University of Nebraska - Lincoln
DigitalCommons@University of Nebraska - Lincoln

Publications of the University of Nebraska Public Policy Center

Public Policy Center, University of Nebraska

1-1-2008

Evaluation of the Public Engagement Project on Pandemic Influenza Vaccine Prioritization Phase I: Evaluation of Public and Stakeholder Input

Follow this and additional works at: http://digitalcommons.unl.edu/publicpolicypublications

Part of the Public Policy Commons

"Evaluation of the Public Engagement Project on Pandemic Influenza Vaccine Prioritization Phase I: Evaluation of Public and Stakeholder Input" (2008). *Publications of the University of Nebraska Public Policy Center.* Paper 109.
http://digitalcommons.unl.edu/publicpolicypublications/109

This Article is brought to you for free and open access by the Public Policy Center, University of Nebraska at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Publications of the University of Nebraska Public Policy Center by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Evaluation of the Public Engagement Project on Pandemic Influenza Vaccine Prioritization

Phase I: Evaluation of Public and Stakeholder Input

DRAFT

February 7, 2008

Funding provided through a contract with National Association of County and City Health Officials Contract # 2 0 0 7 – 012406

The University of Nebraska Public Policy Center provides assistance to policymakers in all three branches of government and researchers on a wide range of public policy issues. The mission of the PPC is to actively inform public policy by facilitating, developing, and making available objective research and analyses of issues for elected and appointed officials; state and local agency staff; the public at large; and others who represent policy interests.

215 Centennial Mall South, Suite 401, Lincoln, NE 68588-0228
Ph: 402-472-5678 | Fax: 402-472-5679
www.ppc.nebraska.edu

Executive Summary

This report presents the results of an evaluation of the Public Engagement Project on Pandemic Influenza Vaccine Prioritization, an effort to engage citizens and stakeholders in discussions about methods to prioritize vaccine distribution in the event of an influenza pandemic. Meetings with citizens occurred January 2007 in Las Cruces, New Mexico and Nassau County, New York; and during November 2007 in Milwaukee, Wisconsin and Hendersonville, North Carolina. Citizens were provided information about pandemic influenza and deliberated about the issues and challenges of vaccination priorities. Stakeholders met in Washington, D.C. after the first two citizen meetings and again after the second two meetings. The stakeholder meetings followed a format similar to the citizen meetings. Key findings from the evaluation include:

1. The process was successful in attracting diverse citizens to engage in the process.
2. Citizens were motivated to participate in the process because of personal interest in the subject and the payment of a stipend.
3. Participants had sufficient knowledge about pandemic influenza to adequately consider and discuss vaccine distribution measures for pandemic influenza. The process substantially increased the knowledge of citizen participants.
4. Participants perceived the process to represent balanced, honest, and reasoned discussion of the issues while respecting diversity of views.
5. The process affected the opinions and judgments of citizen participants related to values and goals of vaccine priorities.
6. Participants were satisfied with the outcomes of the process and generally believed their input would be used by policy makers.

Evaluation of the Public Engagement Project on
Pandemic Influenza Vaccine Prioritization

Phase I: Public and Stakeholder Input

The Project

This project arose out of a desire by the Centers for Disease Control and Prevention, U.S. Department of Health and Human Services to obtain citizen and stakeholder input about who should receive priority for getting vaccinated in the event of pandemic influenza. To obtain this input, four citizen meetings were held, in Las Cruces, New Mexico; Nassau County, New York; Milwaukee, Wisconsin; and Hendersonville, North Carolina. The first two citizen meetings were held in January 2007 followed by a meeting of stakeholders in Washington, D.C. on January 30, 2007. Draft federal guidelines for prioritizing how vaccines would be distributed in the event of a pandemic were released between the January 2007 stakeholder meeting and the next round of citizen meetings were held during November 2007 in Milwaukee, Wisconsin and Hendersonville, North Carolina. The second round of citizen meetings was designed to obtain feedback on the draft guidelines. A second stakeholder meeting was held in December 2007 to review input from the second round of citizen meetings and to provide stakeholder input on the draft federal guidelines. The citizen meetings followed a similar format:

- Meeting facilitators welcomed citizen participants and outlined meeting goals and ground rules;
- Pandemic planning experts presented citizen participants with general information about the influenza and vaccination prioritization through a series of educational presentations; in the last two citizen meetings, information about the draft federal guidance was presented;
- Citizens deliberated in facilitated, small group discussions about vaccination prioritization, ranked sectors of the general population for vaccination, and identified general concerns;
- Citizens expressed their preferences and concerns about vaccination prioritization in a large group reporting-out period; and
- An electronic polling session of citizens was conducted to measure citizen preferences about vaccination prioritization.

The stakeholder meetings included panel presentations from representatives of the citizen meetings in addition to expert presentations.

Program Evaluation Questions

The evaluation addresses the following questions:

1. Participation and recruitment questions:

    a. Did the process successfully attract a sufficient number of citizen participants in four locations?

b. Did the process successfully recruit participants who reflected a diversity of perspectives, and demographic characteristics such as age, gender, race/ethnicity, education, and income?
c. Why did citizens elect to participate in the process?

2. Process issues:

    a. Did citizens and stakeholders have sufficient knowledge about pandemic influenza to engage in informed discussions about vaccine prioritization?
    b. Were citizens and stakeholders satisfied with the process?
    c. Did the process result in a balanced, honest, and reasoned discussion of the issues while respecting diversity of views?
    d. Did the process affect the opinions and judgments of participants related to values and goals of vaccine distribution?

3. Product issues:

    a. Did citizens and stakeholders believe their input would be considered by decision makers?
    b. Did citizens contribute useful information for the stakeholder deliberations and did stakeholders consider and integrate citizen input into their recommendations?
    c. Did citizen and stakeholder input receive serious consideration by decision makers and adds value to the input already being received from expert groups? A key aspect of the evaluation is to understand how citizen and stakeholder input is used by decision makers in establishing pandemic influenza policy. For this report, the evaluators were in the process of collecting information about use of the input and the analysis is not included.

Method

This study employs a sequential, mixed method design using quantitative and qualitative information. There are four major methodological components:

1. Pre- and post surveys completed by citizens and stakeholders;
2. Individual interviews conducted with stakeholders and citizens who attended the meetings;
3. Individual interviews with organizers and facilitators;
4. Focus groups conducted immediately after each of the citizen meetings; and
5. A qualitative evaluation component will be implemented in the future to determine how citizen and stakeholder input is used by decision makers, including document reviews and individual interviews with policy makers.

Pre-Post Survey

Respondents. For each of the citizen meetings, respondents were asked to complete an informed consent form and voluntarily complete the surveys. Demographic information about respondents is discussed in the Results section below. Four hundred eighteen individuals from the citizen groups completed the survey (114 in New Mexico,119 in New York, 101 in Wisconsin and 84 in North Carolina). About 10% of the respondents completed the Spanish version of the survey, nearly all from the New Mexico meeting.

Surveys. The pre-survey consisted of two sections: eight multiple-choice questions assessing knowledge about pandemic influenza and a section with four items asking opinions about values, goals, priority populations, and who should make decisions about vaccine distribution. The post-survey included these two sections and two additional sections: 1) a series of statements about the quality, fairness and effectiveness of the deliberative process that respondents were asked to rate on a 5-point scale from strongly agree to strongly disagree and 2) demographic questions. Surveys 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 section. Spanish versions were also developed.

