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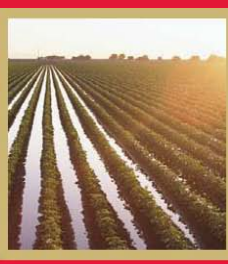
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Evaluation of a Deliberative Process to Obtain Citizen Input for the Draft Strategic National Vaccine Plan

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Executive Summary

The Deliberative Process to Obtain Public Input for the Draft Strategic National Vaccine Plan occurred in March and April 2009. Public meetings were held in three locations – St. Louis Missouri, Columbus Ohio, and Syracuse New York. Each meeting followed a similar format: 1) A morning presentation of essential information about the U.S. vaccine system, followed by a question and answer session with the participants, 2) introduction of participants to values underlying the U.S. vaccine system with an opportunity to discuss and define the most and least important values, 3) presentation of background information on 12 areas of activity in the U.S. national vaccine program, 4) small group activities in which participants matched their most important values to 12 areas of vaccine activity, and 5) another small group activity in which participants allocated additional funding to national vaccine programs. Throughout the day, participants had opportunities to discuss and decide on the top values they thought should influence national vaccine program activities.

The evaluation included five major components: 1) a pre/post survey to assess changes in knowledge and opinions about social values and priority areas, 2) a post process survey to assess quality of the process, anticipated use of the input, and reasons for participating, 3) comparison of demographic characteristics of participants with census data to assess diversity of participation, 4) post process focus groups with citizens to supplement information about process quality, recruitment efforts, participant knowledge, and expectations about use of the public input, and 5) individual interviews and a focus group with project sponsors and facilitators to understand the project and capture lessons learned. Results of the evaluation include the following findings:

The process was generally successful in attracting citizens to participate in three deliberation days held across the country. Two of the three sites included approximately 100 participants. One site – Syracuse - fell short of this goal, but included enough citizens to engage in the process including doing small group work. Likely reasons for lower participation in the one site include the lack of a stipend paid to participants and selective recruitment efforts. Citizens were motivated to participate by interest in the subject, a desire to learn more about the topic, a feeling of responsibility to contribute to an important public policy issue, and payment for their time.

The process was successful at attracting participants from diverse backgrounds and perspectives. While there were certain groups underrepresented in the meetings (e.g., males) and the characteristics of participants did not exactly match the populations of the participating communities, there appeared to be enough diversity in backgrounds and perspectives to result in meaningfully dialogue and exploration of different sides of issues. Evaluation results found differences in perspectives across demographic groups and meeting locations, thereby reinforcing the need to include diverse representation in public engagement processes to obtain multiple points of view.

The process was successful in improving the knowledge of participants so they could engage in informed discussions about national vaccine policy. The presentation of information and the opportunity to engage in dialogue about the topic resulted in participants' increasing their understanding of critical information about vaccines and vaccine policy. Knowledge increased for all groups regardless of education, income, race/ethnicity, age, gender and geographic location. The process did not, however, result in the same level of knowledge for all participants. In fact the range in understanding the topic was greater after the meetings than before the meetings. To create a more level playing field in which all citizens have an equivalent understanding of the topic, it is recommended that presentations be tailored more to persons of lower educational background and socio-economic status.

The evaluation revealed that citizens changed their perspectives and opinions as a result of the deliberative process. By becoming better informed about the topic areas and engaging in discussions about issues related to vaccine policy, participant views about priority areas and social values underlying the priority areas changed significantly from the pre-test to the post-test. This result indicates that citizen deliberations provide a qualitatively different type and level of input from alternative methods such as public polling or surveys. Contrary to expectations, we did not find the process to result in increased agreement among participants about priority areas and social values.

The process was perceived to be of high quality by citizens and evaluators. We believe this was true in large part to the level of planning of project organizers and facilitators prior to the meetings. Participants rated the process high on a number of dimensions. For example, citizens and stakeholders thought participants felt comfortable talking in the meeting, the discussion was fair to all participants, and the process helped them understand the types of trade-offs involved in developing priorities for national vaccine policy. Satisfaction with the process was consistent across race, ethnicity, age, gender, and income, and family status, indicating the process did not favor one group over another. However, there were differences in satisfaction across the meeting locations, with Syracuse participants being less satisfied with the process. Citizens also anticipated their input would be given serious consideration by decision makers. We recommend developing a feedback process to inform citizens at a later date about how their contributions were used in policy development.

The evaluation included documentation of lessons learned through conducting the deliberative process. Some of these lessons include 1) identifying the purpose and use of public input helps focus the process, 2) creating a common understanding of terms and definitions is important, particularly the values underlying the U.S. vaccine system, 3) attention to detail is important to achieving good outcomes, 4) compensation for citizens appears to increase participation and diversity of participants, and 5) presentation materials need to be tailored to increase comprehension among individuals with varying levels of education and socioeconomic status.

Chapter 1: Introduction

This evaluation examined a process for engaging the public in discussions about priorities for the United States national vaccine plan and explored the opportunities and challenges related to consideration of citizen input by decision makers. The evaluation of this project is important from three perspectives. First, the results will aid the public health field by contributing to the question of whether obtaining citizen and stakeholder input adds value to important public health decisions. Second, the evaluation results may be useful for persons who study public engagement processes; the evaluation is a case study of one type of citizen deliberation process applied to a public health topic, resulting in lessons for other citizen participation efforts. Third, the evaluation may be instructive for persons interested in the mechanics of evaluating public engagement processes.

The Public Engagement Process

The National Vaccine Plan was last updated in 1994. In modifying this plan in 2009/2010, there was a desire by federal agencies to obtain input from citizens in addition to experts and other stakeholders. For the public engagement process, a core planning team was created composed primarily of federal level conveners, the head facilitator, and Oak Ridge Institute for Science and Education (ORISE), who convened regular meetings via teleconference prior to the first engagement forum in St. Louis on March 14. The planning meetings primarily focused on design of the engagement exercises, recruitment of participants, and development of the evaluation survey vis-à-vis the objectives of the project. The actual process design was generated primarily by Dr. Roger Bernier of the Centers for Disease Control and Prevention and Jacquie Dale of One World Inc.—the head facilitator. Among this core team of planners, there was a division of labor between ORISE personnel—who largely concentrated on providing project administration and logistical support, and the facilitator and CDC/HHS personnel—who concentrated on designing the engagement activities. This division of labor among the core planning team would prove helpful because it allowed team members to concentrate on the specific areas for which they were accountable. Materials and processes for the public engagement events were pretested with ORISE employees who were not health care workers on February 18, 2009. The final process design was then finalized prior to the three deliberations in St. Louis, MO; Columbus, OH; and Syracuse, NY.

The core activities for the engagement process included the following basic components:

1. A morning presentation of essential information about the U.S. vaccine system, followed by a question and answer session with the participants.

2. A morning activity in which participants are introduced to the concept of underlying values behind the U.S. vaccine system, and asked to discuss and identify the values most and least important to them.
3. An afternoon presentation on the 12 areas of activity in the U.S. national vaccine program plan.
4. An afternoon activity in which participants align the top five values identified in the morning with each of the 12 areas of activity by allocating a point value to each top value per activity. One point was assigned to values that had a weak alignment to the program activities; three points were assigned to those values with medium alignment to the program activities; and five points were assigned to those values with the strongest alignment to the 12 areas of activity.
5. A final activity in which participants are asked to indentify which 3 areas of the national vaccine program they would prefer to prioritize if new funding was made available.

After each of the activities, there were a series of live electronic voting sessions in which participants were asked to vote for or identify the outcomes following their small group discussions. Some of the voting was conducted by individual participants and other votes were tabulated by group or table. Voting was followed by large group discussions led by the head facilitator in which tables had the opportunity to report back results and discuss perspectives. Throughout the process, expert resource people from the CDC/HHS or state representatives were encouraged to observe and roam among participants to answer questions. All activities were preceded and followed by the pre and post evaluation surveys.

Local conveners were primarily responsible for promotion and recruitment of participants to the engagement forums, recruitment of small group facilitators, securing meeting spaces, and arranging for catering and other administrative details. Working with the core planning team—particularly ORISE—the local conveners identified training dates for small group facilitators within the week prior to the actual event.

Following the St. Louis forum, the core planning team made three significant changes to the process activities. First, changes to the morning values activity were made in an attempt to better define the meaning of the values for participants. Slight changes were made to the definitions of some values, as well as to how they were presented on the values cards provided to participants. Second, the number of values and activities participants were asked to select was cut from 5 to 4, in the interest of time and ease for participants. And third, during the question and answer period after the morning's presentation, resource people went table to table answering questions, rather than one person at the podium answering questions. This allowed participants to have more of their questions answered in the allotted amount of time.

The agenda was similar in the three cities. St. Louis participants' task was slightly more difficult and took longer because they were asked to select their top 5 priorities rather

than their top 4. In Columbus, the process included a scenario in which participants were asked how they would allocate new money to vaccine activities; this activity was not included in the St. Louis or Syracuse deliberations. The recruiting process differed in Syracuse in two ways: the only medical and public health professionals screened out were physicians and nurses, and gifts were provided instead of monetary compensation. The number of participants in Syracuse was about half that in St. Louis and Columbus.

