Doctor Knows Best:  
Physician Endorsements, Public Opinion, and the 
Politics of Comparative Effectiveness Research

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Abstract

While American medicine features a high level of technological innovation, many medical services have never undergone rigorous study of their clinical benefits. Some experts believe that less than half of all medical care is based on adequate medical evidence. To address this problem, the federal government is making a major investment in “comparative effectiveness research” (CER) to learn what therapies are most effective for patients. CER has the potential to reduce wasteful health care spending and improve the quality of care, but the political sustainability of this effort remains uncertain due to fears that it will lead to “death panels” and “rationing.” Previous national surveys have shown that the public supports investments in CER but remains anxious about the use of study results to restrict treatment options or set budget priorities. An unresolved question is what factors might boost public support for the use of CER to guide clinical and policy decisions. In this paper, we investigate one potential source of support: the public’s trust in physicians as faithful agents of patient interests.

We conducted a national survey to explore the public’s confidence in doctors relative to other groups and its beliefs about the motivation of medical societies when they participate in public policy. The study also features a survey experiment that permits examination of the extent to which cues from doctors’ groups affect public opinion relative to cues from partisan and bipartisan political groups.

We find that doctors are viewed as harder workers, more interested in helping people, more trustworthy, and more caring than other professions. Similarly, the public sees the desire to maintain high incomes for group members and to preserve group influence as being weaker motivations for medical associations than for other organizations in the policy arena. In the survey experiment, cues from a doctors’ group had a greater influence on public opinion than the position of a bipartisan political commission. Our results imply that the medical profession’s support may be the strongest weapon available to proponents of evidence-based medicine to combat claims that CER is simply a pretext for rationing.
Governments are often charged with solving important societal problems. In the United States, one sector with a myriad of problems is health care. Medical care in the U.S. is expensive and unequally distributed, and the quality of care often falls short of best practice (Hacker 2008; McGlynn et al. 2003). The enactment of the Patient Protection and Affordable Care Act represents the latest chapter in the struggle to address these challenges.

With the important exception of the individual health insurance mandate, no aspect of the Obama Administration’s health reform law has generated more intense controversy than the new effort to learn what really works in health care—and what does not (Gerber and Patashnik 2010). This effort, known as “comparative effectiveness research” (CER), is designed to determine what treatment regimens are most beneficial for patients.\footnote{An initial $1 billion investment in CER was included in the 2009 economic stimulus legislation. The Affordable Care Act established a new, nongovernmental entity called the Patient-Centered Outcomes Research Institute to oversee this research. Starting in 2013, Medicare and private health insurance companies will pay a tax to support the activities of the new institute. This funding is estimated to reach $500 million annually by 2015.} While one might think that such data already exist, the reality is that a great deal of medical care is not based on hard evidence. There is more than one way to treat most conditions (such as surgery versus medication), and often nobody knows which is best. This lack of knowledge contributes to unwarranted geographical variation in treatment decisions (Wennberg 2010), suboptimal care for patients (Brownlee 2007b) and wasteful spending (Devo and Patrick 2005; Hadler 2008).

CER was originally a technocratic reform idea, developed and endorsed by health care experts associated with both parties. Yet, CER became highly politicized during the debate over the Obama Administration’s health reform proposal due to charges that federal bureaucrats would use the information from medical studies to ration care and impose “one-size-fits-all” medicine (Avorn 2009; Gerber and Patashnik 2010). In a previous national survey, we found public support for using CER to provide information about whether a given treatment option...
works better than alternatives, but much less support for using study findings as the basis for mandating clinical decisions or setting budget priorities (Gerber et al. 2010a).

While CER has generated anxiety among the public, it is clearly not an issue about which ordinary citizens possess direct knowledge or deeply anchored values and beliefs. Public opinion about efforts to promote the integration of medical evidence into clinical practice and public policy are likely to be heavily influenced by underlying public attitudes toward health care as well as by the positions of opinion leaders (Zaller 1992).

In addition to government officials, one of the most important sets of opinion leaders are physicians. Physicians obviously will play a key role in implementation of CER because they bear responsibility for communicating evidence-based recommendations to patients. What has been less recognized is that physicians may also play a key political role in determining whether the new federal commitment to CER can stick. The impact that physicians may have on the political sustainability of CER stems in part from the influence of medical societies over the development of clinical guidelines. At a deeper level, it reflects the public esteem in which the medical profession is held and the high degree of trust that most Americans place in doctors when it comes to reforming the U.S. health care system. For example, nearly three-quarters of Americans (73%) express confidence in doctors to recommend the right thing for reforming the health care system.2 As the medical profession becomes increasingly enmeshed in debates over medical evidence and cost control, it is critical for researchers to gain a better understanding of the public’s assessments of physicians as potential arbiters of conflicting information about health reform proposals.

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To gain insight into the mediating role of physicians in health policy, this paper addresses three central questions. First, what do Americans believe about the motivations of doctors compared to other professions? Second, what does the public believe about the motivations of medical societies when such organizations make policy recommendations? Third, how does physician support for or opposition to a health care policy affect public opinion about that policy? We address the last question through a survey experiment that provides a way to assess how the American Medical Association’s support for or opposition to a policy affects public opinion independent of the effect of the position of political groups (e.g., the political parties).