Procedures. Citizens received pre-tests upon registration 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 15 minutes to complete the post-test. Stakeholders at the first meeting were given the pre-test but not the post-test. The original plan was to have the stakeholders complete the post-test at their second meeting, but the length of time between meetings was longer than originally planned and there were some stakeholders participating in one of the meetings but not both. At the second stakeholder meeting participants were administered both pre- and post-tests. Given the length of time between the two stakeholder meetings and because many participants from the first stakeholder meeting did not participate in the second meeting, data presented in this report is from the second stakeholder meeting only.

Individual Interviews

Respondents. The evaluators contacted two groups of people for individual interviews:

1. Stakeholders who participated in the second Washington, D.C. meeting
2. Citizens who participated in the four local meetings

Citizens and stakeholders were asked to provide contact information on the informed consent forms if they were interested in participating in the interviews. The evaluators randomly selected a number of participants from the second stakeholder group and each of the citizen groups who provided their contact information and attempted to contact them by telephone and e-mail. Those people who could be reached were selected to participate. Interviews were conducted in Spanish for Spanish-speaking participants.

Interview Questions. Both stakeholders and citizens were asked how they perceived the information presented at the meetings; the quality of the participation; their satisfaction with the process; and how they thought policy makers would consider their input. In addition, the stakeholders were asked how they considered the input from the citizen deliberations in their decisions and how the deliberations might have changed the relationships among stakeholders. Citizens were asked their opinions about how representative of the general public the participants at the meeting were, how they found out about the meeting, and why they participated.

Procedures. Each randomly selected respondent was contacted to schedule an interview with the evaluators. Evaluation staff following an interview protocol conducted the interviews, which were recorded and transcribed.

Focus Groups.

Respondents. At each of the citizen meetings and the second stakeholder meeting, participants were asked to volunteer to stay after the meeting and participate in a focus group. Respondents self-selected to join each focus group.

Procedures. The same questions used in the interviews were used for the focus groups. The discussions were recorded and transcribed. Survey and focus group input was entered into a software program called Atlas.ti. Multiple raters identified themes in the answers from respondents.

Results

Participation and Recruitment

Preliminary observations and findings from the citizen interviews indicate the process was successful at recruiting and attracting citizens to participate in the deliberative meetings. There were 498 citizens who participated in the four citizen meetings (137 in Wisconsin, 118 in North Carolina, 108 in New Mexico, and 135 in New York). It is apparent the process succeeded in attracting a sufficient number of citizens to engage in dialogue at each meeting. The goal was to have at least 100 citizens at each site and all of the sites met this goal. In addition, there were nearly double the number of citizens who participated in this process in comparison to two previous participatory processes on pandemic influenza sponsored by the Centers for Disease Control and Prevention; the Public Engagement Project on Community Control Measures for Pandemic Influenza attracted 259 citizens at four sites in 2006, and approximately 250 citizens participated in the Public Engagement Pilot Project on Pandemic Influenza held in four sites in 2005. Part of the reason for increased participation appears to be the stipends for citizen participation which were provided for this process, but not for the previous two.

Citizens learned about the public engagement meetings through a variety of sources. New Mexico participants were more likely to say that they heard about the forum through friends, family or acquaintances than New York participants. New York participants were

more likely to have responded to a newspaper notice or an email invitation. A number of New York participants attended in response to an invitation from a local politician that they trusted. Many of the Wisconsin participants were recruited by the local Black health coalition. Several of the North Carolina participants said that they received information about the event while they were getting their annual flu shot. Both Wisconsin and North Carolina participants said they had been personally 'invited' to attend either by a health official or by someone they knew. Some of the people interviewed recalled seeing a notice about the event in a newspaper, but the personal invitation was what they credited with influencing them to register.

Stakeholders attending the meeting in Washington, D.C. were personally invited to attend by the organizers of the event. Even though they were representing professional interests at the stakeholder meeting, their personal reasons for attending mirrored those of the citizen participants.

> *"I came because I thought I had something to contribute and something to learn." Stakeholder*

All groups contained some people who attended because it was related to their job or the group they represented. Almost everyone interviewed said they had some personal interest in learning more about pandemic influenza.

Participants in the citizen groups were asked about any effect the stipend may have had on their decision to attend. Most said that they attended out of personal or professional interest in the subject matter first, but admitted easily that the stipend and the food played a major part in getting them to the forum on a Saturday. For many it was what tipped the scale in favor of attendance. One participant voiced this theme by saying, "without the stipend I would have found excuses not to attend." The stipend was also viewed as an acknowledgement that participants' time and opinions had value to organizers.

> *"I like the idea that someone is willing to listen to me and actually give me a stipend for my opinions."*
> *"It was a nice feeling – I came away with information, lunch and 50 dollars."*

A participant in North Carolina suggested that the stipends be limited to one per household to encourage diverse participation and to discourage people from signing up multiple family members. However, the high number of participants may be due, at least in part, to family members attending together. Several of the participants from all of the sites said that they attended because of a family member's urging; these individuals indicated that, although they did not expect to get anything but the stipend out of the event, they left with a clearer understanding of pandemic influenza and the difficulties faced by policy makers in vaccination prioritization.

Citizens participating in the meetings represented diverse demographic backgrounds. Table 1 shows age percentages for the four citizen meetings. Participants represented a cross-section of ages, although the largest age group of citizens at each meeting site was 65 years of age or older.

Table 1
Percentage of respondents by age for citizen sites

Age	Overall	Las Cruces	Long Island	Milwaukee	Hendersonville
18-24	9.2	12.9	4.4	15.6	2.9
25-34	14.5	13.9	5.5	28.6	11.6
35-44	12.1	15.8	2.2	19.5	11.6
45-54	20.4	26.7	14.3	19.5	20.3
55-64	16.9	14.9	25.3	11.7	14.5
65+	26.9	15.8	48.4	5.2	39.1

Table 2 shows gender percentages for the four citizen meetings, indicating that participants were predominately female.

Table 2
Percentage of respondents by gender for citizen sites

Gender	Overall	Las Cruces	Long Island	Milwaukee	Hendersonville
Male	33.6	26.0	43.5	24.4	42.0
Female	66.4	74.0	56.5	75.6	58.0

Table 3 shows race/ethnicity for each site and indicates there was a mix of racial/ethnic diversity across the four sites, although a majority were Hispanic and non-Hispanic white. The four sites included no Asian participants who completed the survey or who indicated their race/ethnicity on the survey.

Table 3
Percentage of respondents by race/ethnicity for citizen sites

Race/Ethnicity	Overall	Las Cruces	Long Island	Milwaukee	Hendersonville
Hispanic White	27.4	72.3	14.4	27.6	8.7
Hispanic Black	7.7	2.0	1.1	0.0	2.9
Non-Hispanic White	43.8	21.8	70.0	6.6	82.6
Non-Hispanic Black	17.0	1.0	8.9	59.2	4.3
Asian	0.0	0.0	0.0	0.0	0.0
Native American	1.8	0.0	4.4	1.3	1.4
Other	2.4	3.0	1.1	5.3	0.0

Table 4 shows education levels across the four sites and indicates participants had a range of education levels. Almost 20% of participating citizens had a graduate school degree. Fewer than 10% of participants had less than a high school degree.