Evaluation Questions

The evaluation examined the following questions:

1. Participation and recruitment questions:
 - a. How successful was the process in attracting citizens to deliberations in three meeting locations: St. Louis Missouri, Columbus Ohio, and Syracuse New York?
 - b. How successful was the process in attracting citizens with diverse backgrounds and perspectives?
 - c. What motivated citizens to participate in the process and what could have improved recruitment?
2. Process quality
 - a. How successful was the process in providing a sufficient level of citizen knowledge about vaccine policy so they could engage in informed discussions?
 - b. How did the process affect citizen perceptions about vaccine goals and values underlying those goals?
 - c. To what extent did the process result in a balanced, honest, and reasoned discussion of the issues and what would have improved the process?
3. Perceptions about the product
 - a. What were citizen perceptions about how the input would be used?
 - b. What are the lessons learned that can be used to improve future public engagement processes?

Chapter 2: Evaluation Methods

This study employed a mixed method design using quantitative and qualitative information. The University of Nebraska-Lincoln Institutional Review Board approved the evaluation design and all participants were asked to complete an approved informed consent form to participate in the evaluation. There were six major methodological components:

1. Conduct a pre/post survey of meeting participants in three citizen meeting locations to assess change in knowledge, goals and values.
2. Obtain demographic information about participants.
3. Conduct a post meeting survey to obtain citizen perceptions about the process
4. Conduct a post meeting focus group to gain deeper understanding about citizen perceptions of process and outcomes from the meeting.
5. Conduct interviews with conference sponsors and facilitators to understand the process, the rationale for the process, and lessons learned from conducting the process.
6. Conduct an analysis of deliberation participant demographic characteristics compared to characteristics of the site's general population.

The pre and post-surveys were conducted through a combination of electronic polling and paper and pencil surveys. The pre-survey had two sets of questions: multiple-choice questions assessing knowledge about vaccines and a section asking opinions about public health priorities, vaccine goals, and values. The post-survey included these two sets of questions and a set of questions about the quality, fairness and effectiveness of the deliberative process and recruitment process. Questions were pre-tested and modified to improve comprehension of questions and answers. To help reduce response-order bias, three versions of each survey were administered with the order of questions randomly varied in the opinion-questions sections.

For evaluation questions administered through a paper and pencil survey, citizens received pre-tests at the beginning of each meeting. Organizers asked them to find a seat and complete the survey immediately. At the end of the meeting, participants had about 15 minutes to complete the paper and pencil post-test. Some of the demographic information for one meeting was collected through electronic voting, and the voting occurred in the first half hour of the meeting. We were able to link the information from the electronic voting to the written surveys so we could compare information by individual. For the pre-post surveys, there was a 15.4% attrition rate (see Table 1). Results from the pre-post survey included the 208 participants who completed both the pre-survey and the post-survey.

Table 1

Number of Pre-tests and Post-tests Completed and Attrition Rate

City	Pretest Number	Posttest Number	Attrition Number	Attrition Rate
OVERALL	246	208	38	15.4%
St. Louis, MO	94	86	8	8.5%
Columbus, OH	98	78	20	20.4%
Syracuse, NY	54	44	10	18.5%

Citizens were asked to volunteer to stay after the meeting and participate in a focus group. Respondents self-selected to join each focus group. The focus group questions for citizens included how they perceived the information presented at the meeting; the quality of the participation; aspects of the process that influenced their opinions; their satisfaction with the process; how the process could have been enhanced; and how they thought policy makers would consider their input. Citizens were asked to share their perception of how representative of the general public the participants at the meeting were, how they found out about the meeting, and why they participated. Interviews with event organizers and facilitators were conducted by telephone. Evaluators supplemented survey and interview results with direct observation of the meetings.

Analyses

The evaluation logic model can be found in Attachment A. Quantitative data from the pre/post surveys was analyzed using the software package SPSS v17. Atlas.ti, a qualitative analysis software package, was used to organize information from audio tapes and detailed notes from focus groups, interviews and observations. Triangulation with multiple coders and data sources served as a validation strategy. The qualitative data was intended to provide depth and explanation for quantitative findings.

To assess the extent which the process was successful in attracting citizens with a broad diversity of perspectives, we examined the demographic characteristics of meeting participants and compared them to the demographic characteristics of the general population in the community where the meeting was held. We used chi-square tests to determine statistical significance related to demographic differences. Quantitative analysis was supplemented with direct observations of the diversity of perspective and citizen perceptions about the diversity of participants.

To assess the knowledge of participants related to information about vaccine policy, we compared change in knowledge on the pre and post-survey. A two way Analysis of Variance (ANOVA) was used to determine statistical significance between pre and post-scores including significance testing for each knowledge question. Direct observation of

the level of discussion among citizen deliberators by the evaluators and vaccine experts supplemented the quantitative analysis. We also assessed the participants' perceptions about their level of knowledge and their ability to engage in informed discussion through survey questions and focus group responses. We examined how knowledge and change in knowledge were related to demographic characteristics of participants within and across sites.

To assess the process we relied on direct observation by evaluators, facilitators and meeting organizers. We gauged citizen perceptions of the process through standard ratings on the post--survey as well as qualitative information obtained through the focus groups. To assess how the process affected the goals, values and priorities of the citizen participants, we relied on the pre/post survey. Two way Multivariate Analysis of Variance (MANOVA) was used to test for statistically significant differences between pre and post-ratings. We supplemented the quantitative results with participant perceptions about how and why their opinions may have changed. We examined how values, goals and priorities are related to citizen demographic characteristics, to the level of knowledge of citizens and to the satisfaction of citizens with the process within and across sites.

Chapter 3: Evaluation Results – Recruitment and Participation

Summary of Findings

- The process was successful at attracting citizens to deliberations; although in one site, only about half the desired number of citizens participated
- Major motivators for participating include interest in the subject, the desire to gain knowledge about the topic, and a feeling of responsibility to contribute to an important public policy issue
- The process was successful at attracting participants of diverse backgrounds and interests, although the demographic characteristics of participants did not mirror those of the communities within which the meetings were held.
- The evaluation results suggest public engagement processes could benefit from a standardized recruitment process across sites that includes stipends as an incentive for participation and employs multiple methods targeted toward diverse groups.
- Providing incentives, such as stipends or gifts, only after completing the process would likely reduce attrition.

Reasons for Participation

The goal of the public engagement process was to recruit a sufficiently large number of citizens to participate in each meeting and to have citizens represent a diversity of perspectives and backgrounds. A “rule of thumb” goal for the citizen deliberations was to attract 100 participants at each of the three sites; organizers believed that a process having large numbers of citizen participants would be perceived as more credible and generalizable by decision makers. In addition, facilitators wanted a sufficient number of citizens to allow small group deliberations. Evaluator observations and findings from the focus groups and interviews indicate the process was successful at recruiting and attracting citizens to participate in the deliberative process. Each citizen meeting included enough citizens to have multiple small group discussions. As shown in Table 2, two of the three meetings attracted approximately 100 citizen participants.

Table 2
Number of Citizen Participants by Community

City	Number of Participants
St. Louis, Missouri	97
Columbus, Ohio	98
Syracuse, New York	54*
Total	259

* Estimated from return of pre and post surveys

Attrition of participants was an issue. Although exact numbers of participants who left early were not recorded at each meeting, one conference organizer estimated that about 15% of citizens left the meeting before the process was concluded. There is support for this attrition rate from the completion of pre and post surveys; 15.4% of individuals who completed the pre-survey in the morning did not complete the post-survey at the end of the process (see Table 1). One method to reduce attrition would be to require participants to complete the entire deliberation process before they receive their incentive for participating, although there may be ethical issues with mandating completion if the deliberation is conducted as part of a research project.

St. Louis and Columbus participants were paid a \$50 stipend to attend; Syracuse provided gifts but did not offer cash incentives. The stipends and gifts were provided to participants whenever they elected to leave the meeting; participants were not required to attend the entire meeting to receive their incentive. Recruitment was done through flyers and emails to community groups, schools, advocacy and faith-based groups. Word of mouth was also relied upon in all cities to draw participants. Some local organizers thought if they had more time to recruit, they could have attracted greater numbers of participants. Participants were asked in focus groups and on evaluation surveys what made them decide to attend the event and how they learned about it.

Compensation was a reason given for deciding to attend by about a fifth of the participants in St. Louis and Columbus, usually in combination with a statement about the educational benefit of the event. For example, “Free knowledge with a small payment for my time,” and “Curiosity and compensation”. A review of evaluation survey comments revealed that individuals citing compensation as a draw tended to be younger than the overall sample. The impact of compensation was discussed in focus groups after the event in St. Louis and Columbus. Generally, compensation was seen as a valid way to draw diverse participants to the event: “I’m sure originally some people came for the money, but once the meeting got started, it came out we all had different opinions about it and we all feel differently about it [vaccination issues].” One organizer/key stakeholder commented: “I was pleasantly surprised, even with people who said they were there only for the 50 dollars, a lot of them got into the issues and they really did want to talk about the issues and dialogue with their group.”

Other reasons cited for attendance related to civic responsibility (“Civic duty” and “Social responsibility”), previous experience with public engagement events (“I attended another meeting, heard the event needed more people, am interested in the topic, and wanted the event to succeed”), curiosity (“Some thing to do today”) and an interest in

the topic (“This is a topic I consider to be very important”). A number of participants attended because they were personally affected by vaccine issues, particularly in

Syracuse, for example: “I have a child with autism. He was injured by vaccines” and “It is an important topic to me. I have a 1yr old son and want to better understand issues and bring up problems I have with the current system.”



The majority of participants from Syracuse (82%) learned about the event through either the local University or FOCUS (the local coordinating partner). St. Louis participants heard about the event through friends and materials distributed through FOCUS St. Louis, the Public Health Department and a Father’s Support Group. St. Louis participants who said they heard through friends, word of mouth or the Support Group were more likely to identify themselves as African American than other participants. Columbus participants identified a diverse set of recruiting strategies as influencing their decision to attend, including flyers (provided by or left at community agencies), emails, friends, family and co-workers.