Our study focuses on public opinion, but it is important to note that physicians’ own beliefs about CER remain divided and unsettled. There is a general professional consensus, supported by the findings of the Institute of Medicine, that physicians lack adequate information on the relative effectiveness of different treatment modalities (IOM 2007; also see AMA 2010). Yet the financing system of health care in the U.S. creates “entrenched barriers” to the translation of hard data into improved care (Avorn and Fischer 2010). Advocates argue that CER is compatible with emerging approaches to personalized medicine (Epstein and Teagarden 2010). However, doctors may be wary of CER for conceptual reasons, believing that studies focus on “average” treatment effects and miss the idiosyncratic ways in which an intervention works for a particular subgroup of patients. In addition, physicians who earn a significant portion of their income from performing a given procedure may fail to “implement the results of a study that found the procedure to be no better than a less costly or safer alternative” (Avorn and Fischer 2010, 1894). A recent survey of physician opinion found that more than half of physicians agree that having more hard data would improve the quality of care, but that two-thirds are concerned that CER will be used to restrict their freedom to select treatments for their patients (Keyhani,
Woodward, and Federman 2010). The fact that physicians’ own views on CER are evolving makes it all the more important to determine the consequences of these views for the beliefs of ordinary Americans.

**BACKGROUND**

Before turning to our survey analysis, we briefly provide some background on the public policy problem that has led the Obama Administration to make a major investment in medical research. Despite the highest per capita health spending in the world and the rapid pace of technological innovation, the scientific basis of U.S. medical care is weak. Less than half of all care is supported by adequate evidence about its comparative effectiveness (CBO 2007; see also Wennberg 2004). Consequently, decisions about what tests and treatments to use are routinely made on the basis of anecdotes, local custom, and the personal experience of individual physicians. Surgical procedures, for example, can diffuse into widespread clinical use on the basis of no hard scientific evidence at all (Cohen et al. 2004). And although the Food and Drug Administration (FDA) conducts relevant research, the agency’s core mission is to regulate product market entry and labeling, not to determine best medical practices. Most FDA clinical trials only investigate the efficacy of drugs and medical devices relative to a placebo, not relative to other treatment alternatives (Avorn 2005).

The persistence of the medical evidence gap should concern all Americans. As one medical journalist writes:

> [I]t seems completely crazy for a country that spends so much on health care to spend so little on systematically filling the gaps in medical knowledge…What's the best way to get people to lose weight and exercise in order to prevent heart disease and diabetes? Nobody knows. Is a cesarean section necessary if a woman's previous child was delivered by cesarean? Can a million-dollar da Vinci surgical robot, touted by many hospitals that
have purchased the device, really improve outcomes, or is it just a fancy way to spend money? If a man has prostate cancer, which remedy is best? (Brownlee 2007a)

There have been cases where thousands of patients have undergone risky procedures that were later determined to be ineffective when properly evaluated (e.g., high-dose chemotherapy with bone marrow transplants for breast cancer; Mello and Brennan 2001). The more common pattern is for patients to receive treatments that are relatively safe but ineffective, increasing health costs without offsetting medical benefits (Gerber and Patashnik 2006).

A segment of the public recognizes these problems. In a previous national survey, we found that 30% of the public believes that less than half of the care they receive is evidence based; 20% believe about half of their care is evidence based; and 50% believe more than half of their care is evidence based (Gerber et al. 2010a). The public’s recognition that not all medical care is based on hard evidence does not translate into strong support for the use of research studies to mandate changes in clinical practices or the allocation of health care resources, however. Previous survey research suggests that the public supports the use of CER to provide information to health care consumers (such as creating warning labels for treatments that are not supported by strong scientific evidence) but the majority of the public opposes the use of research findings to determine which groups of patients should be protected from budget cuts in Medicare or to charge patients more to get a treatment that research has not shown to be effective if the patient’s own doctor recommends the treatment (Gerber et al. 2010a; also see Gerber et al. 2010b).

The greatest challenge for health reformers will be to use CER as a tool for cost control, especially given recent debates over government rationing of mammograms and other health...

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3 Women were significantly more likely than men to say that less than half of their care is evidence-based (Gerber et al 2010a).
services. Using a series of survey experiments, Gerber et al. (2010a) show that support for CER declines in response to general political debate about its consequences—it is easy to stoke public fears when the subject is medical care—but that arguments against CER can be countered to some degree by specific, targeted rebuttals. Significantly, telling people that doctors support the use of CER was found to be a particularly persuasive rebuttal to the claim that CER would lead to “one-size-fits-all” medicine (Gerber et al. 2010a). This result is consistent with the hypothesis that doctors and medical associations are powerful actors when it comes to health care reform and the use of CER in particular. In the present study, we investigate why the support of doctors is important to the public and how much the support of doctors can influence public opinion surrounding health care reform.

DATA AND METHODS

The data reported in this paper are drawn from an opt-in Internet-based survey conducted from February 17-23, 2011 (n = 1,500). This survey was conducted by YouGov/Polimetrix under a contract with Yale University, and was approved by the institutional review board at Yale University. The nationally representative survey sample produced responses similar to other surveys on baseline questions about insurance coverage (23% report being uninsured) and health status (76% report their health as “good” or better). Full question wording and details on Polimetrix’s sampling methodology are included in the Appendix.

