

**Illinois Department of Public Health  
2009 H1N1 Influenza A  
Pandemic Communications Evaluation Survey**

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*Results Analysis—Final Draft*

**Decision and Information Sciences Division**

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## **Executive Summary**

### **Problem Statement**

Because of heightened media coverage, a 24-hour news cycle and the potential miscommunication of health messages across all levels of government during the onset of the H1N1 influenza outbreak in spring 2009, the Illinois Department of Public Health (IDPH) decided to evaluate its H1N1 influenza A communications system. IDPH wanted to confirm its disease information and instructions were helping stakeholders prepare for and respond to a novel influenza outbreak. In addition, the time commitment involved in preparing, issuing, monitoring, updating, and responding to H1N1 federal guidelines/updates and media stories became a heavy burden for IDPH staff.

### **Stakeholder Solution**

Subsequently, IDPH turned to its largest public health stakeholder group, the Illinois Pandemic Influenza Workgroup (IPIW), for assistance. The IPIW's Best Practices Subcommittee (subcommittee) agreed to lead the development, implementation, and evaluation of an e-mail-based H1N1 survey. From late May 2009 through July 2009, the subcommittee drafted and produced an H1N1 survey to help IDPH identify the communication systems' best practices and areas for improvement. The subcommittee used IDPH pandemic plans and after-action reports, federal pandemic reports, and IDPH staff interviews to develop survey question content.

Both entities agreed the best way to rapidly obtain stakeholder feedback was to issue an electronic survey that would: (1) identify strengths and weaknesses of its information sharing during the first H1N1 influenza wave; (2) use survey results to improve informational message timing, content, and delivery before the fall 2009 influenza season/vaccination campaign; and (3) identify ways to more effectively use IDPH personnel resources, technology, and communication devices to disseminate information.

### **H1N1 Survey Distribution**

As part of its responsibilities, the subcommittee recruited 549 individuals from the following stakeholder groups to participate in the survey:

- Local health departments
- Hospitals
- Private physicians
- Schools and universities
- Child care centers
- Private businesses and associations
- Nursing homes / long-term care facilities
- Government agencies (state and non-public-health local government agencies)

In total, 237 individual stakeholders (43 percent) accepted the e-mail invitation to complete the H1N1 survey's 33 questions. All respondents were given the option of answering the questions anonymously and 62 (26 percent) of respondents did so. The first 26 questions asked respondents to rate IDPH's performance using a 5 point Likert Scale, which measures respondents' agreement or disagreement with a statement. The 26 questions were divided into the following evaluation categories:

1. **General Performance:** clear, timely, accurate H1N1 messages issued.
2. **Information Usefulness:** H1N1 messages enhanced stakeholders' response efforts.
3. **Policy Recommendations:** H1N1 messages aided coordination efforts.
4. **Communication Tools/Media:** effectiveness of conference calls, Web site, fax, and alert network.
5. **Stakeholder Preferences:** proper number of alerts, updates, and guidance issued.

Another seven open-ended questions addressed stakeholders' perceptions of IDPH's messaging campaign, information acquisition habits, communication issues, H1N1 topics of interest to stakeholders, preferred methods of communication, and H1N1 informational sources.

## **H1N1 Survey Results**

**General Performance:** The majority of respondents reported that IDPH waged an effective H1N1 information messaging campaign during the initial stages of the H1N1 influenza outbreak. For example, the majority of respondents (69 percent) believed IDPH's messages were clear and accurate and 68 percent felt H1N1 messages were timely. In addition, 57 percent stated that IDPH properly prioritized critical information for them and 54 percent believed IDPH issued clear social distancing measures.

**Information Usefulness:** Of great importance, 64 percent of respondents stated that IDPH's H1N1 messages and instructions helped them respond to the outbreak, and 57 percent stated they were influenced by IDPH's messages to activate their own response plans. Further, 74 percent of respondents stated that the correct staff person in their organization read IDPH's H1N1 correspondence.

**Policy Recommendations:** Respondents believe IDPH should be playing an active communications role; 84 percent stated IDPH should issue informational messages during disease outbreaks like the H1N1 outbreak. Respondents also want IDPH to either continue or adopt the following actions:

- Of those responding, 72 percent do not want IDPH to customize Centers for Disease Control and Prevention (CDC) messages/updates; however, 84 percent favor local health customization of IDPH messages/updates with local data.
- Of those responding, 78 percent want IDPH to coordinate "hotlines" with local health departments and hospitals; further, 69 percent want IDPH to establish a separate hotline for hospitals, private medical providers, and health clinics.
- While 72 percent of respondents want IDPH to open a joint information center (JIC), only 47 percent believe local health departments should open one during a statewide disease event.
- Significantly, only 32 percent agree that IDPH should not make any changes in the way it delivers information to stakeholders prior to the seasonal influenza season/H1N1 vaccination campaigns.