Focus group participants were asked about their expectations coming into the day. The general theme arising from all groups was that participants came with the expectation they would learn something new about vaccines and vaccination policy. Many of them were interested in gaining information to increase their understanding of personal situations. It should be noted that these events took place in proximity to National Autism Month, which may have influenced attendance and heightened awareness of vaccination issues for participants.

“I have 2 grandchildren who are autistic and actually have 4 grandchildren with hyperkinetic conditions. I was not sure if it was environmental versus a vaccination issue. I wanted to learn the effects for myself and how decisions are made.”

“I am a special education teacher and I get lots of questions from the parents all the time about whether or not vaccines caused or contributed to their child’s issues.”

Diversity of Participants

A goal of the project was to attract a diversity of participants, both in terms of demographic characteristics and perspectives. It was not necessarily the goal to have the participants match the exact demographics of the United States or of the communities in which the meetings were held, but rather to have enough diversity to hear multiple perspectives from different sectors of the population. In this sense, it appears the process was successful. Participants represented a diverse mixture of demographic characteristics and perspectives. For participants who completed the post-survey, the demographic information indicates diversity within the sample in age, gender, race/ethnicity, education, and income, although participants were not exactly representative of the general population in the three communities.

Figure 1 shows the proportion of citizen participants of each gender for the three meetings. Participants were predominantly female. St. Louis had the greatest proportion of male participants (41.9%) compared to the two other sites; approximately 25% of participants in the Columbus and Syracuse meetings were males.

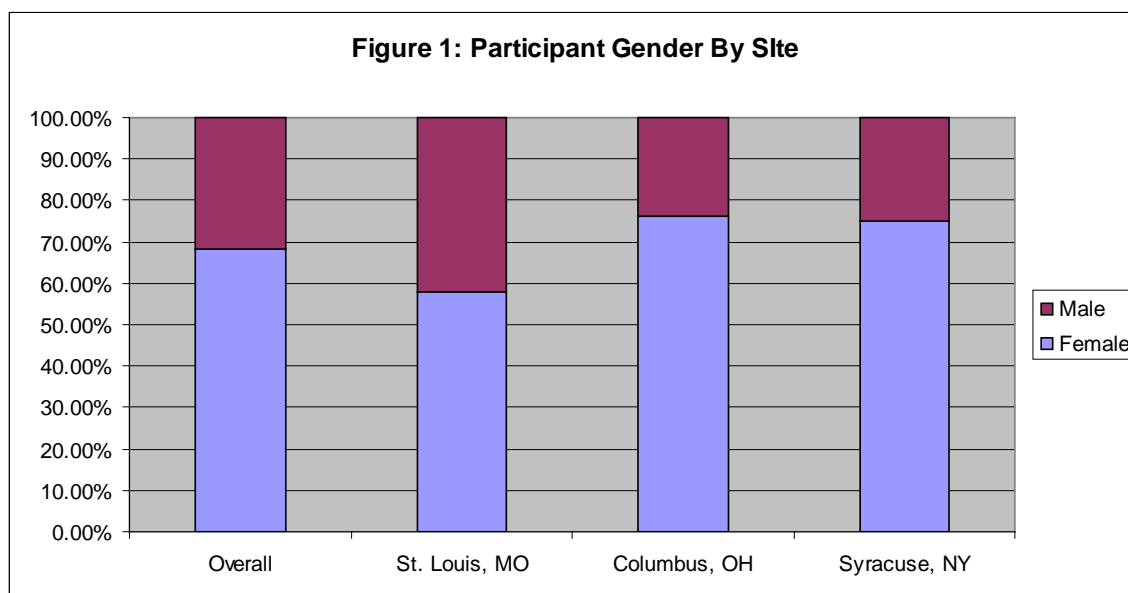


Table 3 shows the ages of participants across the three meeting sites. Participants represented a cross section of ages, although a majority of participants were 45 years of age or older. There were no significant differences across the three meeting sites with respect to age of participants.

Table3
Age of Citizen Participants by Meeting Location

Ages	Overall	St. Louis	Columbus	Syracuse
18-24	10.0% (n=21)	12.4% (n=11)	6.5% (n=5)	11.6% (n=5)
25-34	15.3% (n=32)	10.1% (n=9)	23.4% (n=18)	11.6% (n=5)
35-44	15.8% (n=33)	13.5% (n=12)	19.5% (n=15)	14.0% (n=6)
45-54	23.0% (n=48)	23.6% (n=21)	20.8% (n=16)	25.6% (n=11)
55-64	20.6% (n=43)	22.5% (n=20)	16.9% (n=13)	23.3% (n=10)
65+	15.3% (n=32)	18.0% (n=16)	13.0% (n=10)	14.0% (n=6)
<i>ESTIMATED MEAN AGE</i>	<i>42.5</i>	<i>43.8</i>	<i>45.8</i>	<i>42.9</i>

Table 4 compares the race and ethnicity of citizens across the three meeting locations. There was a mix of racial and ethnic diversity across the three sites. Non-Hispanic whites were the largest single group for all three meetings and constituted the majority of participants in Syracuse. There was less racial/ethnic diversity in Syracuse than in the other two meeting locations. Syracuse had a significantly lower proportion of Hispanics and Non-Hispanic Blacks than the other locations.

Table 4
Race/Ethnicity of Citizen Participants by Meeting Location

Race/ Ethnicity	Overall	St. Louis	Columbus	Syracuse
Hispanic White	5.4% (n=11)	3.5% (n=3)	9.3% (n=7)	2.4% (n=1)
Hispanic Black	6.9% (n=14)	9.4% (n=8)	6.7% (n=5)	2.4% (n=1)
Non-Hispanic White	46.5% (n=94)	40.0% (n=34)	41.3% (n=31)	69.0% (n=29)
Non-Hispanic Black	34.7% (n=70)	41.2% (n=35)	36.0% (n=27)	19.0% (n=8)
Asian	1.0% (n=2)	0% (n=0)	2.7% (n=2)	0% (n=0)
Native American	2.5% (n=5)	3.5% (n=3)	1.3% (n=1)	2.4% (n=1)
Other	3.0% (n=6)	2.4% (n=2)	2.7% (n=2)	4.8% (n=2)

Table 5 shows the education level of participants across the three meeting locations. Overall, participants in the three meetings represented diversity in level of education, although the majority in each meeting had at least some college experience. On average, participants in Syracuse had a significantly higher level of education than participants in Columbus or St. Louis. No participant from the Syracuse meeting reported having less than a high school education; nearly 75% of Syracuse participants reported having at least a college degree. This was noted by Syracuse focus group attendees as they expressed concern about that lack of diversity across education levels (*"We all had at least BA degrees and I was concerned about the educational level represented"*) and that recruitment had not been extended to rural areas surrounding the city. *"I didn't know if we were covering rural counties; that concerned me."*

Table 5
Education of Citizen Participants by Meeting Location

Education	Overall	St. Louis	Columbus	Syracuse
Less than high school (1)	3.3% (n=7)	5.6% (n=5)	2.6% (n=2)	0% (n=0)
Some high school (2)	9.1% (n=19)	10.1% (n=9)	13.0% (n=10)	0% (n=0)
High school graduate (3)	16.3% (n=34)	18.0% (n=16)	20.8% (n=16)	4.7% (n=2)
Some college (4)	25.8% (n=54)	25.8% (n=23)	28.6% (n=22)	20.9% (n=9)
College graduate (5)	19.1% (n=40)	18.0% (n=16)	19.5% (n=15)	20.9% (n=9)
Some graduate school (6)	7.2% (n=15)	5.6% (n=5)	2.6% (n=2)	18.6% (n=8)
Graduate school graduate (7)	16.2% (n=40)	16.9% (n=15)	13.0% (n=10)	34.9% (n=15)
MEAN	4.46	4.25	4.09	5.58

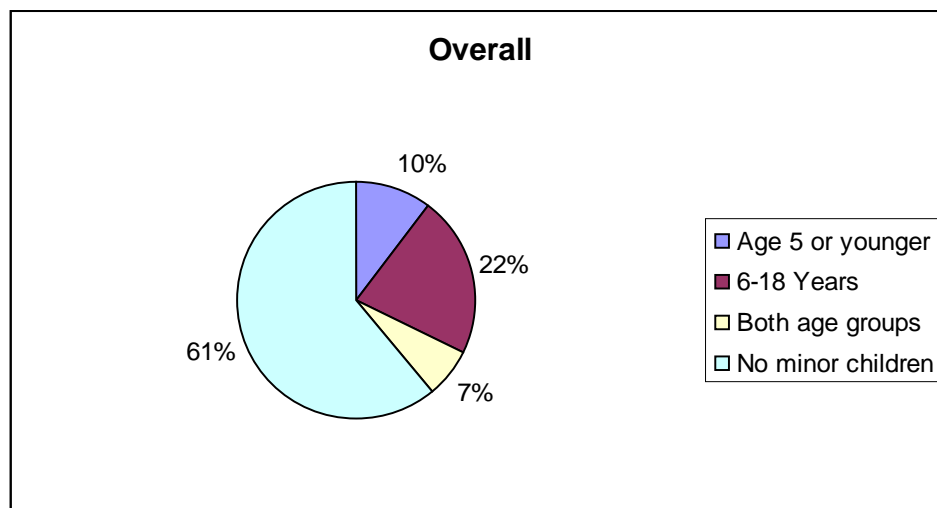
Table 6 shows the self-reported household income for citizens who participated in the three deliberations and completed the survey. Each meeting site included citizens with incomes across the economic spectrum. Syracuse participants were much less likely to have annual incomes \$15,000 or less and much more likely to have incomes over \$60,000 than participants at either of the other two sites.