4 Gerber et al. (2010a) compared the relative persuasiveness of the claim that “[m]any doctors’ groups and medical associations are calling for comparative effectiveness research because the research will give doctors the information they need to identify the best treatments for their patients” to the claim that “[t]he government and insurance companies will use the research to tell doctors how to practice medicine. They will force doctors to follow one-size-fits all treatment guidelines rather than being able to use their knowledge and expertise to tailor care to each individual patient.” Respondents used a sliding scale ranging from 0 (the anti-CER argument was more persuasive) to 100 (the pro argument was more persuasive). In this experiment, the mean score was 65.8.
RESULTS

Beliefs about Doctors’ Motivations and Abilities

Many Americans believe that the health care system does not always promote the best outcomes for patients. When effective treatments for common conditions are not readily available, the public becomes suspicious about the reasons why. On a separate nationally representative survey, 68% of the public agreed with the statement that “drug companies keep cures for some serious medical conditions secret from the public to protect the profits they get from their current products.”\(^5\) In contrast to public suspicion of the pharmaceutical industry, and despite the erosion of medical authority in American politics since the 1960s (Blendon et al. 1993; Jacobs and Shapiro 1994; Krause 1996; Peterson 1993; Schlesinger 2002; Starr 1982), the public displays great faith in physicians compared to other groups and the government.\(^6\)

Our survey randomly assigned respondents to evaluate one of four professions: doctors, lawyers, grade school teachers, or Members of Congress. They were asked to rate their agreement with a series of six statements about the motivations of people from their randomly assigned profession. For example, those in the “doctors” condition were asked how much they agreed with the statement: “Becoming wealthier is important for doctors.” Responses were measured on a five-point scale ranging from “strongly disagree” (1) to “strongly agree” (5). Mean responses to these items for each profession are displayed in Figure 1.


The results indicate that doctors are viewed as harder workers, more interested in helping people, more trustworthy, and as caring more (“about people like me”) than each of the other professions. All of the differences in the public’s assessment of doctors compared to other professions are statistically significant at $p<.05$, two-tailed, with the exception of the differences between doctors and school teachers on the “interested in helping people” ($p=.26$) and “can be trusted” ($p=.25$) items. While the public does not see doctors as exclusively altruistic (see Schlesinger 2002), doctors are perceived to be less driven by a desire to gain greater wealth and prestige than members of other elite professions such as lawyers and Members of Congress.

The public also expresses confidence in the ability of doctors to tailor care to the needs of individual patients. On a separate survey conducted from May 21-24, 2010 by YouGov/Polimetrix (N=2,200), a majority (52%) agreed with the statement, “If a treatment only helps some patients who get it, your doctor knows whether you will be among those for whom the treatment is effective.” The public’s faith in doctors reinforces public concerns that CER would reduce physicians’ ability to exercise professional judgment when caring for individual patients.

Beliefs about the Motivations of Medical Associations

While the public has the most direct contact with individual physicians, medical societies are involved in Medicare coverage and reimbursement decisions and have more direct influence over public policy. Medical societies take positions on proposed changes to federal rules and make recommendations for coverage and reimbursement decisions under Medicare that affect
program beneficiaries and taxpayers. When comparative effectiveness studies are published about the benefits, costs, and risks of a given treatment, medical societies may issue statements about the research methodologies used and the significance of the study findings. These statements may be quoted in the media and shape public beliefs about the effectiveness of particular treatment modalities as well as about the quality and efficiency of the U.S. medical system. In these respects, at least, medical associations are similar to other economic organizations that adopt positions and make recommendations to influence public policy. An important question is whether the public views doctor associations as having the same or different motivations than other groups.

Respondents to our survey were asked to evaluate the importance of several factors in explaining why various groups make policy recommendations. Each respondent was randomly assigned to evaluate the motivations of one of four groups: medical associations, unions, business organizations, or health insurance organizations. We investigated the importance of the following five motivations: maintaining high income for group members; preserving the group’s influence over policy makers; ensuring that new laws and regulations help their industry; promoting the health of patients (for doctor’s groups and health insurance organizations) or workers (for business organizations and unions); and protecting doctors from malpractice suits (for doctor’s groups and health insurance organizations only). Responses were measured on a five-point scale ranging from “Not at all important” (1) to “Extremely important” (5). Figure 2 displays the percent who chose either of the top two response categories: “very important” or “extremely important.”

[FIGURE 2 ABOUT HERE]
The results indicate that the public sees the desire to maintain high incomes for group members and to preserve group influence over policy makers as being weaker motivations for medical associations than for unions and business organizations. Only 45% stated that “maintaining high incomes” was either very or extremely important to medical associations, whereas 60% and 55% said the same for unions and business organizations. The public also perceives medical associations as being more concerned about promoting patient health (65% selected very or extremely important) than health insurance organizations (56%), and to be more concerned about promoting patient health than unions (54%) and business organizations (42%) are concerned about promoting worker health. The public does, however, see the desire to protect doctors from malpractice suits as being a stronger motivator for medical associations (61%) than for health insurance organizations (50%).

**Survey Experiment on Medical Association and Political Cues**

The survey findings discussed above suggest that the public regards doctors as trustworthy actors motivated to help patients. The public’s high level of confidence in doctors is striking compared not only to the degree of trust in other professional groups, but also relative to the deep mistrust Americans have in government, particularly with respect to health policy. The success of the new federal emphasis on CER will depend in part on whether the public concludes that doctors are embracing the initiative or resisting it. To the extent the public is fearful that CER is simply an exercise in cost control that will impede doctors from tailoring treatments to the needs of individual patients, the strong support of individual physicians and medical associations may help overcome it.
As mentioned above, a prior study examined which substantive responses to claims that CER will lead to rationing or “one-size-fits-all” medicine are most effective (Gerber et al. 2010a). However, given the complexity of the issue, the source of arguments about CER policy may prove just as important. We examined this possibility by performing a survey experiment. The design allows us to assess how public support for a generic proposal to “help reduce the amount we spend on health care” is affected by the support or opposition of medical associations and both partisan and bipartisan political groups. These group support and opposition cues were randomly assigned across respondents and were designed to mimic common elements of the political debate over health care cost control. We did not give the proposal any substantive content beyond indicating that it would help constrain health care costs because cost control is the dimension of CER that has been most controversial.