Table 4
Percentage of respondents by education level for citizen sites

Education Level	Overall	Las Cruces	Long Island	Milwaukee	Hendersonville
Less than high school	5.6	16.2	1.1	2.6	0.0
Some high school	3.9	5.1	1.1	7.9	1.4
High school graduate	21.4	20.2	25.8	28.9	8.7
Some college	24.9	22.2	17.2	36.8	26.1
College graduate	15.1	10.1	22.6	6.6	21.7
Some graduate school	10.1	11.1	6.5	7.9	15.9
Graduate school graduate	19.0	15.2	25.8	9.2	26.1

Table 5 shows income levels of participants. Participants represented a range of income groups, although the largest category of individuals was incomes between $30,000 and $60,000 per year.

Table 5
Percentage of respondents by income level for citizen sites

Income Category	Overall	Las Cruces	Long Island	Milwaukee	Hendersonville
$15,000 or less	23.3	31.3	8.8	46.5	3.2
$15,001 - $30,000	15.2	21.9	6.3	21.1	9.7
$30,001 - $60,000	32.7	35.4	30.0	26.8	38.7
$60,001 - $100,000	16.8	8.3	25.0	2.8	35.5
$100,001 or more	12.0	3.1	30.0	2.8	12.9

Table 6 compares the demographic characteristics from the four citizen meetings to the demographics of the broader population across the four communities. Participants in the four citizen meetings tended to be older, more likely to be female, less likely to be white or black, more likely to be Hispanic, more likely to have attended college and more likely to be lower income than the general population of the four communities. The goal of recruitment efforts was not to mirror the demographic of the communities but to have a diversity of backgrounds and perspectives. The project appears to have succeeded in this respect.

Table 6
Comparison of meeting participant characteristics to general population

		Meeting Participants	Community Demographics
Age	20-24*	9.2%	8.5%
	25-34	14.5%	18.3%
	35-44	12.1%	20.6%
	45-54	20.4%	20.2%
	55-64	16.9%	14.8%
	65+	26.9%	17.5%
Gender	Male	33.6%	48.1%
	Female	66.4%	51.9%
Race/Ethnicity	Hispanic **	35.1%	13.3%
	White	43.8%	53.4%
	Black	17.0%	26.4%
	Asian	0.0%	4.9%
	Native American	1.8%	0.3%
	Other	2.4%	1.7%
Education	Less than high school	5.6%	5.7%
	Some high school	3.9%	7.8%
	High school graduate	21.4%	26.3%
	Some college	24.9%	16.8%
	College graduate	15.1%	26.4%
	Some graduate school	10.1%	***
	Graduate school graduate	19.0%	16.9%
Income	Less than $15,000	23.3%	14.4%
	$15,000 - $24,999	****	10.0%
	$25,000 - $34,999	****	9.7%
	$35,000 - $49,999	****	12.6%
	$50,000 - $74,999	****	17.0%
	$75,000 - $99,999	****	11.4%
	$100,000 or more	12.0%	24.9%

* Meeting participants in this category range from age 18-24, while Community Demographics encompass only ages 20-24.
** Meeting participants of Hispanic race/ethnicity responded as either Hispanic White (27.4%) or Hispanic Black (7.7%) for a total of 35.1%. Community Demographics reflect as Hispanic those individuals who identify themselves as Hispanic only. For both groups, White or Black indicates Non-Hispanic White or Non-Hispanic Black.
*** Community demographics do not report citizens with some graduate school experience.
**** These five categories of income are reported as listed for Community Demographics. However, our Meeting Participants reported income in increments as follows: $15,001 - $30,000 (15.2%), $30,001 - $60,000 (32.7%), and $60,001 - $100,000 (16.8%).

Minority health coalitions were heavily involved in the recruitment efforts in New Mexico and Wisconsin, the two sites that were most likely to state that attendance at the event was representative of their community. New Mexico participants said that there was a noticeable absence of people representing the business community. The Wisconsin participants pointed out the lack of representation from people who were homeless or disabled. All of the groups would have liked the event to have included younger people in the discussion and commented on the large number of older adults attending. The older adults interviewed said that their demographic group was more available to attend such events on a Saturday because they had fewer obligations and commitments than younger people.

All groups would also have liked the events to include more "everyday Joes," including families with children. Participants offered suggestions for recruitment that included targeting organizations that serve people in the underrepresented groups or asking for organizations to select participants that were representative of their constituency rather than depend on recruitment strategies like newspaper ads. Several people suggested that offering on-site child care be considered as an incentive for parents of young children to attend. The location and timing of the event was also suggested as playing a significant role in determining which groups could attend.

> "They should go to areas that are really truly in the community, like a block from my crib."

Citizen and Stakeholder Knowledge

Citizens were given an eight item knowledge test at the beginning of each session and again at the end. The average scores for citizens increased significantly from the pre-test to the post-test; the average score increased from 39.6% on the pre-test to 64.5% on the post test ($F = 272.530$, $p < .001$). The level of knowledge on all items, but one, increased significantly from the pre-test to the post-test indicating that the presentation of information and the discussions improved citizen understanding of pandemic influenza (see Table 7). Additional analysis indicates that although those who participated in January 2007 and those who participated in November 2007 started at the same pre-test knowledge level (both scoring 39.6% correct), the January group had a greater increase in knowledge by the post-test (68.5% correct vs. 59.4% correct for the November group). This could be due to a different process at the two time periods.

Table 7
Change in citizen knowledge

Question	% of people who answered correctly	
	Pre-test	**Post-test**
Q1: How soon after someone is infected with an influenza virus will they get sick?	39.8% (128)	65.5% (211)*
Q2: When will the next pandemic occur?	50.9% (164)	72.0% (232)*
Q3: About how many people do you think die in a typical year from flu in the United States?	27.0% (4987)	61.8% (199)*
Q4: Who is at risk when a new influenza virus appears that has never been seen before?	78.3% (252)	88.8% (286)*
Q5: How many pandemics have occurred over the last 100 years?	38.2% (123)	83.2% (268)*
Q6: What causes a flu pandemic?	42.2% (136)	47.8% (154)
Q7: About how many people could become ill in the United States during a severe pandemic?	17.1% (55)	35.4% (114)*
Q8: About how long would it take to produce a flu vaccine after the virus causing a pandemic is identified?	23.3% (75)	61.2% (197)*

* indicates a significant increase in knowledge at $p < .05$

The perceptions of the citizens verify the quantitative results. Overall, citizens believed they had enough information to have well-informed opinions about vaccine distribution. On a 1 to 5 scale, with 5 representing strongly agree and 1 representing strongly disagree, average scores were as follows:

Table 8
Citizen perception about level of knowledge

Statement	Overall Mean (Std Dev)	January 2007 Mean (Std Dev)	November 2007 Mean (Std Dev)
I think I have enough information right now to have a well-informed opinion about making the best use of limited supplies of vaccine in a pandemic.	4.29 (0.86)	4.28 (0.87)	4.31 (0.84)

Overall knowledge scores appear higher for stakeholders than for citizen groups (see Table 9). There was little change in overall scores from pre-test (81.1%) to post-test

(83.1%). This could reflect the high degree of knowledge on the subject that most stakeholders came with or it could be because there was no educational presentation related to general knowledge about pandemic influenza offered to stakeholders at the event. Knowledge increased pre- to post-deliberation on only Question 7; the number of people answering correctly doubled. This is in contrast to the citizen groups, where although knowledge increased on Question 7, a majority of people continued to answer incorrectly on the posttest. The educational emphasis at the stakeholder meeting was on the proposed federal guidelines for vaccination in the event of a severe pandemic. The resulting increase in knowledge related to the number of people who could become ill in a severe pandemic reflects this educational emphasis.

