Understanding Public Judgment on Science-Intensive Issues

San Diego Dialogues on Community Water Fluoridation

Viewpoint Learning

Executive Summary

In recent decades, the public has been asked to come to grips with a daunting number of policy issues that involve a strong scientific component. Community water fluoration (or CWF) is one such issue. Between June 2005 and May 2007, Viewpoint Learning conducted a series of citizen dialogues focused on the question of whether or not the city of San Diego should fluoridate its drinking water. These dialogues were designed to determine which considerations are most important in forming and changing people's views on CWF, as well as to develop insight into how the public processes information, form their attitudes and reach judgment on policy issues with a strong scientific component.

The dialogues were sponsored by Dental Health Foundation of California, the U.S. Centers for Disease Control and Prevention, and the University of California Berkeley. Eight ChoiceDialogue sessions were conducted with randomly selected groups of San Diego residents.[1] A total of 294 respondents participated in the dialogues, each group a representative cross section of the community.

In each session, participants spent the first half of the dialogue crafting a vision for the future of oral health in San Diego, determining their priorities and the tradeoffs they would (and would not) find acceptable. In the second half of each session, participants tested this vision and the common ground they had established by examining a range of advocacy materials – both favoring and opposing CWF – of the type used in public campaigns in recent years. The purpose of this part of the dialogue was to test how the pressures of actual campaigns affect decision-making. Participants were asked to assess these materials in terms of credibility, importance, and any effect they had on their earlier opinions about whether or not to fluoridate. Participants filled out extensive questionnaires, and the sessions were videotaped; these results were analyzed both qualitatively and quantitatively.

The research was conducted in three successive phases, each building on the previous ones.

Phase 1: Examined information-based "public education" techniques frequently used to engage the public on science-intensive issues

Phase 2: Tested the effectiveness of social marketing and messaging techniques

Phase 3: Experimented with a different approach highlighting the common ground shared by supporters and opponents and responding to public concerns in a more balanced way.

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[1] The ChoiceDialogue methodology is described in Appendix A of the complete report.

Key findings

In all eight dialogues, participants considered two basic scenarios—to leave San Diego's water unchanged or to fluoridate. They were asked to consider three major aspects of the issue in particular:

1. <u>Personal choice vs. community responsibility</u>. Should the responsibility for public health and well-being lie primarily with individuals? Or should we take community-wide action to improve everyone's well-being, even if some individuals object? What sorts of interventions are we willing to accept in the name of the greater public good?

2. <u>Science and the environment</u>. How should scientific data factor into the decision of whether or not to fluoridate? How much reliance should we place on what scientists say? How much should we "tamper with nature" in order to address a specific problem?

3. <u>Cost vs. benefit</u>. What are the costs and benefits of each course of action? What risks and benefits need to be taken into consideration?

Overall participants began favoring CWF by a margin of nearly 2:1, but that support tended to fall off over the course of the dialogue, leaving the two scenarios essentially tied by the end. These shifts closely parallel the results of many real-life campaigns; as such they open a useful window into the process through which the public makes decisions about this issue.

A detailed analysis of how participants' responses and concerns changed over the course of the dialogue can be found in the main body of the report. In general, we found that as participants worked through the issues their thinking followed a consistent sequence of steps and conclusions:

  I. **Preserve individual choice wherever possible**

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  II. **However, individual choice should take a back seat, IF there is a significant demonstrable benefit to the wider community**.

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  III. **Does the scientific evidence indicate that fluoridation offers such a benefit?** What was quite striking in these dialogues was the extent to which the issue of trust — or more accurately mistrust — shaped the answer to this question and the outcome of the dialogue overall:

     o Participants' requests for more information were often actually questions about **trust,** and information alone cannot resolve such questions.

     o The more participants felt they were being "spun" by experts and advocates – that information was being used tactically not to inform but to sell a pre-determined agenda – the more mistrustful they became and the less open to change.

     o Trust also shaped participants' responses to cost-effectiveness arguments.

Ultimately, many participants remained uncertain about whether fluoridation met the standard of providing a significant demonstrable benefit and as a result opted for the least change (better safe than sorry) option.

The results of the three phases indicate that conventional information-based public education and social marketing approaches are insufficient to bring about public support for change on a science-intensive issue like CWF – and can be counterproductive. Participants tended to view such advocacy strategies as manipulative and one-sided and, when presented with what they saw as "spin vs. spin," those without strong pre-existing opinions said that they had no good way of assessing which arguments were more credible. They also expressed a great deal of frustration at the barrage of claim and counter-claim, complaining that advocates on both sides seemed to be playing games with the public's well-being for reasons of their own. Because of the impasse over what information could be trusted, many of these participants concluded that the wisest course was to stick with the status quo.