Table 6
Annual Household Income of Citizen Participants by Meeting Location

Annual Income	Overall	St. Louis	Columbus	Syracuse
\$15,000 or less (1)	37.8% (n=79)	46.3% (n=38)	46.2% (n=36)	12.8% (n=5)
\$15,001 - \$30,000 (2)	16.7% (n=35)	11.0% (n=9)	23.1% (n=18)	20.5% (n=8)
\$30,001 - \$60,000 (3)	21.1% (n=44)	22.0% (n=18)	20.5% (n=16)	25.6% (n=10)
\$60,001 - \$100,000 (4)	12.9% (n=27)	14.6% (n=12)	3.8% (n=3)	30.8% (n=12)
\$100,001 or more (5)	4.8% (n=10)	4.9% (n=4)	2.6% (n=2)	10.3% (n=4)
MEAN	2.25	2.20	1.89	3.05

Figure 2 shows the percentage of participants reporting they have children at home for each site and across the three sites combined. All three sites included citizens who had children living at home, although the majority of participants at each location had no minor children living at home. Citizens participating in the St. Louis meeting were least likely to have children living at home, while citizens at the Columbus meeting were most likely to have children living at home.

Figure 2
Children Living at Home for Citizen Participants by Meeting Location



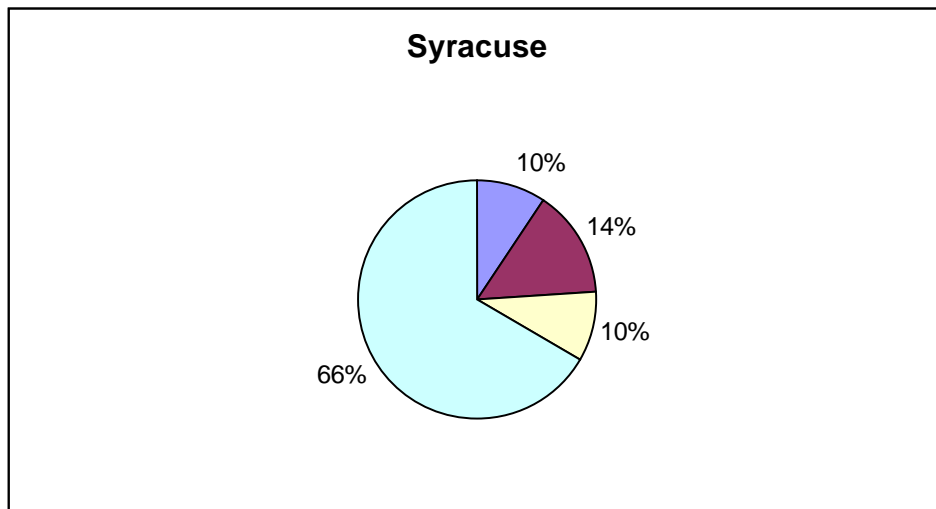
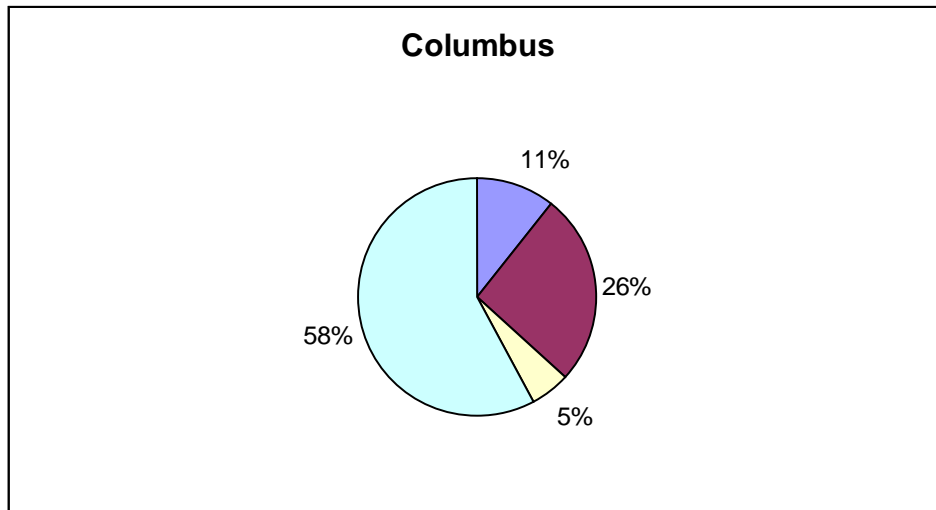
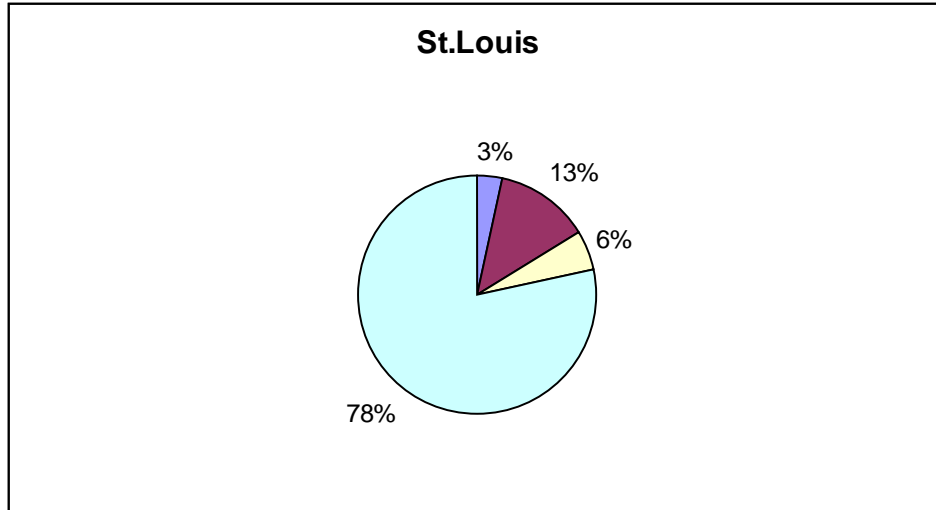


Table 7 compares the demographic characteristics of participants in the three meeting locations to the demographic characteristics of the general population in the United States who are ages 18 years and older. In addition, we compared the demographic characteristics of meeting participants with the characteristics of the populations within each of those communities. **Gender:** In relation to the demographic characteristics of the population in general, males were underrepresented and females were overrepresented compared to the U.S. population and to the populations in the community for each meeting site. **Age:** Meeting participants across the three sites were not significantly different in age compared to the national population. The only significant difference for each of the three sites was that 55 – 64 year olds in St. Louis were overrepresented in relation to those in the community. **Race/Ethnicity:** Overall,



Non-Hispanic Blacks and American Indians/Alaskan Natives were overrepresented at the deliberations compared to the U.S. general population; Non-Hispanic Whites and Asians were underrepresented. In relation to community demographics, Hispanics and American Indians/Alaska Natives were overrepresented in St. Louis and Columbus. Non-Hispanic Whites were underrepresented in Columbus. Although participants were less racially and ethnically diverse in Syracuse than in the other two locations, participants tended to reflect the race/ethnic characteristics of the broader Syracuse community. **Education:** Overall, those with some college education and graduate school degrees were overrepresented at the meetings in comparison to the U.S. population over age 25; those with less than a high school education and only a high school diploma were underrepresented. In relation to the demographic characteristics of the each

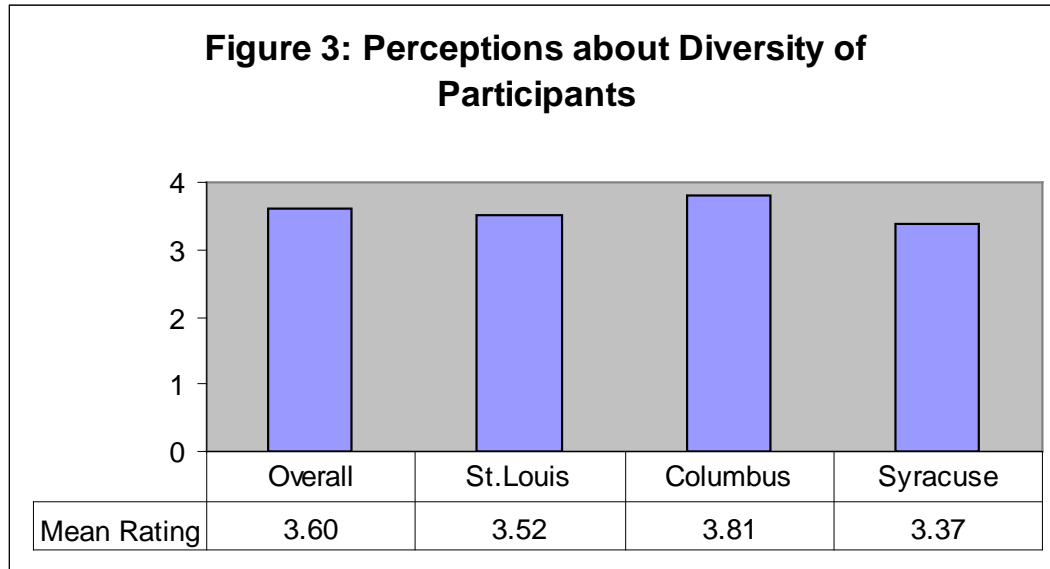
community, participants with graduate school degrees were overrepresented in Syracuse. **Households with Children:** There were no significant differences between the meeting participants regarding the proportion who had children living at home. In relation to community demographics, households with children under 18 years of age were overrepresented in Columbus.