Table 9
Change in stakeholder knowledge

Question	**% (#) of people who answered correctly**	
	Pre-test	**Post-test**
Q1: How soon after someone is infected with an influenza virus will they get sick?	80.6% (25)	77.4% (24)
Q2: When will the next pandemic occur?	93.5% (29)	80.6% (25)
Q3: About how many people do you think die in a typical year from flu in the United States?	87.1% (27)	80.6% (25)
Q4: Who is at risk when a new influenza virus appears that has never been seen before?	100.0% (31)	93.5% (29)
Q5: How many pandemics have occurred over the last 100 years?	96.8% (30)	93.5% (29)
Q6: What causes a flu pandemic?	71.0% (22)	67.7% (21)
Q7: About how many people could become ill in the United States during a severe pandemic?	45.2% (14)	87.1% (27)*
Q8: About how long would it take to produce a flu vaccine after the virus causing a pandemic is identified?	74.2% (23)	83.9% (26)

* indicates a significant increase in knowledge at $p < .05$

The perceptions of the stakeholders verify the quantitative results. Overall, stakeholders believed they had enough information to have well-informed opinions about vaccine distribution. On a 1 to 5 scale, with 5 representing strongly agree and 1 representing strongly disagree, average scores were as follows:

Table 10
Stakeholder perception about level of knowledge

Statement	**N**	**Mean (Std Dev)**
I think I have enough information right now to have a well-informed opinion about making the best use of limited supplies of vaccine in a pandemic.	35	4.31 (0.68)

Participants were asked about the information presented at the event. Almost everyone interviewed said that there was at least some information that they heard for the first time at the event. This included people who reported having extensive knowledge prior to attending the event. Participants from all sites reported referring to the handouts throughout the day and using them as references in small group deliberations. Some participants described the information as "very influential" while others noted that it served as a refresher for them. Most agreed that the information presented at the beginning of the day was necessary to bring all participants up to a shared knowledge level.

> *"We would not have been able to discuss it without the information."*
> *"It created an impact on our discussion. If it wasn't for that I don't think we could have had a good dialogue."*

All of the participants interviewed said the information presented was understandable, though several wondered if it might have been hard for other participants to grasp or follow. Some citizens thought additional information would have been helpful such as information about the value of vaccinations at difference stages of a pandemic. The two citizen meetings held after the federal guidance was released had a handout on their tables that graphically represented the vaccination priorities which some found confusing. Suggestions for improvement included having a list of definitions or a glossary in the handouts. A bilingual Hispanic participant noted that a few of the Spanish speaking people at his table had some trouble with the language, but in general it was understandable.

> *"Being at the Hispanic table, having the material translated in Spanish would help. It was just a few people who didn't have the ability to fully understand the whole thing."*

On the other end of the spectrum, some participants thought the information presented was "over-simplified." There were several participants who said that the delivery of the information could have been improved, but most were generally satisfied with the content. Having speakers from local jurisdictions was meaningful to most participants and helped "reinforce" the key messages.

> *"They didn't speak down to us, but they didn't talk over our heads."*
> *"I thought it was at a level that I thought just about everybody could understand"*

The second stakeholder meeting did not include the presentation on the difference between pandemic and seasonal influenza as the citizen groups did. Focus group participants after this meeting noted that it should not have been assumed that all stakeholders came in with an understanding about the difference between seasonal and pandemic influenza. They noted that an introductory presentation similar to those done at the citizen group meetings may have given participants shared clarity on the issues being discussed.

"I think the complexity could be explained better."

All of the stakeholders who were interviewed said that they understood the information presented. Several stakeholders said they also had to rely on information they obtained outside of the event about pandemic influenza when considering the proposed federal guidelines. Several reported reviewing the federal guidelines and previous pandemic influenza public engagement reports prior to coming to the event.

> *"On the website there was more information. Maybe send out information about where to look for information prior to the meeting."*

The Quality of Deliberations

The post-surveys indicate citizens generally believed the process was of high quality. Table 11 shows average scores for ratings of the process on a scale 1 to 5, with 1 representing strongly disagree and 5 representing strongly agree. For the first six items, a higher quality process is associated with a higher score. For the last two items, a higher quality process is associated with a lower score. Opinions differed between citizens who participated at different times ($F(11, 263) = 1.894$, $p = .040$). Those who participated in January 2007 were more positive about the process than those who participated in November 2007, giving higher ratings to feeling comfortable talking in the discussion; feeling the discussion was fair to all; thinking other people felt comfortable talking; and thinking the process produced credible, relevant, and independent information.

Table 11
Average citizen ratings of process

Statement	Overall Mean (Std Dev)	January 2007 Mean (Std Dev)	November 2007 Mean (Std Dev)
I felt comfortable talking in this discussion.	4.69 (0.66)	4.81* (0.46)	4.55* (0.83)
I think this process helped me better understand the types of trade-offs involved in setting priorities for influenza vaccination.	4.62 (0.66)	4.66 (0.60)	4.58 (0.72)
This discussion was fair to all participants.	4.57 (0.75)	4.70* (0.65)	4.41* (0.84)
I think other people in this discussion felt comfortable talking.	4.52 (0.78)	4.63* (0.64)	4.39* (0.91)
I think this process has produced credible, relevant, and independent information.	4.49 (0.76)	4.58* (0.71)	4.38* (0.81)
I think this process produced a valuable outcome regarding how to prioritize influenza vaccination.	4.38 (0.88)	4.43 (0.81)	4.31 (0.95)
Important points were left out of our discussion.	**2.71 (1.39)**	**2.75 (1.41)**	**2.65 (1.38)**
One person or a small group of people dominated the discussion.	**2.20 (1.42)**	**2.14 (1.42)**	**2.28 (1.43)**

* Citizens who participated in different processes differed in opinion.

The post-surveys indicate stakeholders generally believed the process was of high quality, although their ratings were slightly less positive than citizen ratings. Table 12 shows average scores for ratings of the process on a scale 1 to 5, with 1 representing strongly disagree and 5 representing strongly agree. For the first six items, a higher quality process is associated with a higher score. For the last two items, a higher quality process is associated with a lower score.

Table 12
Average stakeholder ratings of process

Statement	N	Mean (Std Dev)
This discussion was fair to all participants.	35	4.60 (0.78)
I felt comfortable talking in this discussion.	34	4.50 (0.71)
I think other people in this discussion felt comfortable talking.	35	4.29 (0.96)
I think this process helped me better understand the types of trade-offs involved in setting priorities for influenza vaccination.	35	4.20 (0.72)
I think this process has produced credible, relevant, and independent information.	35	4.14 (0.85)
I think this process produced a valuable outcome regarding how to prioritize influenza vaccination.	35	4.09 (0.82)
Important points were left out of our discussion.	**34**	**2.59 (1.18)**
One person or a small group of people dominated the discussion.	**35**	**2.11 (0.99)**

Only a few people commented on the registration process prior to the meeting. A couple of people talked about the lack of feedback between registration and the event. It was recommended that participants receive tangible confirmation of registration like an email or mailing that included up to date information about the logistics of the event. *"Advertisements in the paper should have had specific information and someone should have gotten back to us. We had to call someone in New Mexico to find out if we were registered."* Several people in the Wisconsin and North Carolina groups said that registration went "smoothly." Several participants "checked out" the organizer before agreeing to attend and cited the availability of historical information and reports on partner websites as influential in their decision to register for the event.