**Communication Tools/Media:** While 70 percent of respondents state that IDPH's written messages were easy to understand and another 64 percent found H1N1 information/updates on the IDPH Web site timely and useful, most respondents were dissatisfied with IDPH's traditional communication tools. For example, only 24 percent of respondents agreed that IDPH's fax system is an effective means of communication. Moreover, only 44 percent of respondents found IDPH's conference calls helpful, and less than half of respondents (47 percent) agreed that IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool.

The dissatisfaction with IDPH's conference calls, fax system, and H-HAN, combined with the finding that only 32 percent of respondents do not want IDPH to change its delivery information system, indicates the areas in which IDPH can make the greatest improvement.

**Stakeholder Preferences:** Only 16 percent of respondents thought IDPH provided too many alerts, updates, and guidance during World Health Organization Phases III–VI. Most respondents (69 percent) want informational updates from IDPH, but they only want to receive it once per day, unless there is an emergency situation; similarly, 67 percent of respondents believe IDPH's Web site should be updated only once per day. A majority of respondents (77 percent) want guidance for physicians and hospitals posted on the IDPH Web site, and 55 percent of respondents want IDPH to include Web site links rather than attaching entire documents in its H1N1 messages.

### **Open-Ended Questions**

Evaluating the open-ended questions (fill-in-the-blank/select preferences) of the H1N1 survey gave IDPH a better picture of how stakeholders want to receive information during a public health emergency. These questions also helped clarify which communication issues and topics were of concern to stakeholders. For example, 52 percent of respondents informed IDPH they either visited the IDPH Web site and/or used the IDPH Help line to gain information at least one time per day during the initial stage of the H1N1 outbreak.

Of importance, IDPH learned that the majority of respondents, 53 percent, believed that IDPH's information dissemination system had already helped them address their specific H1N1 communication issue(s). Regarding future H1N1 topics to address, only 27 percent of respondents wanted more detailed information about H1N1 vaccine policies, and a small cluster (7 percent) wanted more guidance on school closure.

Respondents also informed IDPH they favor receiving information/updates via e-mail and the IDPH Web site more than traditional communication tools, such as conference calls, landlines, and cell phones.

The last open-ended question also helped IDPH identify how stakeholders obtain their H1N1 information. Thirty percent of respondents relied on only one source (e.g., IDPH, CDC); however, 70 percent of respondents utilized two to six sources to retrieve their H1N1 information. This finding represents both a challenge and an opportunity for IDPH. If stakeholders are consuming information from multiple sources, then IDPH needs to make media monitoring a high priority to ensure consistency of the overall public health message.

### **Results: Organizational Comparison**

This evaluation report also compares and contrasts the H1N1 survey findings for key stakeholder groups. The table below summarizes the highest (5.0) and lowest scores (1.0) for each organizational group.

<b>County and Local Health Departments</b>	<b>High Score</b>	<b>County and Local Health Departments</b>	<b>Low Score</b>
<b>H1N1 Survey Question</b> <i>6. IDPH messages (alerts, instructions, etc.) were read by your organizations' appropriate staff person.</i>	4.5	<b>H1N1 Survey Question</b> <i>17. IDPH's fax machine was an effective means of communication to use during a disease outbreak like H1N1.</i>	2.7
<b>Hospitals</b>	<b>High Score</b>	<b>Hospitals</b>	<b>Low Score</b>
<b>H1N1 Survey Question</b> <i>21. Guidance for physicians and hospitals should be posted on the IDPH Web site.</i>	4.3	<b>H1N1 Survey Question</b> <i>17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.</i>	3.0
<b>Schools, Universities and Child Care Centers</b>	<b>High Score</b>	<b>Schools, Universities and Child Care Centers</b>	<b>Low Score</b>
<b>H1N1 Survey Question</b> <i>10. Local health departments should continue to customize IDPH H1N1 messages with local information.</i>	4.4	<b>H1N1 Survey Question</b> <i>18. IDPH's Hospital-Health Alert Network is a useful communication tool to use during a disease outbreak.</i>	1.2
<b>Government Agencies</b>	<b>High Score</b>	<b>Government Agencies</b>	<b>Low Score</b>
<b>H1N1 Survey Question</b> <i>11. IDPH phone bank "hotlines" should coordinate hotline activities with local health departments and hospitals.</i>	4.5	<b>H1N1 Survey Question</b> <i>17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.</i>	2.3
<b>Private Medical Practices</b>	<b>High Score</b>	<b>Private Medical Practices</b>	<b>Low Score</b>
<i>11. IDPH phone bank "hotlines" should coordinate hotline activities with local health departments and hospitals.</i>	4.1	<i>13. IDPH's H1N1 Influenza conference calls were helpful to your organization.</i>	2.2
<b>Private Businesses</b>	<b>High Score</b>	<b>Private Businesses</b>	<b>Low Score</b>
<i>10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.</i>	3.7	<i>17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.</i>	0.9
<b>Residential Care Facilities</b>	<b>High Score</b>	<b>Residential Care Facilities</b>	<b>Low Score</b>
<b>H1N1 Survey Question</b> <i>16. Your organization would prefer to receive just one update from IDPH each day unless there is emergency guidance requiring immediate distribution.</i>	4.0	<b>H1N1 Survey Question</b> <i>18. IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool to use during a disease outbreak.</i>	1.1
<b>Unknown Organizations</b>	<b>High Score</b>	<b>Unknown Organizations</b>	<b>Low Score</b>
<b>H1N1 Survey Question</b> <i>25. IDPH should issue information messages during international/national disease outbreaks like H1N1.</i>	3.6	<b>H1N1 Survey Question</b> <i>17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.</i>	1.8