However, the Phase 3 dialogues indicated that a different approach – one that focuses on common ground and addresses public concerns in a more balanced and responsive way – may lessen the dramatic escalation of mistrust and help reduce the erosion of support for CWF. The sample size in Phase 3 is small, and these findings should be tested with further research.

Conclusions

These dialogues were not designed to create citizen-experts well versed in all the details of water fluoridation. Instead, they were designed to shed light on which factors the public takes into account when making decisions about this kind of issue. These results provide a useful window for decision-makers into how people make up their minds and what matters most when a science-intensive proposal like CWF comes before them.

The research findings reported here suggest a number of points that can help interested decision-makers engage the public more fully around the issue of water fluoridation, and more generally around science intensive issues:

- **Build on common ground.** Despite their differences, participants in every dialogue – supporters and opponents of CWF alike – consistently agreed on a series of key points:

    o *The problem of bad oral health is an urgent community problem that we must work together to address.*

    o *Education is crucial – whether or not we fluoridate the water, we must do a better job of teaching people to take good care of their teeth.*

    o *We need to improve everyone's access to dental care.*

    o *We shouldn't put anything in our water unless it offers a significant benefit and very low risk.*

    o *We do not want people to get too much fluoride – over-exposure can cause problems.*

- *Science is not infallible, but it is the best tool we have for understanding the natural world.*

- *We want to preserve individual choice, but individual choice should take a back seat <u>if</u> there is a significant demonstrable benefit to the wider community.*

- **Facts alone will not change minds.** The traditional information-driven campaign by itself is not adequate, especially in a climate of mistrust. Members of the public make up their minds not on the basis of information alone, but also on the basis of deeper concerns that are shaped by values, emotions, and deeply-held beliefs. The public can easily tune out information that counteracts their worldview; this tendency is even stronger when mistrust runs high. Decision-makers need to focus on understanding deeper public concerns and helping citizens to work through the choices and tradeoffs involved.

- **Spin intensifies mistrust.** When people feel they are being spun they become more frustrated and mistrustful, as well as more resistant to change. Excessive claims from either side tended to backfire when presented to those who were not already strong supporters of that viewpoint. Citizens' ability to see through spin, and the damage that the resulting mistrust can cause, should not be underestimated.

- **Transparency about interests is essential.** Participants repeatedly asked for honesty and transparency from experts on both sides of the issue. When assessing an argument, they wanted to know who was making it and why. Advocates' motivations came under constant scrutiny; participants were concerned about whether experts were objective or were marshalling evidence in only one direction.

- **"Common sense" resonates.** Participants showed a consistent and pervasive preference for "common-sense" arguments rather than technical data, and this was particularly true when mistrust ran high. When technical data is potentially tainted by spin, most people turn to information that meshes with their intuitive sense of how the world works.

- **A different approach can help build trust.** These ChoiceDialogues showed the limitations of trying to move the public with a data-driven approach (based on scientific authority) or with social marketing and advocacy techniques, when the fundamental issue is trust. In these circumstances a different approach is needed. Such an approach focuses not on correcting factual misconceptions or emphasizing positive messages, but on understanding public concerns and building on common ground. Experts and advocates need to acknowledge that these concerns exist and to treat them seriously. Simply trying to correct factual misunderstandings without addressing underlying concerns actually *increases* mistrust rather than reducing it.

The ChoiceDialogues showed that maintaining trust is the key to building public support for a public health change like CWF. *To do this, public health experts need to position themselves as trusted advisors on how best to deal with a shared community challenge rather than advocates for one viewpoint or outcome – with CWF as one possible means to that end, rather than an end in itself. In effect they must shift their focus from "how can we win?" to "how can we help the public make up its mind?"*

More generally, scientists can no longer expect the public simply to defer to their expertise when controversial issues are on the table. Even in the face of overwhelming scientific consensus, a handful of rogue studies or misleading results quoted out of context can derail decades of peer-reviewed data. And countering this with a "spin vs. spin" approach actually *undercuts* the authority of science in the public eye. This is especially true in the current climate of mistrust, where public skepticism extends to nearly every social institution: from politics and government to business, academia, religion and science.

Resolving the many science-intensive questions that challenge us today will require finding better ways to understand the public's values and frameworks, respond more effectively to public concerns, and build on common ground. The dialogue-based approach used in the third phase of this research shows promise and should be tested and developed further.