Two group cue dimensions were experimentally manipulated. The first dimension varied the American Medical Association’s (AMA) position. One-third of the sample was told that the AMA endorsed the proposal; another third was told that the AMA opposed the proposal; the AMA’s position on the proposal was not mentioned for the remaining one-third of respondents.

The second dimension of the experiment examined the effects of political group endorsements. Each respondent saw a statement that described the proposal as (a) “supported by congressional Democrats but opposed by congressional Republicans,” (b) “supported by congressional Republicans but opposed by congressional Democrats,” (c) “supported by congressional Democrats and Republicans” or (d) “supported by a bipartisan commission on deficit reduction.” An additional group was randomly assigned to receive no political group cue. These five conditions were randomly assigned with equal probability independently of the AMA cue treatment.
In sum, some respondents were presented with the position of a single group (e.g., AMA endorsement or endorsement from a bipartisan commission) while others were presented with both a political cue and the position of the AMA. (No respondents were assigned to the condition in which neither a political cue nor the AMA cue was provided.) The outcome measure was respondents’ assessments of how the particular cue (or cues) would affect their own support for the proposal and was measured using a five-point scale ranging from “much less likely to support” (-2) to “much more likely to support” (2).

For each of the 14 experimental conditions, Table 1 reports the average (weighted mean) for the outcome measure with standard errors in parentheses. The table also reports the weighted mean for each political cue condition, collapsing AMA conditions (in row 4), and the weighted mean for each AMA condition, collapsing political cue conditions (both including the “no political cue” cases [in column F] and not including those cases [in column G]). (The Appendix reports tests of balance across treatment conditions and additional data analysis.)

TABLE 1 ABOUT HERE

Focusing on column G, we find that respondents who received the AMA support cue (row 2) were more likely to say this cue would increase their support for the proposal (mean=.30), while respondents who received the AMA opposition cue (row 3) were more likely to say it would decrease their support for the proposal (mean=-.11). This net difference between receiving AMA support or opposition cues of .41 is statistically significant ($p<.001$). In concrete terms, 24% of the people who received the AMA opposition cue said they were (somewhat or much) more likely to support the proposal, while 38% of the people who received the AMA
support cue said the same. Only 14% of those who received the AMA support cue said they were (somewhat or much) less likely to support the proposal, while 30% of those who received the AMA opposition cue did so. It should be noted that the effects of the AMA cues are very similar for Democrats, Republicans, and Independents; differences across partisan groups are not statistically significant ($p > .10$ for all pairwise comparisons; see Table 2). Taken together, these results suggest that public support of a proposal to help reduce health care spending is likely to be significantly influenced by the position of the AMA.

We expected the position of a bipartisan commission on deficit reduction to affect public opinion as well but the results suggest it did not. Collapsing the AMA conditions (row 4 of Table 1), we find that in the absence of a political cue, average support for the proposal is .12 (column A). When the bipartisan commission cue is given, average support is also approximately .12 (column C). The bipartisan commission cue does not meaningfully affect responses: 20% of the people who received the bipartisan commission supports cue said they were (somewhat or much) less likely to support the proposal, while 17% of the people who received no political cue did so; 31% of the people who received the bipartisan commission supports cue said they were (somewhat or much) more likely to support the proposal, while 27% of the people who received no political cue said the same. The effect of support from a bipartisan commission does not vary across respondents with differing partisan identities, including those who identify as Independent ($p > .10$ for all pairwise comparisons; see Table 2). Overall, these results imply that endorsements from bipartisan political committees are unlikely to increase public support for proposals to reduce health care spending.

Aggregate support for the proposal is not significantly affected by the other political cues. The differences between the bipartisan commission and the other political cue conditions in row
4 are not statistically significant \((p=.43\) for difference between bipartisan commission and Democrats support; \(p=.52\) for difference between bipartisan commission and both parties support; \(p=.78\) for difference between bipartisan commission and Republicans support). Collapsing across AMA conditions (row 4), there are no statistically significant differences between any of the other political cues and the group that received no political cue or between the other political cue experimental conditions \((p>.10\) for all pairwise comparisons).

Partisans, however, do differ substantially in their responses to directional partisan cues (see Table 2). Compared to those who received no political cue (mean=.35 for Democrats and .03 for Republicans), Democratic respondents presented with an endorsement cue from congressional Democrats and an opposition cue from congressional Republicans were more likely to say the information would increase their support for the proposal \((mean=.71, p=.02\); among Republican respondents, this informational condition substantially decreased support for the proposal \((mean=-.67, p<.001\). Conversely, Republican respondents indicated that an endorsement cue from congressional Republicans and opposition cue from congressional Democrats would substantially increase their support for the proposal \((mean=.95, p<.001\), while this combination of cues considerably decreased support among Democratic respondents \((mean=-.57, p<.001\). (None of the political cue treatment conditions significantly affected Independents relative to the no political cue condition.)

\[\text{TABLE 2 ABOUT HERE}\]

To summarize, members of the public who identify with a political party are more responsive to cues from their party about whether to support a generic health care cost control
proposal than they are to information about the AMA’s position (as seen in Table 2). However, given the aggregate distribution of partisan preferences in the electorate, the effects of Democratic and Republican partisan cues are likely to be offsetting (as seen in Table 1). Additionally, the position of the AMA has a larger effect than either of the bipartisan cues (“both parties support” and “bipartisan panel supports”). Thus, the findings from this survey experiment illustrate the important role medical associations like the AMA may play in determining the political future of issues such as CER. Even without giving respondents specific reasons why a health care cost control proposal would be good or bad for patients, the AMA’s position has the potential to significantly influence public support or opposition.