The process during the meeting was generally applauded and appreciated by participants. They described it as "professional" and "well-structured." Many of the participants commented on the physical setting of the meetings in addition to the process. New Mexico participants appreciated the placement of microphones throughout the room, the simulcast interpreting and the personal attention from their facilitators. New York

participants valued the process but felt that moving from room to room may have been disruptive. New Yorkers also said that more time could have been allotted for small group discussion and completion of the surveys, which was included in subsequent meetings in Wisconsin and North Carolina.

Wisconsin participants had trouble hearing questions from the audience because of the lack of microphones. Some complained about the room being cramped and cold making it somewhat uncomfortable. North Carolina participants also commented on how cramped their room was. No complaints were lodged about the food in any of the locations. Stakeholders did not comment in the interviews or focus group about facilities.

The small group discussion was valuable to participants in all sites. They generally enjoyed the discussion and thought the facilitation was good.

> *"I liked the way we broke down into groups. Each person from the table got to say what their group was thinking."*

> *"I found it fair. If you wanted to give your input you certainly had the opportunity to do so."*

Participants generally viewed the information as building toward active participation in both large and small group discussions. Listening to other people's viewpoints was universally seen as positive in both sites.

> *"I really think the thing that most influenced my opinion was the give and take at the table. It wasn't only the tables, but when they reported out giving different reasons."*

> *"We all came from different backgrounds, ethnic backgrounds, and professional groups. What was good about it was that we all compromised."*

The availability of experts seemed to be very important and impressive to some participants. They found it helpful to have their questions answered and felt valued because experts sat at their table and were accessible for questions.

> *"What surprised me was that there was a guy there who said he was from the government – that surprised me a lot."*

Several of the participants viewed the pre-meeting surveys as a source of information that helped set the expectation of knowledge to be gained throughout the day.

> *"I realized that when I did the initial pre-test that it had been quite a while since I had read that information and I'd forgotten a lot of it."*

> *"I liked the way they tried to get a feel for what you knew before and what you knew after."*

The event in New Mexico included both English and Spanish speakers. The Spanish speakers who were interviewed appreciated the efforts made to mix the populations, but at times felt isolated from the group. They noted that some of the information, notably the electronic polling, was not available in Spanish. Some of the Spanish speakers were concerned that there may have been a loss of critical information in the simultaneous translation. One participant noted that she felt badly that the English speakers were left out of the Spanish speaker's discussions. Another said that this was a "solid effort" to be inclusive and that it was important for Spanish speakers not to be separated from the rest of the community. Like the English-speaking participants, they would have liked to have seen more Spanish speakers at the event who were working class and not there to represent a specific constituency. They recommended more personal outreach to the community to increase attendance at future events.

There was a table of bilingual and Spanish-only speakers in Wisconsin. One participant commented about the segregation of the table. This person suggested that integrating the Hispanic participants may have led to more diversity of opinion in the small group discussions. Another participant in Wisconsin noted that the briefing materials were not translated into Spanish, making it difficult for non-English speakers to refer back to written materials as others had the opportunity to do.

Three of the meetings included electronic polling of participants that followed small group discussion. Technical difficulties prevented polling in New York. New Mexico participants thought that the electronic voting process could have been explained better or made available in Spanish for Spanish speakers in the forum. Interviewed participants liked the availability of electronic polling, but had a variety of opinions about the timing and implementation of polling.

Participants at the meetings in Wisconsin and North Carolina and the second stakeholder meeting were asked to summarize their discussion via a reporter for organizers over the lunch hour. The organizers then crafted polling questions from the themes that arose from the small group discussions. Several participants noted that the questions did not capture the depth of their discussions. They were concerned that polling was the only mechanism for learning about the discussion from other tables, limiting the discussion and interaction among small groups.

> *"Some people that brought up certain things there was not time for discussion afterwards, we just voted on it."*

Some participants, particularly in Wisconsin, were concerned about the role that government officials had in presenting the polling questions.

> *"I'm not walking around Milwaukee saying the conspiracy theorists are right – I'm not going that far – I'm simply saying that the sense of neutrality, scientific neutrality about obtaining public opinion was lost."*

This was less of an issue in North Carolina and the second stakeholder group because neutral facilitators assumed the role of presenting the polling questions rather than a government official. The stakeholders and citizens all wanted more time to explore and discuss polling results. Prior to voting, participants were asked if they wanted to explain the theme from their small group's perspective. Differing opinions were not solicited prior to the vote, nor was there much time for discussion after the vote. Some participants were concerned about this and suggested that polling be staggered throughout the day to allow for small and large group discussion about emerging issues. The placement of polling at the end of the day did not allow for extended discussion to clarify or explain the votes.

> *"When we did the polling and we saw some real strong differences of opinion. I leave not knowing why there were those differences."*

Overall, the day-long process was generally viewed as valuable by citizen participants.

> *"I really loved the simple fact that we was able to sit down and actually talk and express our opinions."*

> *"Thank you for the opportunity to come and learn the information – making us feel important – that we have a say. It's not only that you asked, but we received from you."*

Some stakeholders were critical of the electronic polling. As indicated by one stakeholder:
"I think that it is risky to base public policy on a straw poll (the electronic polling). I noted that many stakeholders had already left before the straw poll."

The Impact of Deliberations on Citizen Opinions

Survey results indicate some opinions regarding social values, goals, and priority groups changed for citizens after they received information and deliberated about vaccine priorities. Citizens were asked to rate each value on a 1-7 scale where '1' was 'Most Important' and '7' was 'Least Important.' Table 13 indicates that social justice, utilitarianism, equality, national security, compassion, and independence all decreased in importance following the deliberation, while societal contribution increased in importance (although it received the lowest rating both before and after the deliberation). Relatively high importance was placed on social justice, social order and utilitarianism both before and after the deliberation.

Table 13
Changes in social value ratings by citizens

Social Value	Pre-test Mean (Std Dev)	Post-test Mean (Std Dev)	ANOVA F-value	ANOVA p-value
Social Justice	1.69 (1.31)	2.10 (1.79)	8.834	.003^
Social Order	1.95 (1.33)	2.15 (1.64)	2.144	.145
Utilitarian	1.95 (1.40)	2.25 (1.80)	4.563	.034^
Equality	2.09 (1.74)	2.52 (1.96)	8.223	.005^
National Security	2.09 (1.57)	2.86 (1.97)	30.028	<.001^
Nationalism	2.88 (1.98)	3.06 (1.94)	1.829	.178
Compassion	2.36 (1.83)	3.26 (2.03)	40.864	<.001^
Freedom	3.25 (2.11)	3.50 (2.10)	2.918	.089
Independence	2.93 (1.99)	3.62 (2.26)	17.849	<.001^
Societal Contribution	4.48 (2.16)	3.68 (2.07)	23.033	<.001*

* indicates a significant increase in importance at p<.05
^ indicates a significant decrease in importance at p<.05