## **Recommendations**

Based on the survey results, the subcommittee identified best practices and areas for improvement that IDPH can implement during the H1N1 outbreak and future large-scale disease outbreaks. They are summarized below.

### **Best Practices**

IDPH should continue to play a leadership role in communicating H1N1 information; 84 percent of respondents believe IDPH should issue informational messages during disease outbreaks like the H1N1 outbreak. Respondents liked IDPH's clear, accurate, and timely informational messages/updates; 57percent agreed that IDPH's messages and instructions motivated them to activate their own plans; and 64 percent agreed that these measures helped them respond to the H1N1 outbreak. IDPH's dissemination techniques were also on target, with 74 percent of respondents reporting instructions and updates were read by the organizations' appropriate staff person; moreover, IDPH should continue to use its Web site as a message dissemination tool, since 64 percent of respondents agreed that the Web site provided timely and useful information.

IDPH should continue to collaborate with its key stakeholder groups to develop, conduct, and evaluate future preparedness and response surveys. IDPH's recruitment of stakeholders proved quite effective, producing a 43 percent survey response rate. Another best practice is for IDPH to continue using pandemic plans and exercise after-action reports as content sources for future surveys.

### **Areas for Improvement**

Given the overall dissatisfaction and/or uncertainty for some stakeholders surrounding the effectiveness of IDPH's communication delivery system, specifically, the fax distribution system, H-HAN, and conference calls, IDPH should investigate how it can improve these communication tools to benefit a larger portion of stakeholders. IDPH should also consider reaching out to those survey respondents (private medical practices, private businesses, and residential care facilities) who were more critical of the IDPH communication system and get them more engaged in the information-sharing process.

IDPH should also obtain the e-mail addresses of all stakeholders so future surveys can reach more respondents, such as universities, child care centers, private businesses, physicians, and residential care agencies. This will give IDPH instant access to a wider database of key contacts that can be reached during routine and emergency/disaster situations. With 70 percent of respondents obtaining their H1N1 information from two or more sources, such as IDPH, CDC, local health departments, the media, and the Internet, IDPH should expand its media monitoring.

Specifically, IDPH should consider the following actions: (1) assign staff to compare and contrast IDPH disease recommendations with other recommendations appearing in the media and on the Internet from other public health agencies and hospitals; (2) review traditional media outlets (TV, radio) and Internet news sources, independent Web sites, and social networking sites on a daily basis to confirm IDPH's messaging is accurately portrayed.

Respondents also had some direct recommendations for IDPH to undertake prior to the fall 2009 influenza season:

- Avoid customizing CDC guidance and updates.
- Open a JIC during a statewide disease outbreak.
- Coordinate phone bank “hotlines” with local health departments and hospitals.
- Establish separate phone bank hotlines for hospitals, private medical providers, and clinics.
- Post physician and hospital guidance on the IDPH Web site.
- Send just one daily H1N1 informational update.
- Update IDPH’s Web site once per day.

### **Overall Success**

The process and results of the H1N1 messaging survey represent a best practice that other health departments and emergency management agencies can replicate to improve coordination efforts with stakeholder groups during both emergency preparedness and response phases. Most important, the H1N1 survey confirmed that IDPH’s messages were influencing stakeholders’ decisions to activate their pandemic plans and initiate response operations. While there was some dissatisfaction with IDPH’s delivery of information and some communication tools, such as the fax system, this report should demonstrate to IDPH that its core partners believe it has the ability and expertise to issue timely and accurate instructions that can help them respond to a large-scale disease outbreak in Illinois.