**DISCUSSION**

The U.S. spends about twice as much as other OECD nations on health care yet it ranks poorly on many measures of health status (Schoen et al. 2007; Schoen et al. 2010; Squires 2011). While there are many reasons for the inefficiency of the U.S. health care system, one is the failure to generate and use hard evidence about the relative benefits of treatment alternatives. The promise of CER is that better data and its integration into clinical practice and public policy decisions can help promote better quality and value in health care. This aspect of CER is reasonably straightforward. The radical element of CER is its implicit challenge to the widespread belief that doctors *already* know what is best for patients and *already* practice evidence-based medicine. To the extent that CER is viewed as imposing a constraint on the ability of doctors to exercise their professional judgment, much of the American public is likely to oppose it (Gerber et al. 2010a). If CER is, instead, seen as an objective tool that helps
physicians make the best treatment decisions for and with their patients, Americans are likely to be become more comfortable with it (Gerber et al. 2010a).

In part because medical knowledge is esoteric and asymmetrically distributed, the United States delegates vast decision-making authority to physicians (Arrow 1963). Yet the medical profession is also a political institution that has the “power to distract, encourage, limit, and inform public recognition of and deliberation over social problems” (Dzur 2002, 178). Research on the political influence of U.S. physicians demonstrates convincingly that doctors and organized medicine have lost power and legitimacy over the past fifty years (e.g., Peterson 1993; Schlesinger 2002). While physicians are clearly less powerful in an absolute sense than they were a half century ago, what also matters is the power and standing of the medical professional relative to other policy actors. As the present study suggests, the American public overwhelmingly trusts physicians and views them as faithful agents of patient interests and does not see doctors as a wholly self-interested economic interest group. Given the deep mistrust many Americans have for government, and the widespread suspicion of health insurance companies and the pharmaceutical industry, doctors may be the only group that commands the prestige and standing to persuade the American public that investments in CER is needed and that the findings from well-designed studies should be translated into clinical practice—and eventually into payment rules and other cost-control incentives.

The controversy over CER stems in part from a recognition that studies could challenge the usefulness of common treatments, as well as the income streams of drug companies, device firms, and provider groups. Given the unsustainability of the current growth rate of health care spending, however, the question is not whether the nation will seek to control health care costs but how. Physician leadership in promoting public acceptance of CER as the scientific
foundation for cost control measures may help reduce the need for blunter and less patient-centered methods of cost controls in the future (also see, for example, Reuben and Cassel 2011).

**Limitations and Directions for Future Research**

The results of the present study suggest that physicians and medical associations have the ability to influence public support for CER and its likely political sustainability. As with any study, some limitations should be kept in mind. We discuss three such limitations, which also suggest possible avenues for future research.

First, we did not ask respondents to evaluate a policy specifically associated with CER (rather, they evaluated a generic health care cost control proposal). It is possible that a positive or negative endorsement from a medical association such as the AMA would be less (or more) effectual when explicitly framed in the context of CER. Future work could use the survey experimental design used here to test such a proposition.

Second, this design could also be used to explore whether and how the endorsement or opposition of other governmental or non-governmental actors influence public opinion with respect to CER. How important is the position of the President in shaping public opinion in this area? Could groups such as medical specialty societies, public interest lobbies, or business organizations move public opinion and if so how influential are their positions relative to what we find for the AMA?

Last, and more broadly, the survey experiment we use presents respondents with a simplified representation of the world in many ways. Most notably, the survey experiment provides respondents limited information on which to base their decisions. Although this simplified framework demonstrates that physician endorsements are potentially important to the
sustainability of a health policy proposal, we cannot say with certainty that such endorsements would result in similar effects where other information is available to citizens. While we believe the public’s high level of confidence in doctors and medical associations is robust to alternative models, a survey experiment that embeds more detailed and complex information about the health care system and a specific proposal would provide a more complete picture of the types of information people encounter in the real world and the potential effect doctors and medical associations can have on public opinion.
References


Appendix for “Doctor Knows Best”

This document includes the following supplementary material.

1. Details on YouGov/Polimetrix’s Sampling Methodology
2. Question Wording
3. Balance Tests for the AMA and Political Cues Experiment
4. Testing for Interactions between the AMA and Political Cue Conditions (Table A1)
1. Details on YouGov/Polimetrix’s Sampling Methodology

The data reported in this article are drawn from an opt-in Internet-based survey conducted from February 17-23, 2011 (n = 1,500). This survey was conducted by YouGov/Polimetrix under a contract with Yale University, and was approved by the institutional review board at Yale University. YouGov/Polimetrix uses a combination of sampling and matching techniques to account for the fact that opt-in Internet survey respondents may differ from the general population. This process is designed to approximate a random digit dialing sample.