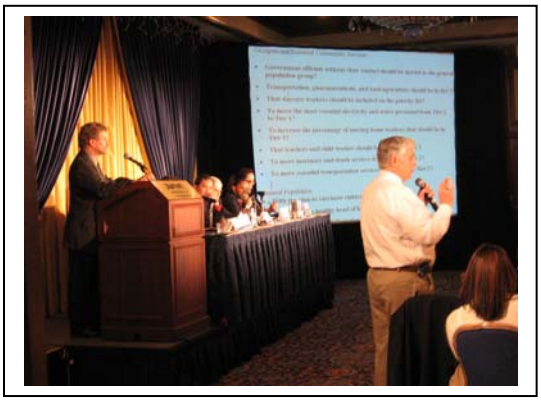

Table 14 shows citizen ratings of goals before and after deliberations. Citizens were asked to rank the goals from '1' for 'Highest Priority' to '8' for 'Lowest Priority.' Maintaining critical health care increased in priority after the deliberation, and was ranked first. Minimizing the spread of influenza was also a fairly high priority, although its ranking decreased as a result of the deliberation. Other goals that decreased in priority after the deliberation were: ensuring adequate distribution of vaccine and antivirals, minimizing deaths due to influenza, and treating all persons the same. Maintaining economic productivity was the lowest priority both before and after the deliberation.

Table 14
Changes in goal ratings by citizens

Goal	Pre-test Mean (Std Dev)	Post-test Mean (Std Dev)	ANOVA F-value	ANOVA p-value
Maintain critical health care services	3.21 (1.95)	2.84 (1.90)	6.942	.009*
Minimize the spread of influenza	2.68 (1.85)	3.04 (2.00)	5.585	.019^
Ensure adequate distribution of vaccine and antiviral medicines	3.11 (2.16)	3.58 (2.32)	8.270	.004^
Minimize deaths due to influenza	3.30 (2.34)	3.75 (2.33)	7.076	.008^
Maintain social order	4.22 (2.44)	4.00 (2.22)	1.962	.162
Maintain national security	4.23 (2.65)	4.43 (2.56)	1.630	.203
Treat all persons the same regardless of status	4.02 (2.64)	4.85 (2.54)	23.803	<.001^
Maintain economic productivity	5.32 (2.49)	5.37 (2.36)	0.118	.731

* indicates a significant increase in priority at p<.05
^ indicates a significant decrease in priority at p<.05

Table 15 shows the change in group ratings by citizens from the pre-test to post-test. Citizens were asked to rank the following groups from '1' for 'Highest Priority' to '8' for 'Lowest Priority' for receiving limited flu vaccine. Both before and after the deliberation, the highest priority for vaccination was placed on those who provide healthcare. High priority was also placed on those who implement pandemic response activities, provide vital community services, and are most likely to pass the virus to others in the community. Those who provide healthcare, implement pandemic response activities, provide vital community services, and provide the greatest economic benefit to the community were prioritized significantly higher after the deliberation, although the last group still received a fairly low priority ranking (second-to-last). Priority decreased for those who: are at high risk of dying, are most likely to transmit the virus to those at high risk of dying, and those who request the vaccine (lowest priority overall).

Table 15
Changes in group ratings by citizens

Group People …	Pre-test Mean (Std Dev)	Post-test Mean (Std Dev)	ANOVA F-value	ANOVA p-value
… who provide health care	2.54 (1.95)	2.28 (1.79)	4.022	.046*
… who implement pandemic response activities	3.35 (2.22)	2.80 (2.04)	12.554	<.001*
… who provide vital community services	3.69 (2.03)	3.31 (1.93)	5.544	.019*
… most likely to pass influenza to others in community	3.56 (2.04)	3.73 (1.94)	1.203	.274
… most likely to transmit viruses to those at high risk of dying	3.63 (2.06)	4.37 (2.03)	25.107	<.001^
… at highest risk of dying	3.66 (2.36)	4.65 (2.14)	50.282	<.001^
… who provide greatest economic benefits	5.76 (2.12)	5.44 (2.11)	4.311	.039*
… who request vaccine (first come, first served)	6.11 (2.39)	6.79 (2.05)	24.662	<.001^

* indicates a significant increase in priority at p<.05
^ indicates a significant decrease in priority at p<.05

Survey results indicate opinions regarding social values, goals, and priority groups changed much less for stakeholders than for citizens after they received information and deliberated about vaccine priorities. Regarding social values (Table 16), there were no significant differences in the stakeholder ratings from pre-deliberation to post-deliberation. Like the citizen groups, relatively high importance was placed on: Social Order, Social Justice, and Utilitarianism, both before and after the deliberation. This stakeholder group also placed some importance on the values of National Security.

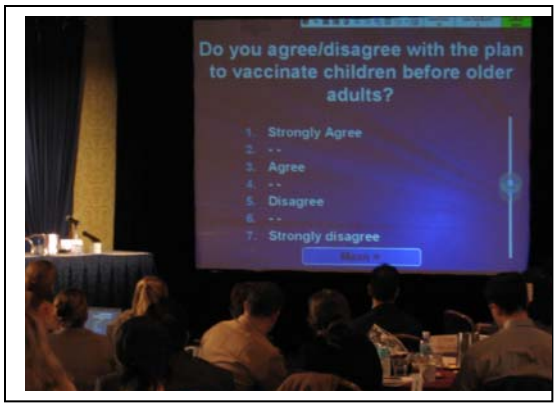

Table 16
Changes in social value ratings by stakeholders

Social Value	Pretest Mean (Std Dev)	Posttest Mean (Std Dev)	ANOVA F-value	ANOVA p-value
Social Order	1.95 (1.27)	1.84 (0.69)	0.112	.742
Social Justice	2.11 (1.24)	1.95 (1.13)	0.460	.506
Utilitarian	1.89 (1.24)	2.05 (1.47)	0.415	.527
National Security	2.26 (1.41)	2.37 (1.34)	0.321	.578
Compassion	3.00 (1.25)	3.00 (1.41)	<.001	1.000
Nationalism	3.95 (2.04)	3.79 (2.04)	0.321	.578
Societal Contribution	4.00 (2.00)	3.89 (1.94)	0.068	.797
Equality	3.97 (2.15)	4.11 (1.94)	0.516	.482
Freedom	5.21 (1.75)	4.95 (1.97)	0.703	.413
Independence	5.11 (1.63)	5.47 (2.01)	1.901	.185

There was also little change in stakeholder rankings of goals (see Table 17) from pre-test to post-test. Maintaining critical health care increased in priority after the deliberation and was ranked first. Minimizing the spread of influenza and minimizing deaths were also prioritized over the other goals and did not change as a result of the deliberation.

Maintaining national security decreased significantly in priority after the deliberation, as did maintaining economic productivity. Maintaining economic productivity was the lowest priority both before and after the deliberation.