Table 7
Comparison of Participant Demographics to U.S. Demographics

Demographic Variable	Meeting Participants	U.S. Demographics
Gender		
Females	68.4%	50.8%
Males	31.6%	49.2%
Age		
18-24	10.0%	13.1%
25-34	15.3%	17.8%
35-44	15.8%	19.4%
45-54	23.0%	19.2%
55-64	20.6%	14.0%
65+	15.3%	16.6%
Race/Ethnicity		
Hispanic White	5.4%	14.7%
Hispanic Black	6.9%	
Non-Hispanic White	46.5%	66.3%
Non-Hispanic Black	34.7%	12.2%
Asian	1.0%	4.3%
Native American	2.5%	.7%
Other	3.0%	1.9%
Education		
Less than high school	3.3%	6.5%
Some high school	9.1%	9.5%
High school graduate	16.3%	30.0%
Some college	25.8%	19.6%
College graduate	19.1%	24.5%
Some graduate school	7.2%	
Graduate school graduate	19.1%	9.9%
Children at Home		
Yes	31.6%	31.4%
No	68.3%	68.6%

Participants perceived that the meetings attracted citizens from diverse perspectives and backgrounds (see Figure 3). When asked to rate the statement, “Participants at this meeting represented a broad diversity of perspectives,” citizens on average provided a

3.6 rating on a four point scale indicating general agreement. There were differences across the three sites. Participants at the Columbus meeting rated this item significantly higher and participants at Syracuse rated this item significantly lower.



The general impression of focus group participants in all cities was that a diversity of opinion was represented, “It was a really diverse group and everybody at the table wanted to learn something.” Some commented that the participants adequately reflected their community, “All walks of life were here.” But others expressed concern that some groups may have been underrepresented at the events, including in the make-up of the presenters and organizers of the events:

“I realize that there isn’t a lot of diversity on the decision making level. The presenters – the ethnic diversity is not there either. Previous studies have historically given people of color a reason to be suspicious.”

Chapter 4: Evaluation Results – Citizen Knowledge

Summary of Findings

- The process was successful at increasing relevant knowledge of participants, so citizens could engage in informed dialogue
- Knowledge increased equivalently across demographic groups based on education, income, race/ethnicity, age, gender, and geographic location.
- Participants believed they had adequate knowledge to make informed choices about vaccine policy
- The process did not equalize knowledge across groups; for example, persons with higher education levels understood the information better than participants with lower education levels.
- The evaluation findings suggest information presented should be tailored to participants with lower education.

Knowledge of Participants

Citizens were given a nine-item knowledge test at the beginning and end of each deliberation. As indicated in Table 8, average scores for citizen knowledge increased significantly from the pre-test to the post—test ($F(1, 205) = 163.262, p < .001$). There were no significant differences in citizen knowledge across the three sites ($F(2, 205) = 2.975, p = .053$). However, it should be noted that the knowledge difference between Syracuse and the other two sites approached significance. Participants in the Syracuse meeting had higher scores on the pre-test than the other two sites. This is likely due to the higher level of education of Syracuse participants and that many of them had particular interest in the topic area. There were no significant differences across the three sites in knowledge change ($F(2, 205) = 1.155, p = .317$). This indicates the process used in all three locations to inform participants was equivalent and met the objective of increasing knowledge.

Table 8
Change in Participant Knowledge by Meeting Location

Knowledge Scores	Overall (n=208)	St. Louis (n=86)	Columbus (n=78)	Syracuse (n=44)
Pretest Mean (Std Dev)	51.01 (21.63)	49.48 (22.40)	50.28 (20.71)	55.30 (21.63)
Posttest Mean (Std Dev)	71.79 (25.59)	69.12 (26.86)	69.66 (23.12)	80.81 (25.74)

Knowledge by Different Groups

To assess whether the process was more successful at increasing knowledge for some categories of participants than others, we examined change in knowledge by

demographic variables. Table 9 shows pre- and post-test knowledge scores based on education. Perhaps not surprisingly, the higher the education level, the higher the scores on both the pre-test and post-test ($F(1,198) = 133.034, p < .001$). Those with less than or some high school scored 16.78 percentage points lower than those with some college or college graduates ($p=.002$). Participants with less than or some high school scored 22.23 percentage points lower than those with some graduate school or graduate school graduates ($p<.001$). One might anticipate that the deliberation process might equalize knowledge across education groups. The results indicate that the level of knowledge change did not differ significantly across groups; persons with lower education had less knowledge about vaccines coming into the meetings, and while their level of knowledge increased as a result of the deliberations, their level of knowledge did not increase at a different rate than those with higher education. Hence, the process was not successful at bringing the level of knowledge of lower educated persons up to the same level of knowledge of higher educated persons after the meeting. In fact, Table 9 shows that the disparity in knowledge actually increased during the course of the meetings. The standard deviation, which is a measure of the range of knowledge scores increased from 21.63 on the pre-test to 25.59 on the post-test (see Table 8 above). To create a meeting environment in which all participants have an equivalent level of knowledge may require presentations and meeting materials geared toward the learning styles and level of comprehension of persons with high school degrees or less than high school degrees. There was also a significant difference in knowledge across income groups, with persons of higher income showing greater levels of knowledge on the pre and post-test. This result may be linked to a relationship between income and level of education; income and level of education are significantly correlated ($r = .510, p < .001$).

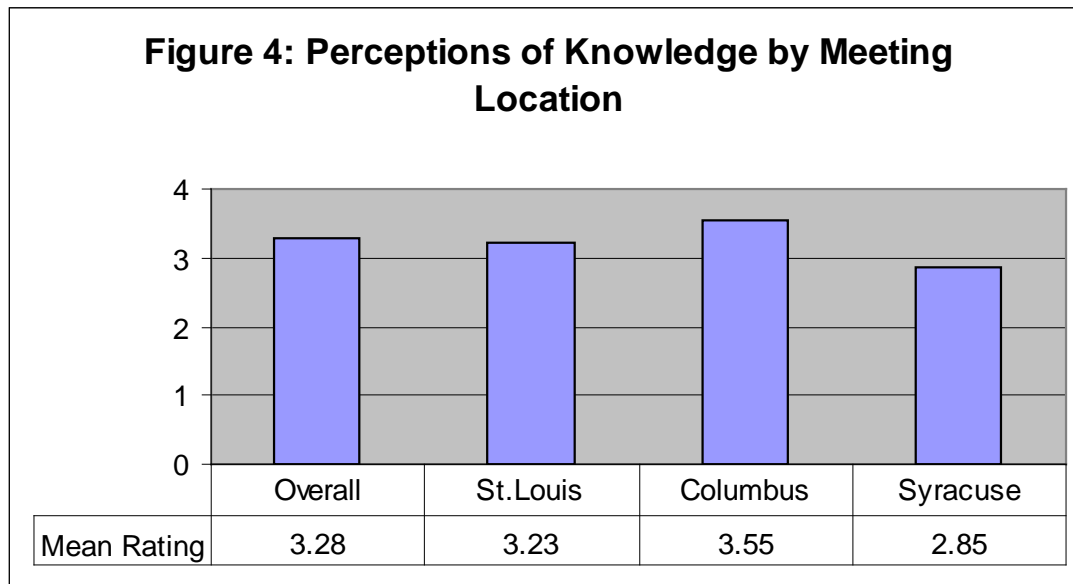
Table 9
Change in Participant Knowledge by Education

Knowledge Scores	Less than or some high school (n=23)	High school graduate (n=32)	Some college or graduate (n=94)	Some graduate school or graduate (n=53)
Pretest Mean (Std Dev)	38.65 (21.15)	44.44 (21.49)	54.37 (19.10)	56.60 (21.60)
Posttest Mean (Std Dev)	56.52 (23.43)	64.58 (26.54)	74.35 (24.87)	83.02 (15.95)

Perception of Knowledge

To supplement the knowledge test, we assessed the degree to which citizen participants thought they had enough knowledge to understand the issues around vaccines. In response to the statement, “I have enough information right now to have a well-informed opinion,” citizens rated this item an average of 3.28 on a scale of 1 – 4 with “4” meaning agree strongly and “1” meaning disagree strongly (see Figure 4). There were significant differences across the three meeting sites ($F(2,189) = 14.961, p < .001$). Respondents in Columbus expressed stronger agreement (3.55) than did respondents in

St. Louis (3.23) who, in turn, expressed stronger agreement than did respondents in Syracuse (2.85). There were no significant differences for this item across gender or age groups; however there was a significant difference across education level ($F(36, 525) = 1.468, p < .041$). Although performance on the knowledge test items indicated persons with lower levels of education understood the information less, these same participants (those with some high school or a high school degree) rated this item significantly higher than participants with a graduate degree or some graduate school ($p = .018$).