The final survey sample is constructed by drawing a target population sample that is representative of the general population on a variety of characteristics. Specifically, YouGov/Polimetrix interviewed 1,644 respondents who were then matched down to a sample of 1,500 to produce the final dataset. The respondents were matched on gender, age, race, education, party identification, ideology, and political interest. YouGov/Polimetrix then weighted the matched set of survey respondents to known marginals for the general population of the United States from the 2006 American Community Survey. All of the analysis presented in the paper uses these weights.
2. Question Wording

Health Insurance
SINGLE CHOICE
Special Instructions: None
Which of the following four statements comes closest to your own view about your current health insurance coverage?
1. My health insurance is good and I feel well-protected when it comes to my health care needs.
2. My health insurance is adequate, but I worry that I might have health care needs that it won’t pay for.
3. My health insurance is inadequate, and I feel very worried about my health care needs not being paid for.
4. I don’t have health insurance.
5. Don't know

Overall Health
SINGLE CHOICE
Special Instructions: None
In general, how would you rate your overall health?
1. Poor
2. Fair
3. Good
4. Very good
5. Excellent

Doctors’ Motivations
GRID
Special Instructions: [Blank] should be assigned with equal probability to “doctors” or “lawyers” or “grade school teachers” or “Members of Congress”. Randomize order of rows.
How much do you agree with each of the following statements?
Columns:
5. Strongly agree
4. Somewhat agree
3. Neither agree nor disagree
2. Somewhat disagree
1. Strongly disagree

Rows:
- [Blank] work harder and longer hours than do people in most other jobs
- [Blank] are interested in helping people
- Becoming wealthier is important for [Blank]
- [Blank] are mainly interested in gaining greater prestige
- [Blank] care about people like me
- [Blank] can be trusted
Doctors Groups
GRID
Special Instructions: Randomize order of rows. Randomly assign participants to one of four treatment conditions – doctors groups, unions, business, insurance – with equal probability. Sometimes [A. medical associations such as the American College of Cardiology or the American College of Radiology / B. unions such as the United Auto Workers (UAW) or the Service Employees International Union (SEIU) / C. business organizations such as the Chamber of Commerce or National Business Association / D. health insurance organizations such as the Health Insurance Association of America and America's Health Insurance Plans] make recommendations about public policy. When developing their recommendations, how important do you think each of the following considerations is to these groups?
Columns:
5 Extremely important
4 Very important
3 Moderately important
2 Slightly important
1 Not at all important
Rows:
- Maintaining high incomes for their members
- Preserving the influence their group has over policy makers
- Ensuring that new laws and regulations help their industry
- Promoting [A. and D. patient health / B. and C. worker health]
- [A and D. only. Protecting doctors from malpractice suits]

Elite Cues Experiment
SINGLE CHOICE
Special Instructions: The treatments follow a (3 x 5) design. Please randomly assign respondents to one of 14 of these 15 conditions with equal probability. No respondents should be assigned to the TREAT 1 = NONE AND TREAT 2 = NONE condition. Randomize order of TREAT 1 and TREAT 2 if BOTH <> NONE.
A variety of public policies have been proposed to help reduce the amount we spend on health care. Suppose you learned that a proposal was [TREAT 1: NONE / supported by the American Medical Association / opposed by the American Medical Association] [IF TREAT 1 <> NONE AND TREAT 2 <> NONE then “and”] [TREAT 2: NONE / supported by congressional Democrats but opposed by congressional Republicans / supported by congressional Republicans but opposed by congressional Democrats / supported by congressional Democrats and Republicans / supported by a bipartisan commission on deficit reduction].

Would this make you more or less likely to support the proposal?
1 Much more likely to support
2 Somewhat more likely to support
3 Neither more nor less likely to support
4 Somewhat less likely to support
5 Much less likely to support
3. Balance Tests for the AMA and Political Cues Experiment

We tested for balance across treatment conditions using a multinomial logit model with a
nominal experimental treatment condition variable as the outcome (i.e., a variable with 14
categories) and the following characteristics as covariates: gender, age, race (indicators for
Black, Hispanic, and other, non-White), education, income, income missing, reported turnout in
2008, and party identification. The results of this analysis are reproduced below. This analysis
identified some minor imbalance on gender (chi-square = 23.98; \(p=.03\)); the next lowest \(p\)-value
was for income missing, \(p=.16\). All of the results discussed in the text are robust to controlling
for the imbalance on gender.
4. Testing for Interactions between the AMA and Political Cue Conditions

There were no statistically significant interaction effects between the two experimental dimensions. Focusing on the cases in which an AMA cue was given (either support or opposition), in a regression model where the outcome is the response variable and indicators for treatment conditions (AMA Support/Oppose, Democrats Support, Republicans Support, Both Parties Support, and Bipartisan Commission Supports) as well as interactions between the four political cue treatment conditions and AMA Support/Oppose, none of the four interaction coefficients are statistically significant (all $p$s>.10). The results of this analysis are reproduced below as Table A1.

Table A1. Testing for Interactive Effects between the AMA and Political Cue Conditions

