

# Research Supplement for “Communicating About Vaccination in the United States”

## Research methods and sample composition

This supplement provides detailed information on the research informing FrameWorks’ strategic brief on reframing vaccination in the United States. Below, we outline the research conducted with researchers and practitioners, and with members of the public providing the evidence base for the brief, describing the methods used and sample composition.

### Core ideas from the field of vaccination in the United States

To develop an effective strategy for communicating about an issue, it is necessary to identify a set of core ideas to get across about vaccination in the United States. For this project, these ideas were garnered from researchers and practitioners in the field of vaccination. FrameWorks researchers conducted eight, one-hour interviews with researchers and practitioners in the field of vaccination in the United States, along with a review of the relevant literature on the issue. Between October and November 2020, researchers conducted interviews, and, with participants’ permission, recorded and transcribed them for analysis. American Academy of Pediatrics compiled the list of interviewees. To refine the core ideas from the field of vaccination, FrameWorks conducted a 90-minute feedback session with researchers and practitioners in January 2021.

Researchers and practitioners in the field of vaccination in the United States conducting interviews consisting of a series of probing questions designed to capture their understanding about vaccines and vaccination in the United States, including the science of how vaccines work, vaccine effects, what is most important for people to understand about vaccination, and solutions to address vaccination uptake. In each instance, the researcher conducting the interview used a series of prompts and hypothetical scenarios for members of the sector to explain their research, experience, and perspectives; break down complicated relationships; and simplify complex concepts.

Interviews were semi-structured, as in addition to pre-set questions, FrameWorks researchers repeatedly asked for elaboration and clarification and encouraged members of the sector to expand on concepts they identified as particularly important. Analysis employed a basic grounded theory approach.<sup>1</sup> A FrameWorks researcher identified and inductively categorized common themes that emerged in each interview and across the sample. This procedure resulted in a refined set of themes, which researchers supplemented with a review of materials from relevant literature.

## **Public understandings of vaccination in the United States**

A primary goal of this research was capturing various commonly held assumptions, or cultural models, members of the public use to make sense of vaccination in the United States and issues related to the topic. Cultural models are cognitive shortcuts to understanding, or ways of interpreting, organizing, and making meaning of the world around us shaped through years of experience and expectations, and by the beliefs and values embedded in our culture.<sup>2</sup> These are ways of thinking available to all members of a culture, although different models may be activated at different times. Individuals belong to multiple cultures, each of which include multiple models (e.g., people participate in public cultures at multiple levels, including national and subgroup cultures). In this project, our goal was to explore the models available in public culture in the United States, but it is important to acknowledge individuals have access to other models from other cultures in which they participate.

In exploring cultural models, we are looking to identify *how* people think rather than *what* they think. Cultural models findings, therefore, differ from public opinion research, which documents people’s surface-level responses to questions. By understanding the deep, often tacit assumptions that structure how people think about vaccines and vaccination, we are able to understand the obstacles preventing people from accessing the core ideas described by researchers and practitioners in the field. We are also able to identify opportunities communicators can take advantage of; that is, existing ways of thinking that can help people arrive at a fuller understanding of the issue.

To identify cultural models the public uses to think about issues related to vaccination in the United States, FrameWorks researchers conducted 20 virtual interviews with members of the US public over Zoom in January and February 2021. A diverse sample of participants was recruited with variation along key dimensions, including, but not limited to geography, socioeconomic status, education, and race and ethnicity (see below).

Cultural models interviews were one-on-one, semi-structured interviews lasting approximately two hours. These design of the interviews intended to allow researchers to capture broad sets of assumptions, or cultural models, that participants use to make sense of a concept or topic area—in this case, issues related to vaccination in the United States. Interviews consisted of a series of open-ended questions covering participants’ thinking

about vaccines and vaccination in broad terms. Researchers then focused more specifically on participants' thoughts on particular concepts regarding vaccination, such as the science, development, benefits, safety, effects, and access, as well as thoughts on factors influencing vaccination in the United States, as well as what can be done to address any issues with regard to US vaccination. Researchers approached each interview with this set of topics, but allowed participants to determine the direction and nature of the discussion. With participants' written consent, all interviews were recorded and transcribed.