Columbus focus group participants noted in the focus group that the information presented at the event was appropriate and easy to understand: “I liked the presentations. We weren’t talked down to but it wasn’t over my head.” Focus groups in Syracuse and St. Louis were not as positive about the presentations. They said the information was too complex and presented in a way that did not help participants understand it:

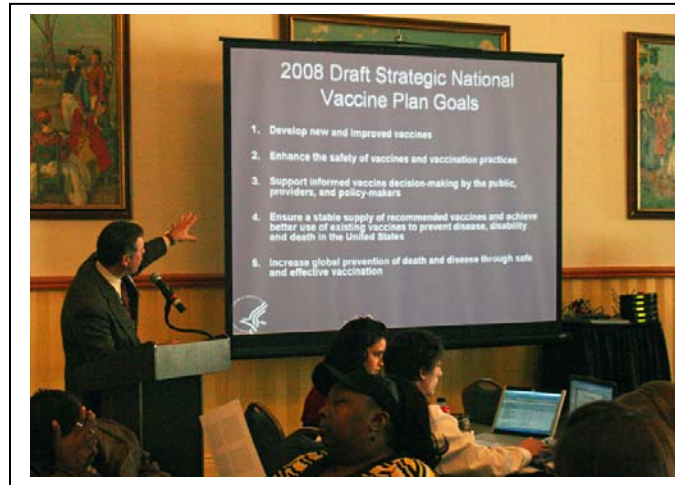
“We had at least one person in my group who was functionally illiterate and the language level was much too high. It needed to be simpler. It was not appropriate to the audience.”

“I lacked a sense of context in the initial presentation.”

All focus group participants were asked to suggest additional information that would have assisted them in their dialogues. Several focus group participants said they would have liked more information on the history and process of developing new vaccines and how vaccine development is funded in the United States. They also asked for

information about vaccines that presented concerns rather than just assuming that all vaccines are “lovely and wonderful.”

Most participants appreciated the availability of experts and resource personnel at the events who could answer questions as they arose. They complimented the facilitation and noted that facilitators helped bring participants into the conversation. Generally participants in the focus groups believed that differing opinions were taken into consideration in discussions.



“Even if you didn’t feel certain things, people took into consideration what people had to say.”

“There were a lot of different opinions. It was a good discussion.”

Chapter 5: Evaluation Results – Impact of Deliberations on Beliefs

Summary of Findings

- As a result of the deliberative process, the opinions of participants changed.
- Opinions about values and priority areas varied significantly across the three meeting locations; this evaluation finding reinforces the need to conduct public engagement processes in multiple geographic locations.
- Opinions about values, although not priority groups, varied significantly base on the income, education level and race/ethnicity of participants; this finding reinforces the need to attract diverse demographic groups to deliberative processes in order to obtain a variety of perspectives.

Changes in Beliefs

Survey results indicate some opinions regarding social values and priority areas changed for citizens after they received information and deliberated about vaccines. This change is important in that it indicates that something in the deliberative process actually influences participant thinking and beliefs. Participants reported in focus groups that interactions among participants influenced their opinions.

“It changed my opinions, just from listening to the people who were there.”

“I watched my own and others’ attitudes change when forced to make choices.”

“One woman hated vaccinations but she heard what everyone had to say and she just totally turned around her opinion because of what the people talked about.”

Participants were asked to rate 14 social values on a scale from “1” (not at all important) to “4” (very important). Three of these items were worded differently between cities and are separated in Table 10 from the ranked listing of the other 11 items. The results on the evaluation post-survey were consistent with final individual electronic polling. The top four post-survey values were included in the top five electronic polling results; “Protecting our Homeland” was rated high in electronic polling but not as high on the evaluation post survey. As part of the evaluation, we were interested in changes in participant values ratings between the beginning and end of the process. All but four of the social values were rated significantly lower in importance on the post-test compared to the pre-test. One might predict that as a result of the deliberations, citizens would have more agreement in their views; however, as shown by an increase in the standard deviations on 12 of the 14 items, rating of social values became more disparate on the post-test compared to the pre-test. Given that part of the process involved defining the values in small group discussions, it is possible that within a group agreement was reached but that between the small groups common definitions of the values were not shared. Perhaps also the divergence of values reflects the increased variation in understanding of relevant information, discussed in Chapter 4 above.

Table 10
Rating of Social Values Before and After Deliberation Meetings

Social Values	Pre-test Mean (Std Dev)	Post-test Mean (Std Dev)
Achieving Equity	3.69 (.63)	3.73 (.60)
Promoting Education and Awareness	3.74 (.56)	3.66 (.64)
Emphasizing Safety	3.84 (.47)	3.64* (.59)
Protecting the Most Vulnerable	3.77 (.58)	3.64* (.68)
Securing Supply	3.66 (.62)	3.58 (.64)
Improving Our Science	3.72 (.55)	3.49* (.68)
Being Vigilant	3.59 (.71)	3.46 (.68)
Protecting Our Homeland First	3.54 (.80)	3.42* (.83)
Protecting Individuals	3.75 (.57)	3.41* (.78)
Assuring Fairness	3.69 (.65)	3.33* (.80)
Tackling the Biggest Problems First	3.67 (.59)	3.27* (.82)
Saving Medical Costs (St. Louis)	3.51 (.749)	3.16* (.883)
Reduce Medical Costs (Columbus & Syracuse)	3.71 (.53)	3.57* (.76)
Obtaining Greater Protection Now (St. Louis)	3.56 (.729)	3.41 (.760)
Greater Protection Now (Columbus & Syracuse)	3.55 (.71)	3.29* (.85)
Helping Others (St. Louis)	3.72 (.553)	3.37* (.803)
Helping Other Countries (Columbus & Syracuse)	3.27 (.77)	2.90* (.89)

* indicates significant change at $p < .05$

Participants were asked to rank order 12 areas based on priority at the beginning and at the end of each meeting. Rankings were from “1” (most important) to “12” (least important). “Make vaccine affordable and available to everyone” was rated the most important area both on the pre-test and the post-test, and “Assure compensation for those injured by vaccines” was rated least important. The evaluation ratings were consistent with the electronic polling; the top five areas were the same for both, although in slightly different order. There were two areas that changed significantly from the pre-test to the post-test across all three sites: “Improve vaccine safety” and “Assure compensation for those injured by vaccines.” Both of these decreased in importance from pre-test to post-test (see Table 11).

Table 11
Rating of Priority Areas Before and After Deliberation Meetings

Priority Areas	Pre-test Mean (Std Dev)	Post-test Mean (Std Dev)
Make vaccine affordable and available to everyone	3.77 (3.47)	4.04 (3.84)
Assure there is enough vaccine	5.20 (3.36)	5.19 (3.26)
Maintain high rate of vaccination of children	4.78 (3.59)	5.27 (3.35)
Improve vaccine safety	4.34 (3.63)	5.54* (3.70)
Improve monitoring of disease and vaccines	6.09 (3.73)	6.08 (3.46)
Improve the information offered about vaccines	6.65 (3.89)	6.26 (3.68)
Develop new vaccines	5.97 (3.66)	6.27 (3.18)
Improve tools for making vaccines	6.64 (3.54)	6.34 (3.33)
Increase vaccination of adolescents	6.69 (3.40)	7.13 (3.37)
Increase vaccination of adults	7.54 (3.31)	7.37 (3.32)
Help other countries reduce diseases through vaccination	7.82 (3.62)	8.37 (3.57)
Assure compensation for those injured by vaccines	7.93 (4.08)	8.87* (3.73)

* indicates significant change at $p < .05$

Changes by Different Groups

We examined whether the geographic and demographic backgrounds of the participants made a difference in perspectives about values and priority areas. In theory, if there are minimal differences across demographic groups of participants, public engagement conveners would not need to be too concerned about ensuring participants represent a diversity of perspectives or backgrounds. If, on the other hand, there are substantial differences in perspectives across demographic groups, it may become more important to ensure there is diverse representation of participants and that deliberations are conducted in different parts of the country.

We found significant differences across the three deliberation sites in the post-meeting rating of social values ($F(22,308) = 2.655, p < .001$). For example, participants in St. Louis and Columbus rated “Protecting our homeland first” as more important than participants in Syracuse; participants in Syracuse rated “Improving our Science” as more important than citizens in St. Louis or Columbus; participants in Columbus rated “Securing supply” as more important than citizens in Syracuse. There were also significant differences in how citizens ranked priority areas across the three sites ($F(24,302) = 3.104, p < .001$). Citizens in Syracuse ranked “Improve vaccine safety,” “Improve monitoring of disease and vaccines,” and “Improve the information offered about vaccines” higher than did participants in Columbus or St. Louis; this is consistent with the observation that many Syracuse participants were concerned by the link between vaccines and autism. It appears, then, that conducting public engagement in different geographic locations may be important to obtain varied perspectives.

Ratings of values and rankings of priority areas also differed significantly across demographic groups. For example, post-meeting ratings of values differed by level of education ($F(33,459) = 1.676, p = .012$). Participants with some graduate school or a graduate degree rated “Protecting our homeland first” and “Securing our supply” as significantly less important than participants with lower levels of education. Ratings of values also varied by income level ($F(22, 336) = 1.753, p = .020$). Citizens earning less than \$30,000 per year rated “Protecting our homeland first” higher than participants with higher incomes and rated “Improving our science” lower. Responses varied by race/ethnicity as well ($F(33, 531) = 1.652, p = .014$); for example, participants of “other” race (using categories of Hispanic, Non-Hispanic Whites, Non-Hispanic Blacks, and Other) rated “Protecting the most vulnerable” significantly higher than Non-Hispanic Whites. The rating of values did not vary significantly by gender or whether participants had children living at home. Although there were significant differences in ratings of social values across certain demographic groups based on geographic location, income, education, and race/ethnicity, there were no significant differences for the ranking of priority areas across demographic groups except, as discussed above, across the three meeting locations. These results provide evidence that diversity of backgrounds has some bearing on the perspectives brought to public engagement processes. This appears most important for geographic location, and somewhat less so for race/ethnicity, income level, and education.