<table>
<thead>
<tr>
<th></th>
<th>(1) Support for proposal (-2=much less likely to support; 2=much more likely to support)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMA Support Cue</td>
<td>0.387</td>
<td>0.296</td>
<td>0.380</td>
<td>0.301</td>
</tr>
<tr>
<td></td>
<td>[0.069]***</td>
<td>[0.128]**</td>
<td>[0.070]**</td>
<td>[0.129]**</td>
</tr>
<tr>
<td>Democrats Support Cue</td>
<td>-0.004</td>
<td>-0.035</td>
<td>-0.004</td>
<td>-0.022</td>
</tr>
<tr>
<td></td>
<td>[0.110]</td>
<td>[0.156]</td>
<td>[0.110]</td>
<td>[0.158]</td>
</tr>
<tr>
<td>Republicans Support Cue</td>
<td>0.160</td>
<td>0.167</td>
<td>0.152</td>
<td>0.161</td>
</tr>
<tr>
<td></td>
<td>[0.104]</td>
<td>[0.157]</td>
<td>[0.104]</td>
<td>[0.157]</td>
</tr>
<tr>
<td>Both Parties Support Cue</td>
<td>-0.081</td>
<td>-0.234</td>
<td>-0.099</td>
<td>-0.235</td>
</tr>
<tr>
<td></td>
<td>[0.102]</td>
<td>[0.148]</td>
<td>[0.103]</td>
<td>[0.148]</td>
</tr>
<tr>
<td>Bipartisan Panel Support Cue</td>
<td>-0.040</td>
<td>-0.123</td>
<td>-0.047</td>
<td>-0.125</td>
</tr>
<tr>
<td></td>
<td>[0.098]</td>
<td>[0.146]</td>
<td>[0.099]</td>
<td>[0.145]</td>
</tr>
<tr>
<td>AMA Support x Democrats Support</td>
<td>0.042</td>
<td>0.017</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.219]</td>
<td>[0.222]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMA Support x Republicans Support</td>
<td>-0.033</td>
<td>-0.034</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.208]</td>
<td>[0.208]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMA Support x Both Support</td>
<td>0.316</td>
<td>0.286</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.201]</td>
<td>[0.203]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMA Support x Bipartisan Commission Supports</td>
<td>0.147</td>
<td>0.140</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.197]</td>
<td>[0.198]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female=1</td>
<td>-0.118</td>
<td>-0.109</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.072]</td>
<td>[0.073]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.107</td>
<td>-0.054</td>
<td>-0.035</td>
<td>0.006</td>
</tr>
<tr>
<td></td>
<td>[0.075]</td>
<td>[0.092]</td>
<td>[0.091]</td>
<td>[0.102]</td>
</tr>
<tr>
<td>Observations</td>
<td>968</td>
<td>968</td>
<td>968</td>
<td>968</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.038</td>
<td>0.042</td>
<td>0.041</td>
<td>0.044</td>
</tr>
</tbody>
</table>

Note: OLS regression coefficients with robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%
Figure 1. Beliefs about the Motivations of Doctors Compared to Other Professions

Note: Mean responses to the question “How much do you agree with each of the following statements?” Responses were measured on a 5-point scale ranging from “strongly disagree” (1) to “strongly agree” (5). Full question wording is included in the Appendix.
Figure 2. Beliefs about the Motivations of Medical Associations Compared to Other Groups

1. Maintaining high incomes for their members
   - Medical Associations: 23% Very important, 22% Extremely important
   - Unions: 23% Very important, 37% Extremely important
   - Business Orgs.: 24% Very important, 31% Extremely important
   - Health Insurance: 21% Very important, 29% Extremely important

2. Preserving the influence their group has over policy makers
   - Medical Associations: 26% Very important, 32% Extremely important
   - Unions: 19% Very important, 48% Extremely important
   - Business Orgs.: 24% Very important, 29% Extremely important
   - Health Insurance: 23% Very important, 36% Extremely important

3. Ensuring that new laws and regulations help their industry
   - Medical Associations: 31% Very important, 34% Extremely important
   - Unions: 29% Very important, 40% Extremely important
   - Business Orgs.: 27% Very important, 39% Extremely important
   - Health Insurance: 26% Very important, 39% Extremely important

4. Promoting [patient/worker] health
   - Medical Associations: 29% Very important, 36% Extremely important
   - Unions: 25% Very important, 29% Extremely important
   - Business Orgs.: 24% Very important, 18% Extremely important
   - Health Insurance: 26% Very important, 30% Extremely important

5. Protecting doctors from malpractice suits
   - Medical Associations: 29% Very important, 32% Extremely important
   - Health Insurance: 25% Very important, 25% Extremely important

Note: Responses to the question "When developing their recommendations, how important do you think each of the following considerations is to these groups?" Responses were measured on a 5-point scale ranging from "Not at all important" (1) to "Extremely important" (5). Full question wording is included in the Appendix. The figure displays the percent who responded that the consideration was "very important" and "extremely important" (the top two response categories).
### Table 1. Results of AMA and Political Cues Experiment

<table>
<thead>
<tr>
<th></th>
<th>A: No Political Cue (n = 203)</th>
<th>B: Democrats Support (n = 299)</th>
<th>C: Bipartisan Commission Supports (n = 318)</th>
<th>D: Both Parties Support (n = 294)</th>
<th>E: Republicans Support (n = 298)</th>
<th>F: All Political Conditions (columns A-E) (n = 1412)</th>
<th>G: All Political Conditions, except for “No Political Cue” (column A) (n = 1209)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 No AMA Cue (n = 444)</td>
<td>N/A</td>
<td>0.01 (0.11)</td>
<td>0.23 (0.94)</td>
<td>0.18 (0.08)</td>
<td>-0.20 (0.13)</td>
<td>0.06 (0.05)</td>
<td>0.06 (0.05)</td>
</tr>
<tr>
<td>2 AMA Support (n = 477)</td>
<td>0.24 (0.08)</td>
<td>0.25 (0.13)</td>
<td>0.27 (0.09)</td>
<td>0.32 (0.10)</td>
<td>0.38 (0.10)</td>
<td>0.29 (0.05)</td>
<td>0.30 (0.05)</td>
</tr>
<tr>
<td>3 AMA Opposition (n = 491)</td>
<td>-0.05 (0.09)</td>
<td>-0.09 (0.12)</td>
<td>-0.18 (0.11)</td>
<td>-0.29 (0.11)</td>
<td>0.11 (0.13)</td>
<td>-0.10 (0.05)</td>
<td>-0.11 (0.06)</td>
</tr>
<tr>
<td>4 All AMA Conditions (n = 1412)</td>
<td>0.12 (0.06)</td>
<td>0.04 (0.07)</td>
<td>0.12 (0.06)</td>
<td>0.06 (0.06)</td>
<td>0.09 (0.07)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: Cell entries are weighted means with standard errors in parentheses. Total N=1412. Complete question wording: “A variety of public policies have been proposed to help reduce the amount we spend on health care. Suppose you learned that a proposal was [Three AMA Treatment Conditions: NONE / supported by the American Medical Association / opposed by the American Medical Association] [IF AMA Treatment <> NONE AND Political Treatment <> NONE then “and”] [Five Political Treatment Conditions: NONE / supported by congressional Democrats but opposed by congressional Republicans / supported by congressional Republicans but opposed by congressional Democrats / supported by a bipartisan commission on deficit reduction]. Would this make you more or less likely to support the proposal?” Outcome measure ranges from -2 (“much less likely to support”) to +2 (“much more likely to support”).
### Table 2. Results of AMA and Political Cues Experiment, by Respondent Party Identification