A professional marketing firm recruited and selected the participants to represent variation along several dimensions. For all participants, this included gender, age, race and ethnicity, geography in the United States, educational background, income, parental status, marital status, political affiliation, and whether they self-identified as religious or spiritual (as self-reported during the screening process). The sample of members of the US public included 11 men and nine women. Of the 20 participants, three were between 18 and 29 years old, six were between 30 and 44 years old, seven were between 45 and 59 years old, and four were over 60 years old. Three participants identified as Asian, three as Black or African-American, three as Hispanic or Latino, and 11 as White. Thirteen participants were parents and seven were not parents. Thirteen were married or in a civil union, two were divorced, and five had never married. Geographical location in the United States reflected 12 participants who lived in urban areas, seven in suburban areas, and one in a rural area. Regarding education, three participants had completed high school, six had completed some college, seven had undergraduate degrees, and four had postgraduate degrees. In terms of income, one participant reported a total annual income of less than \$25,000; two reported an income of \$25,000 to \$49,999; nine reported an income of \$50,000 to \$99,999; three reported an income of \$100,000; and five reported an income of \$150,000 or more. Nine participants described their political affiliation as Democrat or Lean Democrat, seven as Republican or Lean Republican, and four as Independent/Other or not leaning toward any political affiliation. Of the 20 participants, 16 considered themselves religious or spiritual, and four participants did not consider themselves religious or spiritual.

Researchers used analytical techniques from cognitive and linguistic anthropology to examine how participants understood issues related to vaccines and vaccination in the United States.<sup>3</sup> First, researchers identified common ways of talking across the sample to reveal assumptions, relationships, logical steps, and connections commonly made but taken for granted throughout an individual's talk and across the set of interviews. In short, the analysis involved discerning patterns in both what participants said (i.e., how they related, explained, and understood things) and what they did not say (i.e., assumptions and implied relationships). In many cases, analysis revealed conflicting models that people brought to bear on the same issue. In such cases, one conflicting way of understanding was typically found to be dominant over the other in that it more consistently and deeply shaped participants' thinking (i.e., participants generally drew on this model with greater frequency and relied more heavily on this model in arriving at conclusions). To ensure consistency, researchers met after the first round of coding and analysis to compare and

process initial findings. Researchers then returned to transcripts to revisit differences and explore questions that arose through this comparison. As part of this process, researchers compared emerging findings to the findings from previous cultural models research, using this as a check to ensure they had not missed or misunderstood any important models. Researchers then came back together and arrived at a synthesized set of findings.

Analysis centered on ways of understanding shared across participants. Cultural models research is designed to identify common ways of thinking that can be identified across a sample. While there is no hard and fast percentage used to identify what counts as shared, reported models are typically found in the large majority of interviews. Models found in a smaller percentage of interviews are reported only if there is a clear reason these models only appeared in a limited set of interviews (e.g., the model reflected the thinking of a particular subgroup of people).

While a sample of 20 participants is too small to ensure the sample is perfectly *statistically* representative, its demographic variability is adequate to ensure the identified patterns in thinking are *shared* across different groups within the United States. While larger sample sizes are needed to investigate *variability* within a population or to allow for statistically significant comparisons between groups, the goal of cultural models analysis is to describe *common* ways of understanding within a population. As a result, for cultural models research, sample size is determined by the concept of saturation: A sample is considered a satisfying size when new data do not shed any further light on underlying patterns of thinking within a population. For this project, our analyses confirmed a sample size of 20 interviews was sufficient to reach a point of saturation regarding cultural models of vaccination in the United States.

# Endnotes

- 1 Glaser, B. & Strauss, A. (1967). *The discovery of grounded theory: strategies for qualitative research (observations)*. Chicago: Aldine.

Strauss, A. & Corbin, J. (1990). *Basics of qualitative research: grounded theory procedures and techniques*. Newbury Park, CA: Sage.

- 2 Shore, B. (1998). *Culture in mind: cognition, culture, and the problem of meaning*. Oxford University Press.

- 3 Quinn, N. (Ed.). (2005). *Finding culture in talk: A collection of methods*. New York, NY: Palgrave Macmillan.

## About FrameWorks

The FrameWorks Institute is a nonprofit think tank that advances the mission-driven sector's capacity to frame the public discourse about social and scientific issues. The organization's signature approach, Strategic Frame Analysis®, offers empirical guidance on what to say, how to say it, and what to leave unsaid. FrameWorks designs, conducts, and publishes multi-method, multidisciplinary framing research to prepare experts and advocates to expand their constituencies, to build public will, and to further public understanding. To make sure this research drives social change, FrameWorks supports partners in reframing, through strategic consultation, campaign design, FrameChecks®, toolkits, online courses, and in-depth learning engagements known as FrameLabs. In 2015, FrameWorks was named one of nine organizations worldwide to receive the MacArthur Award for Creative and Effective Institutions.

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