Table 17
Changes in goal ratings by stakeholders

Goal	Pretest Mean (Std Dev)	Posttest Mean (Std Dev)	ANOVA F-value	ANOVA p-value
Maintain critical health care services	3.03 (1.35)	2.45 (1.27)	4.727	.038*
Minimize the spread of influenza	3.03 (1.94)	2.59 (1.57)	1.442	.240
Minimize deaths due to influenza	2.93 (2.39)	3.03 (2.20)	0.139	.712
Ensure adequate distribution of vaccine and antiviral medicines	4.66 (1.72)	4.76 (1.62)	0.085	.773
Maintain social order	4.55 (2.25)	4.93 (1.98)	0.653	.426
Maintain national security	4.31 (2.65)	5.03 (2.41)	4.850	.036^
Treat all persons the same regardless of status	6.17 (2.21)	6.14 (2.05)	0.012	.913
Maintain economic productivity	5.79 (1.70)	6.62 (1.21)	9.907	.004^

* indicates a significant increase in importance at $p<.05$
^ indicates a significant decrease in importance at $p<.05$

Table 18 shows no significant changes in group ratings by stakeholders from the pre-test to post-test. Both before and after the deliberation, the highest priority for vaccination was placed on those who provide healthcare, followed closely by those who implement response activities. High priority was also placed on those who are most likely to transmit viruses to those at high risk of dying and those who provide vital community services. These top rankings are similar to those given by the citizen groups. Individuals who provide the greatest economic benefits and those who request the vaccine were given the lowest priority.

Table 18
Changes in group ratings by stakeholders

Group People …	**Pretest Mean (Std Dev)**	**Posttest Mean (Std Dev)**	**ANOVA F-value**	**ANOVA p-value**
… who provide health care	2.17 (1.26)	2.27 (1.72)	0.070	.794
… who implement pandemic response activities	2.57 (1.72)	2.73 (1.89)	0.326	.573
… most likely to transmit viruses to those at high risk of dying	4.03 (1.75)	3.83 (1.44)	0.317	.579
… who provide vital community services	3.67 (1.67)	3.90 (1.61)	0.568	.457
… most likely to pass influenza to others in community	4.07 (1.60)	4.20 (1.75)	0.205	.654
… at highest risk of dying	4.30 (2.15)	4.40 (1.92)	0.059	.809
… who provide greatest economic benefits	6.37 (1.71)	6.40 (1.71)	0.015	.904
… who request vaccine (first come, first served)	7.40 (1.55)	7.80 (0.41)	1.851	.184

Results from the interviews and focus groups indicated that many individuals believed the process did not alter their opinions about vaccine priorities. Although most said the discussions and information did not change their opinions, they did say that it helped "broaden" or "clarify" their views.

> *"I still have the same opinions but it clarified them a bit about why I feel this way."*
>
> *"I was surprised at the excellent questions and new ideas that came out of this."*
>
> *"I got better insight into some things I did not give much thought to."*

Several people reported the information presented did have an affect on their opinions. This included information gained by asking experts questions during both large and small group discussions. One participant summed up the experience by saying, *"each time new information was given, the discussion changed."* Many participants reported that the small group discussion had the biggest influence on their opinions.

> *"It wasn't so much about the speaker, it was more about us interacting with each other."*

"My mind totally changed by listening to one of the member who made me see things from a totally different perspective."

"I heard people mentioning things I didn't think of, and realized they were very important also."

Use of the Input by Policymakers

Citizens generally expressed their belief the input provided would be used by policymakers. They also believed the deliberative process would increase the public's support of the decision that would be made about vaccine distribution. Table 19 shows citizen ratings for these two question (on a 1 to 5 scale with 5 being strongly agree and 1 being strongly disagree).

Table 19
Citizen perceptions about the impact of citizen input

Statement	Overall Mean (Std Dev)	January 2007 Mean (Std Dev)	November 2007 Mean (Std Dev)
I think this process will increase the public's support of the decision ultimately made on how to prioritize influenza vaccination.	4.34 (0.83)	4.38 (0.83)	4.29 (0.84)
I think officials will use our input in their decisions about how to prioritize influenza vaccination.	4.07 (0.98)	4.10 (0.88)	4.03 (1.09)

Stakeholders also expressed their belief that the input provided would be used by policymakers. They also believed the deliberative process would increase the public's support of the decision that would be made about vaccine distribution. Table 20 shows stakeholder ratings for these two question (on a 1 to 5 scale with 5 being strongly agree and 1 being strongly disagree).

Table 20
Stakeholder perceptions about the impact of citizen input

Statement	N	Mean (Std Dev)
I think officials will use our input in their decisions about how to prioritize influenza vaccination.	35	4.03 (0.66)
I think this process will increase the public's support of the decision ultimately made on how to prioritize influenza vaccination.	35	4.00 (0.77)

Results from the interviews and focus groups indicate participants at both sites were generally pleased with the outcomes of the meeting and felt like it reflected their work in the small and large groups. When asked about how they expected policy makers to use

the information, participants expressed a mix of optimism and cynicism. The cynical responses often were rooted in perceptions of how the federal government responded to Hurricane Katrina. "Look at Katrina – that was one state. They couldn't even take care of Katrina right." Pandemic influenza planning efforts associated with the federal government viewed through the lens of past performance led to other cynical comments.

> *"These reports are going to get buried in somebody's office – unfortunately especially in the current climate, planners will do what they are going to do."*
>
> *"I don't have great expectations that they are going to follow this."*
>
> *"Unless there is a huge overwhelming suggestion that multiple groups are making, I think that the policy will pretty much stay the way they designed them."*
>
> *"If my input is going to be dismissed, let's not waste time – if my input is going to be included, then I'd be willing to sacrifice time without a stipend."*

These comments were tempered by the hope that these forums signaled new respect for public input. Participants from all sites wanted to believe the work they did will be considered by federal decision makers. All who were interviewed were clear that their input was only part of the information that policy makers would be considering. Most thought and expected that expert opinions would be more heavily weighted than citizen input. This did not negate their hope that citizen input would be considered.

> *"I've never seen the government try so hard to really get a feel for what everybody wants"*
>
> *"I just hope that they take all the information into consideration and not let politics rule whatever decision they come to."*
>
> *"Maybe we actually are making a difference at this meeting."*

Selected representatives of the citizen groups were invited to present and participate in the stakeholder meetings. Stakeholders welcomed the citizen viewpoints were impressed by how serious the citizen groups deliberated. The comments of stakeholders reflected how the value of citizen input increased when they were given the opportunity to interact with citizens at the meeting.

> *"I probably didn't give enough credit to the lay folks."*
> *"We need to have that interaction with non-federal people from outside in the communities."*

One participant thought it might be helpful if decision makers were given the same opportunity to receive information, ask questions and engage in discussions before they ultimately made decisions about vaccine prioritization. He referred to the effect this experience had on him as an example of how policy makers might benefit from it:

> *"Maybe before the conference they had certain ideas, but the information from these conferences will change their opinion – because it happened to me – before, I did pretty good research on influenza and vaccines – I developed a certain understanding of it – and yet the conference itself gave me a broader view."*

The gravity of the decisions faced by policy makers related to vaccine prioritization was felt by participants in all citizen sites. They wanted those in charge of the decisions to take into account all available information and to keep citizens informed of their progress.

> *"I think I left there with a sense of how tough it would be."*

> *"This is people's lives….I think they should continue to keep us informed all the way down."*

> *"We are not separate from you."*

The overall impression from citizen participants was that the effort to engage the public in the discussion was successful. People genuinely appreciated being asked for their opinion and felt better informed when they left the session.

