrees mean that you feel favorable and warm toward the person. Ratings between 0 degrees and 50 degrees mean that you don't feel favorable toward the person and that you don't care too much for that person. You would rate the person at the 50 degree mark if you don't feel particularly warm or cold toward the person. If we come to a person whose name you don't recognize, you don't need to rate that person.

- Jay Leno
- Barack Obama
- Sarah Palin
- Mitt Romney
- Conan O'Brien

Mock news report

Health care reform

Please take 30 seconds to read carefully the following article about the health care reform debate that took place **before the bill passed Congress and was signed into law**. When you are done reading, click next. Please note that you will not be able to move to the next page until 30 seconds has gone by.

Breakingnews.com
August 8, 2009

Former Alaska Gov. Sarah Palin called President Barack Obama's health plan "downright evil" Friday in her first online comments since leaving office, saying in a Facebook posting that he would create a "death panel" that would deny care to the neediest Americans.

"The America I know and love is not one in which my parents or my baby with Down Syndrome will have to stand in front of Obama's 'death panel' so his bureaucrats can decide, based on a subjective judgment of their 'level of productivity in society,' whether they are worthy of health care," the former Republican vice presidential candidate wrote.

"Such a system is downright evil," Palin wrote on her page, which has nearly 700,000 supporters. She encouraged her supporters to be engaged in the debate.

The claim that the health care bills in Congress would encourage euthanasia has been circulating on the Internet for weeks and has been echoed by some Republican leaders.

However, non-partisan health care experts have concluded that Palin is wrong. The bill in the House of Representatives would require Medicare to pay for voluntary end-of-life counseling sessions, but there is no panel in any of the health care bills in Congress that judges a person's "level of productivity in society" to determine whether they are "worthy" of health care.

[Participants were randomly assigned to view one of two versions of this article. The version that includes corrective information appears above. The no-correction version does not include the final paragraph of the article above but was otherwise identical. Both versions included a picture of Palin.]

Outcome variables

President Obama's original health care reform proposal would have created government panels with the power to deny care to individual elderly patients.

- Strongly disagree [1]
- Somewhat disagree [2]
- Neither agree nor disagree [3]
- Somewhat agree [4]
- Strongly agree [5]

From what you've heard or read, do you approve or disapprove of the new health care reform law?

- Approve
- Disapprove

[branching – approve)]

Do you strongly approve or somewhat approve of the new health care reform law?

- Strongly approve [1]
- Somewhat approve [2]

[branching – disapprove)]

Do you strongly disapprove or somewhat disapprove of the new health care reform law?

- Strongly disapprove [4]
- Somewhat disapprove [3]

Political knowledge scale

[30 second time limit per question]

How many times an individual can be elected President of the United States under current laws?

For how many years is a United States Senator elected - that is, how many years are there in one full term of office for a U.S. Senator?

How many U.S. Senators are there from each state?

For how many years is a member of the United States House of Representatives elected - that is, how many years are there in one full term of office for a U.S. House member?

What is the name of the Prime Minister of the United Kingdom?

Figure 1: Predicted probabilities (death panels belief)

[figure here]

A media correction successfully decreased the predicted probability of strong agreement with the death panels myth among low-knowledge respondents with neutral or warm feelings toward Palin and high-knowledge respondents with cold feelings toward Palin. However, it backfired and *increased* the predicted probability that high-knowledge respondents with very warm feelings toward Palin would endorse the myth.

Predicted probabilities were generated from the death panels belief model in Table 1. Responses are estimated for non-black female political independents under age 65 with low political knowledge (one correct answer on a five-item scale) or high political knowledge (four correct answers). The statistical significance of marginal effects was evaluated using the delta method in SPost.²³ Arrows indicate the direction and magnitude of the estimated treatment effect.

Figure 2: Predicted probabilities (ACA opposition)

[figure here]

A media correction of the death panels myth decreased the probability that low-knowledge respondents with neutral or warm feelings toward Palin or high-knowledge respondents with cold feelings would strongly disapprove of ACA. However, high-knowledge respondents with very warm feelings toward Palin were more likely to strongly disapprove if they received the correction.

Predicted probabilities were generated from the ACA approval model in Table 1. Responses are estimated for non-black female political independents under age 65 with low political knowledge (one correct answer on a five-item scale) or high political knowledge (four correct answers). The statistical significance of marginal effects was evaluated using the delta method in SPost.²³ Arrows indicate the direction and magnitude of the estimated treatment effect.