Chapter 6: Evaluation Results – Quality of Deliberations

Summary of Findings

- Participants perceived the process to be of high quality.
- Satisfaction was consistent across demographic groups.
- The level of satisfaction varied by meeting location; although, it is unclear whether this can be attributed to differences in process across the meeting sites or different types of individuals attending the meetings
- The most common criticism of the process concerned difficulty understanding the values



Process Ratings

The post-surveys indicate participants generally believed the process was of high quality. Table 12 shows average scores for ratings of the process on a scale of one to four, with four representing agree strongly and one representing disagree strongly. For the first six items, a higher quality process is associated with a higher numerical score. For the last two items (in bold), a higher quality process is associated with a lower numerical score. In all three cities, citizens rated the process high on all dimensions. The highest rated dimensions were that participants felt comfortable talking, thought others felt comfortable talking, and thought the discussion was fair to all participants; the lowest rated dimension was that one person or a small group of people dominated the discussion.

There were differences across the three sites. Overall, citizens participating in the Columbus meeting were most satisfied with the process and citizens from Syracuse were least satisfied. It is unclear if these differences are the result of differences in the process used in each meeting or differences in the participants; as discussed previously,

there were fewer participants in Syracuse, they were less racially and ethnically diverse, more highly educated, reported higher incomes and were not offered compensation for their participation. In addition, it appeared many of the Syracuse participants had concerns about vaccine safety, particularly in relation to autism.

Table 12
Citizen Ratings of Process by Meeting Location

Statement	Overall (n=192)	St. Louis (n=77)	Columbus (n=74)	Syracuse (n=41)
I felt comfortable talking in this discussion.	3.77 (.50)	3.69^ (.61)	3.89* (.31)	3.71^* (.51)
I think other people in this discussion felt comfortable talking.	3.67 (.61)	3.58^ (.68)	3.74^ (.53)	3.68^ (.61)
This discussion was fair to all participants.	3.65 (.66)	3.64^* (.76)	3.78* (.50)	3.44^ (.67)
This process produced a valuable outcome.	3.41 (.75)	3.23^ (.94)	3.66* (.53)	3.29^ (.56)
This process helped me better understand the types of trade-offs involved.	3.36 (.79)	3.22^ (.88)	3.61* (.62)	3.17^ (.77)
This process has produced credible, relevant and independent information.	3.31 (.79)	3.17^ (.94)	3.62* (.52)	3.00^ (.71)
Important points or perspectives were left out of the day's discussion.	2.09 (1.07)	2.32^ (1.13)	1.82* (1.06)	2.15^* (.88)
One person or a small group of people dominated the discussion.	2.07 (1.12)	2.18^ (1.12)	2.00^ (1.17)	2.00^ (1.05)

*^ items without the same symbol are significantly different at $p < .05$

We examined the perceptions of quality across demographic groups. There were no significant differences by gender, age or race/ethnicity; males and females, persons of all age groups, and persons across racial/ethnic groups had equivalent levels of satisfaction with the process. There were, however, significant differences based on education ($F(36,525) = 1.468, p = .041$) and income ($F(24, 338) = 2.531, p < .001$). Participants with lower levels of education tended to agree more than highly educated participants with the following statements:

- This process has produced credible, relevant, and independent information
- This process helped me understand the types of tradeoffs involved

Participants with lower annual incomes were more likely than higher income participants to agree with the following statements:

- The discussion was fair to all participants
- This process produced a valuable outcome

- This process has produced credible, relevant, and independent information
- This process helped me understand the types of tradeoffs involved

Perceptions about the Process

Most comments about the process in general were positive. Participants described it as an “empowering, educational, participatory experience.” They left the day with a sense of what it felt like to make difficult decisions: “I got a taste of lawmaking.” “It helped us to see maybe what the President and Congress have to go through.” “Maybe we should have more patience with leadership that makes these decisions.”

There were a number of participant suggestions and comments about the process centered on the small group exercise in which note cards with values listed on them were used to stimulate discussion about priorities. The primary source of confusion experienced by participants stemmed from the examples used to illustrate the values: “The labels were frankly terrible.” “A lot of people at my table had a hard time understanding the cards.” “The titles on the cards were not clear. Perhaps better examples would have helped?” “The language level was too hard for the group. A lot of really big words were thrown about. And things were going so quickly there wasn’t time for people to raise hands and ask questions.” As one organizer stated, “What was the biggest problem and biggest flaw was the people’s interpretations of what these things were, were completely different.”

In addition to the perceived disconnect between the stated value and its example, many of the focus group participants believed fewer values would have been easier to discuss and prioritize in the time they were allotted for the activity. Key stakeholders and organizers of the event recognized the problem participants had with the cards after the first event, but decided to keep the exercise constant to allow comparison across sites. They did however make some changes to the values exercise which made it easier in the subsequent discussions. After all the discussions had been completed, one organizer suggested it may be better to “let the citizens generate their own values about what is important to them, perhaps with some prompts in the background with facilitation.” Some participants found the value cards helpful when it culminated at the end of the day with an exercise matching it with the vaccine plan elements.

“I wouldn’t have expected those decisions. Just looking at the list I would have picked some things, but when I had to match it with the things we picked from the morning it was different.”

From the observations of the evaluation team, the ORISE team provided excellent logistical support overall, and effective logistical administration should be considered a fundamental requirement of a satisfactory public engagement process. Important components of logistical administration should include having an appropriately large forum, and proper audio/visual facilities and administration. In one location, several participants complained that the video screen was too small: “Our table was on the other side of the room and could hardly see the screen. They should have had a bigger screen.” Particularly as power point presentations and electronic voting play an important role in the engagement process, having a large enough screen—or multiple screens displayed in the forum—should be a priority. In another location, the heat was not turned on for several hours, and both participants and event staff had to don their winter jackets to stay warm. Prior to entering into relationships with local partners, certain logistical requirements that constitute a satisfactory event forum should therefore be identified. In one location, citizens complained about the noise level when small groups were deliberating.

There were varied relationships between the federal conveners and local partners. Local partners did a very good job with event administration overall, particularly with recruitment of participants and facilitators. There was high praise among participants for the quality of small group facilitating overall, which reflected the fact that many of the small group facilitators had had prior experience in facilitating discussions. In one forum, there was disagreement between the federal and local conveners about the offering of a financial stipend to participants, as well as to the focus of recruitment generally. The differences in recruitment strategies in this site may account for the fact there was significantly less turn out among participants. Because a recruitment strategy is crucial to the success of an effective engagement process, the components of that recruitment strategy should be identified well in advance and must be made clear to local event partners. Fundamental components of the recruitment strategy—for example, that a financial stipend will be offered to participants—should be considered a required component of an engagement process prior to entering into an agreement with a local convener.

Chapter 7: Evaluation Results – Perceptions about Use of the Public Input

Summary of Findings

- Participants thought public officials would use their input and that the process would increase public support of policies
- Evaluators suggest a feedback process to communicate how input was used by decision makers

Participants were asked to give their opinions about the degree to which they thought officials would use their input and whether the process would result in more public support for the policy decision. Citizens rated these items on a one to four scale with one indicating disagree strongly and four indicating agree strongly. Table 13 indicates that participants thought their input would be used and the process would increase public support.

Table 13
Participant Perceptions of How Information Will be Used

Statement	Overall (n=192)	St. Louis (n=77)	Columbus (n=74)	Syracuse (n=41)
Officials will use our input in their decisions.	3.18 (.86)	2.99^ (1.02)	3.47* (.69)	3.02^ (.69)
This process will increase the public's support of the decision ultimately made.	3.13 (.85)	3.06^* (.94)	3.34* (.75)	2.85^ (.79)

*^ items without the same symbol are significantly different at $p < .05$

There were significant differences across meeting locations. Citizens in Columbus were most likely to agree with both statements. There were no significant differences based on gender, age, race/ethnicity, child living at home status, or education. However, there were differences based on income. Persons of lower income agreed with both statements more than participants with higher incomes.

Participants in focus groups from all cities expressed hope that decision makers would use the information from the events.

“Some presenter said ‘If we use your information’ and that scared me that maybe I would not be heard. I hope it’s used.”

“It’s important that policymakers do follow public opinion because we are the ones that can choose to not follow recommendations they make. If they don’t listen to us then we won’t get ourselves or our kids vaccinated.”

Key decision makers interviewed as part of the process expressed the same cautious optimism as participants about how public input will be used. They stressed the importance of involving the public, but indicated that it is only one of many voices that will be considered when revising the national plan. One decision maker likened it to a “four legged chair” as the voices of the public are combined with input from the Institute of Medicine, experts inside government and experts and stakeholders outside of government. Another federal policy maker cautioned about unrealistic expectations that any source of input would have any type of immediate and major impact:

"Some ships are very nimble and can shift on a dime, like a sailboat. But when you have an enterprise that is much more like an aircraft carrier it's going to take a long time to shift, especially in vaccine development where you have a 10, 15, 20 year timeline as well as a really complicated system here in the U.S., the ship is more like an aircraft carrier than a sailboat."