> *"A lot of times I think people feel like the government just comes in and makes these decisions after all this work to prioritize and it was really nice to let people come up with the decisions."*

> *"I wish they did this more often. They usually they take surveys, but they never really educate the public and then take surveys. I wish they would do this with a lot of other issues as well, like education or workers rights."*

> *"I think that a lot of people went away informed and wanted to be made aware and wanted to have more input. They went away hungry."*

A general theme from the citizens was that they would be more inclined to accept the decisions of policy makers because they had the opportunity to meaningfully participate in the decision. Stakeholders noted that this theme seemed to persist even when citizens were asked about how they would react if the resulting decision or policy turned out to be contrary to their personal recommendation or belief. Stakeholders also noted that they were surprised to learn from citizen panels that participants advocated for groups to receive priority in vaccination that they were personally not part of. Interviewed stakeholders cautioned against over-generalizing the results of the citizen groups. One

stakeholder noted that overselling the results could lead to "skepticism" related to the validity of the process.

> *"Its gone farther than the vast majority or almost any policy process that I can think of to be inclusive and to bring more voices to the table in a more deliberate fashion. That said, it should not be oversold."*

Many of the citizens who were at the events expressed a sense of responsibility for educating others about pandemic influenza as a result of their participation. One citizen described the role as one of being a "missionary for vaccination." Another summed up the responsibility like this:

> *"If we ever need to do this, the opportunity for those of us who were there to more or less defend the policies will be useful. It will definitely keep my level of frustration down."*

Participants will be tuned in to see what happens with their input. Most would appreciate a personal communication from organizers that gave them a website or internet resource to periodically check for updates. They said that they would like an email or letter acknowledging their participation and directing them to these resources. Participants were hopeful that the federal government would involve local health departments in ongoing decisions and in dissemination of information so local community members could be assured that their needs would be met.

Who Should Decide Vaccine Distribution

Citizens were asked who should make decisions about vaccine distribution in the event of a pandemic. As shown in Table 21, the largest shifts in opinion on who should determine vaccine distribution are away from individuals themselves and toward local health departments. The CDC was the most strongly endorsed decision-maker both before and after the deliberation.

Table 21
Changes in citizen ratings regarding who should decide vaccine priorities

	Pre-test % (#)	**Post-test % (#)**
Individuals themselves	13.8% (39)	8.9% (25)^
Local health department	15.6% (44)	22.3% (63)*
City or county government	3.2% (9)	3.5% (10)
State Health Department	12.4% (35)	10.6% (30)
State government	1.4% (4)	3.9% (11)
CDC	49.3% (139)	45.0% (127)
Federal government	4.3% (12)	5.7% (16)

* indicates a significant increase at $p<.05$
^indicates a significant decrease at $p<.05$

For stakeholders, the largest shifts in opinion on who should determine vaccine distribution are away from individuals and the CDC and toward state health departments and state government (see Table 22). This is similar to the citizen deliberations with the locus of control moving toward a more local setting. In the case of citizens, the movement was from federal and state to local health departments and government. Stakeholders moved from federal to state levels of government and health departments. The CDC was the most strongly endorsed decision-maker both before the deliberation, while the federal government was the most strongly endorsed after the deliberation, with the CDC and state health departments in second place.

Table 22
Changes in stakeholder ratings regarding who should decide vaccine priorities

	Pretest % (#)	**Posttest % (#)**
Individuals themselves	6.9% (2)	0% (0)^
Local health department	3.4% (1)	3.4% (1)
City or county government	6.9% (2)	10.3% (3)
State Health Department	10.3% (3)	24.1% (7)*
State government	0% (0)	10.3% (3)*
CDC	37.9% (11)	24.1% (7)^
Federal government	34.5% (10)	27.6% (8)

* indicates a significant increase at p<.05
^indicates a significant decrease at p<.05

Summary and Conclusions

Based on evaluation results, the Public Engagement Project on Pandemic Influenza Vaccine Prioritization met its major goals. Organizers were successful in recruiting participants to the four citizen meetings held in Las Cruces, New Mexico, Nassau County, New York, Milwaukee, Wisconsin and Hendersonville, North Carolina. The goal of recruiting 100 citizens for each meeting was exceeded. Nearly 500 individuals from these communities gave up a Saturday to engage in a deliberative process around an important public policy issue. Providing stipends and enhanced recruitment efforts appears to have resulted in increased participation in comparison to previous public engagement efforts regarding pandemic influenza.

Citizens represented a diversity of demographic characteristics and perspectives. The goal of the public engagement process was not to have citizen participants mirror the exact demographics of the general populations of the four communities; rather, the goal was to have enough demographic diversity to ensure participants reflected a variety of perspectives and points of view. In this sense, the project succeeded. Participants tended to be older and more educated than the general population. There were more females and Hispanic participants than the general population as well. However, there were participants from across demographic groupings at each meeting. Citizens themselves

indicated they were impressed with the diversity of opinions during the discussions. Despite the cross section of individuals who participated, some thought there was an absence of ordinary citizens. Many of the participants attended because they worked in the health care field or they were members of particular groups with an interest in pandemic influenza.

The public engagement process resulted in increased knowledge for citizens participating in the meetings. Stakeholders generally came into their meetings with a high level of knowledge. Both citizens and stakeholders believed they had adequate knowledge to understand the key concepts. It appears that citizens and stakeholders had sufficient knowledge to engage in thoughtful and informed discussions about which groups should receive priority for vaccinations in the event of a pandemic.

Both citizens and stakeholders believed the process was of high quality, although stakeholders slightly less so than citizens. Both groups felt comfortable talking in the discussion, thought the discussion was fair to all participants, and felt others in the discussion were comfortable in talking during the process. Most indicated that all the important points were included in the discussion and that no one person or group dominated the discussion. Citizens agreed that the process was well structured and professionally organized. Participants particularly appreciated the small and large group discussions and the availability of experts in the process. In one site, the electronic polling did not work; however, this did not appear to be a major detraction for participants. Some individuals indicated that Spanish speakers felt isolated from the rest of the group and that the meeting materials including the electronic polling were not available in Spanish.

Engaging in the participatory process appears to have significantly changed the opinions of citizen and stakeholder regarding the importance of social values to consider when making decisions about vaccine priorities, the goals for vaccine policy, and the priority groups for vaccination. For citizens, the values of “social justice”, “utilitarianism”, “equality”, “national security”, “compassion”, and “independence” all decreased in importance following the deliberation, while “societal contribution” increased. The goals of “ensuring adequate distribution of vaccine”, “minimizing deaths due to influenza”, and “treating all persons the same” decreased after deliberations, while the goal of maintaining critical health care services increased. With regard to groups of individuals who should receive priority for vaccination, “people likely to transmit viruses to those at risk of dying”, “people at highest risk of dying”, and “people who request the vaccine first” decreased in importance, while “people who implement pandemic response activities” increased. These results provide evidence of the value of obtaining input from citizens and stakeholders through this type of participatory process. Participants who understand the issues and engage in deliberations about policy options develop different perspectives than if they had not participated in the process. Although opinions changes, the participants themselves did not comprehend that their perspectives had been altered. Many indicated that the process helped refine or clarify their views, but that their perspectives had not changed substantially.

Both citizens and stakeholders thought the process would increase public support of vaccine policy and that officials would use the public input in making their decisions; although stakeholders were a bit less sure. Citizens in particular appreciated the opportunity to be involved in the process. The majority of citizens and stakeholders believed that the federal government including the Centers for Disease Control and Prevention should make the decision about which groups should receive priority for vaccine in the event of a pandemic. However, after the process, there was a significant shift in participants who thought that county or local health departments should make these decisions.

The University of Nebraska does not discriminate based on gender, age, disability, race, color, religion, marital status, veteran's status, national or ethnic origin, or sexual orientation.