<table>
<thead>
<tr>
<th>Party Identification</th>
<th>No Political Cue (n = 394)</th>
<th>Democrats Support (n = 394)</th>
<th>Bipartisan Commission Supports (n = 394)</th>
<th>Both Parties Support (n = 394)</th>
<th>Republicans Support (n = 394)</th>
<th>All Political Conditions (columns A-E) (n = 394)</th>
<th>All Political Conditions, except for “No Political Cue” (column A) (n = 337)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Republicans</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 No AMA Cue (n = 132)</td>
<td>N/A</td>
<td>-0.71 (0.20)</td>
<td>0.43 (0.18)</td>
<td>0.06 (0.17)</td>
<td>1.13 (0.17)</td>
<td>0.20 (0.11)</td>
<td>0.20 (0.11)</td>
</tr>
<tr>
<td>2 AMA Support (n = 134)</td>
<td>0.20 (0.18)</td>
<td>-0.58 (0.21)</td>
<td>0.24 (0.18)</td>
<td>0.44 (0.21)</td>
<td>0.83 (0.19)</td>
<td>0.24 (0.09)</td>
<td>0.25 (0.11)</td>
</tr>
<tr>
<td>3 AMA Opposition (n = 128)</td>
<td>-0.21 (0.15)</td>
<td>-0.71 (0.24)</td>
<td>-0.34 (0.22)</td>
<td>-0.36 (0.22)</td>
<td>0.87 (0.24)</td>
<td>-0.17 (0.11)</td>
<td>-0.16 (0.13)</td>
</tr>
<tr>
<td>4 All AMA Conditions (n = 394)</td>
<td>0.03 (0.12)</td>
<td>-0.67 (0.12)</td>
<td>0.14 (0.12)</td>
<td>0.07 (0.12)</td>
<td>0.95 (0.11)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Democrats</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 No AMA Cue (n = 162)</td>
<td>N/A</td>
<td>0.85 (0.15)</td>
<td>0.29 (0.14)</td>
<td>0.38 (0.12)</td>
<td>-0.89 (0.14)</td>
<td>0.12 (0.08)</td>
<td>0.12 (0.08)</td>
</tr>
<tr>
<td>2 AMA Support (n = 182)</td>
<td>0.43 (0.13)</td>
<td>0.71 (0.18)</td>
<td>0.54 (0.15)</td>
<td>0.50 (0.15)</td>
<td>-0.15 (0.19)</td>
<td>0.41 (0.07)</td>
<td>0.41 (0.09)</td>
</tr>
<tr>
<td>3 AMA Opposition (n = 174)</td>
<td>0.20 (0.16)</td>
<td>0.59 (0.17)</td>
<td>-0.08 (0.17)</td>
<td>-0.22 (0.16)</td>
<td>-0.57 (0.24)</td>
<td>-0.01 (0.09)</td>
<td>-0.05 (0.10)</td>
</tr>
<tr>
<td>4 All AMA Conditions (n = 518)</td>
<td>0.35 (0.10)</td>
<td>0.71 (0.10)</td>
<td>0.25 (0.09)</td>
<td>0.22 (0.09)</td>
<td>-0.57 (0.11)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Independents</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 No AMA Cue (n = 150)</td>
<td>N/A</td>
<td>-0.10 (0.14)</td>
<td>-0.05 (0.17)</td>
<td>0.01 (0.15)</td>
<td>-0.40 (0.19)</td>
<td>-0.13 (0.08)</td>
<td>-0.13 (0.08)</td>
</tr>
<tr>
<td>2 AMA Support (n = 161)</td>
<td>0.01 (0.11)</td>
<td>0.50 (0.21)</td>
<td>-0.01 (0.14)</td>
<td>0.07 (0.17)</td>
<td>0.51 (0.13)</td>
<td>0.19 (0.07)</td>
<td>0.24 (0.08)</td>
</tr>
<tr>
<td>3 AMA Opposition (n = 189)</td>
<td>-0.15 (0.15)</td>
<td>-0.42 (0.17)</td>
<td>-0.16 (0.18)</td>
<td>-0.30 (0.20)</td>
<td>0.25 (0.14)</td>
<td>-0.14 (0.08)</td>
<td>-0.14 (0.09)</td>
</tr>
<tr>
<td>4 All AMA Conditions (n = 500)</td>
<td>-0.06 (0.09)</td>
<td>-0.07 (0.10)</td>
<td>-0.07 (0.09)</td>
<td>-0.10 (0.10)</td>
<td>0.14 (0.09)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: Cell entries are weighted means with standard errors in parentheses. Total N=394.

Note: Cell entries are weighted means with standard errors in parentheses. Total N=518.

Note: Cell entries are weighted means with standard errors in parentheses. Total N=500.

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