Chapter 8: Summary of Lessons Learned

The general impression of decision makers and organizers about the process used to gather public input via the engagement activities was that it was successful; however this conclusion was delivered with caveats. The snapshot gained from the three cities was not viewed by decision makers as scientifically valid from a sampling perspective, though it was viewed as reasonable given the budget and time constraints of this project. There was also doubt from some decision makers because the conditions were slightly altered among the sites, e.g., compensation was not offered in one site. Evaluation results confirm differences across sites and across demographic groups.

There was general agreement that decisions at the policymaking level should be made prior to gathering public input about what the objectives of obtaining the sought-after public input are, and how that input will be used in decision-making. On both conceptual and practical levels, there is no consensus about the types of policy areas that are appropriate for deliberative discussions as a form of public engagement to inform policymaking. One federal decision maker indicated that obtaining public input through deliberative processes is valuable when critical issues about



policy are yet undecided, rather than using it to address issues in which a decision has already been determined through expert involvement. Another decision maker said that even with expert determinations it is critical to involve the public and gain their perspective. This person said that in the past, recommendations from experts were considered the “gold standard” and that there has been an assumption that lay persons do not possess the deep knowledge needed to make good recommendations or to help prioritize issues. However, the decision maker contends that the role of the public is not to contribute expertise, but instead to understand the cost/benefits of decisions and render an opinion. The example used to illustrate this point was the decision to choose which is more important, to go to a baseball game or out to dinner. In the past, experts got to decide what is important to them, but the public did not. A room full of

restaurant and baseball team owners would benefit from understanding how the public prioritizes the decision, just as scientists and government officials will benefit from hearing the public perspective related to the national vaccine plan.

General themes arising from interviews with decision makers and organizers included:

- Pre-identifying the purpose and use of public input will make it easier for decision makers to use the information and will clarify for the public what their input will influence.
- A deliberative process may not be necessary for all public input desired by government agencies. The process should be matched to the type of desired input.
- Creating a common understanding of terms and definitions to describe values is critical.
- Structuring engagement processes through the use of consistent recruitment strategies and activities will increase the generalizability of the information gained from the process.
- Increasing use of deliberative processes to influence policy will require champions within government to advance its use and to educate decision makers about its value.
- Attention to detail is important to achieve good outcomes (e.g., skilled facilitation; orientation for resource personnel; appropriate room set up and acoustics; recruitment to achieve adequate representation of all groups).
- Involving local convening partners at an early stage is important, as is having clear agreements with them about recruitment of participants and event logistics well in advance of deliberation dates.
- Recruitment of participants should include strategies for obtaining diversity in race/ethnicity, socioeconomic and educational status, and gender. Starting the recruitment process early and using stratified random sampling can assure a distribution of participants based on desired characteristics. This type of recruitment process, however, results in a longer time to reach participation goals and turning away certain individuals who are interested in participating.
- Replicating deliberative processes with expert stakeholders will allow decision makers to compare and contrast it with public input. .

Themes about the process included:

- Rapid input through the use of the real time voting was beneficial because participants and conveners knew what preferences were.

- Observers and subject matter experts present at all the meetings were beneficial to the discussions and participants.
- Values definition cards could/should have been more thoroughly pretested and vetted before used.
- The team of organizers worked very well together and the division of labor between process designers and logistics was beneficial.
- The exercises were creative and challenging, and raised the bar on public engagement activities.
- It is important to identify the core, non-negotiable items that are essential to convening successful deliberative events in agreements with local conveners well in advance – This is especially the case with recruitment, which is a critical component of a successful deliberation. A uniform recruitment strategy across sites is key to the validity of the project.

Themes arising from the participant focus groups and evaluation instruments included:

- Knowledge about the policy topic increases as a result of public engagement processes.
- Diversity of opinion and perspective is important to participants and to organizers.
- Compensation of participants increases demographic diversity.
- Values shift as a result of participating in a deliberative process.
- Information to educate participants should be presented using adult education principles to ensure all learning styles are accommodated.
- Having evaluators participate in planning meetings contributes to a clearer understanding of project goals, rationale for process design, more relevance to evaluation questions and method, and smoother integration of the evaluation into the public engagement process.

Chapter 9: Conclusions

The deliberative process to obtain public input for national vaccine policy met its major goals, although to varying degrees. Organizers were generally successful at attracting citizens to participate in deliberative days in three locations – St. Louis, Missouri; Columbus, Ohio; and Syracuse, New York. The goal was to attract about 100 citizens to participate in each meeting. This goal was nearly met in two of the locations (St. Louis and Columbus), but not the third – Syracuse. There were, however, enough citizens even in the Syracuse meeting to have large group discussions and to break out into small groups for dialogue. Partners in each city led recruitment efforts; there were differences across the three sites in recruitment techniques which likely contributed to the smaller numbers in Syracuse. One important difference was that participants in Syracuse were not offered a stipend for their participation. Standardizing recruitment procedures and providing a standard stipend likely would have resulted in greater participation in Syracuse. There was also about a 15% attrition rate – participants who left before the completion of the process. Requiring participants to attend the entire meeting before they receive their incentive is a strategy likely to decrease the attrition rate. Participants were motivated to participate by an interest in the topic, believing they would learn more about the topic, the stipend in two of the cities, and through a feeling of civic duty or public responsibility to participate in the process.

The process was also generally successful at recruiting a diversity of citizens to the three meetings. Participants represented a diverse mix of demographic backgrounds, although they did not mirror the characteristics of the communities within which the meetings were held. Males were underrepresented in all three meetings. Racial and ethnic minorities were overrepresented particularly in Columbus and St. Louis. Participants also tended to have higher levels of education than the general population, particularly in Syracuse. Although there were demographic differences across the three sites and between participants and the meeting communities, participants came from across the age span, from a variety of racial/ethnic groups, and across the income and education spectrum. Participants were in general agreement that the citizens participating in the meetings represented a diversity of perspectives and expressed a variety of views. Some of the participants noted that although citizens attending the meeting tended to be diverse, the meeting organizers and presenters appeared less diverse. The two communities with more racial, ethnic, educational, and socioeconomic diversity tended to have more varied efforts for recruitment. A stratified random sampling process could be used in future public engagement efforts to help ensure appropriate diversity of participants.

The process was successful at increasing the knowledge level of participants. Knowledge increased significantly at all three meeting sites as a result of information provided to participants and the discussions that ensued. The process was not, however, successful in elevating all participant knowledge to the same level. In fact, there was a greater

disparity in knowledge at the end of the meeting than at the beginning. All demographic groups tended to increase their knowledge at about the same rate. In other words, those groups that had the least knowledge going into the meeting (e.g., persons with less than high school education) increased their knowledge during the meeting, but still had the lowest level of knowledge at the end of the meeting. If it is desirable for all participants to have an equivalent level of knowledge about the topic, future public engagement processes might consider providing information that is able to be easily comprehended by all groups. Some participants thought the presentations were too complex and the language level was too high. However, participants thought they had adequate knowledge to engage in informed discussions. Interestingly, groups who did less well on the knowledge questions were those who were most confident in their knowledge about the subject matter. The evaluation findings suggest information presented should be tailored to participants with lower education levels.

As a result of the process, participants exhibited a change in opinions about social values as well as some priority areas related to vaccine policy. For example, the social values of “protecting our homeland first,” “assuring fairness,” “emphasizing safety,” “tackling the biggest problem first,” “protecting individuals,” “and “improving our science” were rated as less important after citizens engaged in the deliberative process.



Participants perceived that their opinions changed as a result of listening to the opinions of other participants and having to make choices among different options. These results support the conclusion that obtaining input from citizens and stakeholders who are informed and engage in dialogue yields different results than simply surveying and polling the public. The evaluation also revealed, perhaps not surprisingly, that citizens from different geographic area, racial/ethnic backgrounds, income and education levels had different perspectives about social values and priorities. This finding reinforces the need to include citizens from diverse backgrounds in public engagement processes to obtain varied perspectives. The evaluation results also support conducting deliberative processes in multiple jurisdictions. Interestingly, the evaluation did not appear to result in a “meeting of the minds” among participants with respect to the values used to make policy decisions or in the areas identified as priorities; in fact, there was a wider range in opinions about underlying values at the end of the deliberations than at the beginning. This result may have been due to confusion surrounding the values exercise. However, even for the priority areas, we did not find a consistent converging of perspectives.

The deliberation process was perceived to be of high quality. We believe this was true in large part to the level of planning of project organizers and facilitators prior to the meetings. Participants rated the process high on a number of dimensions. For example, citizens and stakeholders thought participants felt comfortable talking in the meeting, the discussion was fair to all participants, and the process helped them understand the types of trade-offs involved in developing priorities for national vaccine policy. There were differences across the three sites with citizens from Syracuse being the least satisfied. In addition, there were differences in satisfaction based on level of education, with more highly educated persons tending to be less satisfied. We found no significant differences in satisfaction for other variables such as race, gender, income, age, and whether they had children at home; this finding indicates that the process was considered high quality across groups. Overall participants thought the process was empowering and educational. Suggested improvements to the process centered primarily on improving the process for developing and prioritizing values.

Citizens thought their input would be used by decision makers and thought it would be important for policy to reflect the opinions of ordinary citizens. The process appeared to create an expectation by participants that the input would be given serious consideration in developing national vaccine policy. It is unclear what feedback process is planned for informing participants how the results of their deliberations were actually used when the vaccine plan is issued, but this step would appear to be important to reinforce the value of each citizen's participation, to build trust with government, and to build support for public engagement efforts. In this evaluation, we were not able to determine how the results of the citizen deliberations were actually used by decision makers.

Appendix 1: Logic Model for the Evaluation of the Deliberative Process to Obtain Citizen Input on National Vaccine Policy