In addition, this study illustrates an important best practice: Web-based surveys can be used to elicit timely feedback for public agencies during emergency-response operations. The benefits of this survey method extend far beyond the use of state health departments. Any agency that is engaged with a variety of stakeholders can use the lessons accrued from the methodological design of this study. Web-based surveying is relatively new; thus, the benefits of this method should be widely distributed.

## **H1N1 Information Messaging Survey: Introduction**

The purpose of this evaluation report is to describe the results of a 2009 H1N1 communications survey conducted by the Illinois Pandemic Influenza Workgroup (IPIW) for the Illinois Department of Public Health (IDPH). During the initial stages of the H1N1 influenza outbreak, IDPH wanted to ensure the information it was providing helped key stakeholder groups prepare for and respond to the H1N1 pandemic. To gauge the effectiveness of the IDPH informational campaign, stakeholders serving on the IPIW developed, implemented and evaluated the survey. The 237 responses to this informal, Web-based survey are detailed here in this report.

The audience for this evaluation report is any state and local public health agencies that responded to the 2009 H1N1 outbreak and their key pandemic stakeholders, such as hospitals, private physicians, schools, emergency management agencies, long-term care facilities, and private businesses. This report will describe why the survey was developed, how IDPH's pandemic plans and after-action reports influenced the survey, and how IDPH's pandemic stakeholders led and managed the survey. Additionally, this report will detail the survey instrument itself, provide an analysis of results for all the respondents, and compares results of the Illinois' pandemic stakeholder groups that voluntarily participated in this survey.

## **H1N1 Information Messaging: Problem Definition**

In April 2009, a new strain of H1N1 influenza A virus ("Swine" flu) appeared in Mexico. Within a month, cases of the new influenza were appearing in the United States, with the largest outbreak occurring in a New York City school. By the summer the disease was endemic in the population, though spread was depressed during the warmer months as naturally occurs with influenza viruses. Federal, state, county, and local health departments around the country began implementing the pandemic flu plans they had been developing and exercising in preparation for an expected H5N1/A ("Avian" or "Bird" flu) pandemic.

In Illinois, during the initial response phase (April 2009–June 2009), H1N1 cases first appeared on April 29, 2009, when nine individuals were identified as having probable infection. By May 1, 54 cases were reported in the state. Six schools in the Chicago metropolitan area closed during the spring term when probable or confirmed cases were reported in their student populations.<sup>1</sup> The first H1N1-related death was reported on May 25, 2009. The victim was a young adult with an underlying health condition. By the end of June, 17 deaths had been confirmed as H1N1-related.<sup>2</sup>

Following its pandemic plan and operational protocols, IDPH coordinated response efforts with the Centers for Disease Control and Prevention (CDC), local health departments, hospitals, and local school districts.<sup>3</sup> While serving in the role of intermediary between federal and local response actions, IDPH communicated information to key stakeholders, an important but resource-intensive endeavor. Communications included developing and issuing recommendations and guidance documents, news releases, press conferences/media interviews, conference calls, and postings to the IDPH Web site.

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<sup>1</sup> *The Daily Herald*, 30 April 2009, *The Daily Herald*, 1 May 2009; *ABC 7 News*, 29 April 2009.

<sup>2</sup> *NBC 5 News*, 25 July 2009.

<sup>3</sup> State of Illinois, "Pandemic Influenza Preparedness and Response Plan," (31 August 2009), 6.

Producing instant, accurate, and consistent information in a 24/7 news era can strain even the most prepared response organizations. For example, IDPH was under constant pressure to use its medical/epidemiology, communications, preparedness, and public information staff members to obtain, interpret, and disseminate information from multiple sources, such as federal government agencies, other state agencies, and internal IDPH divisions. This was done so local health departments, hospitals, health care providers, and schools would have the most timely and reliable information possible to improve their decision-making.

With multiple agencies producing protective actions and the national and local media issuing information at the “speed of Twitter™,” some conflicting guidelines arose. Different recommendations issued by the federal, state, and local governments and private medical professionals regarding school closings and cancellation of athletic events led to some confusion by parents, students, and the general public. For example, by May 4, 2009, the CDC was already reevaluating its official guidance to close a school for 14 days if suspect cases were found in a school. This federal reevaluation prompted the Minnesota Department of Health to announce new guidelines for local schools: (1) isolate individuals infected with H1N1, (2) close schools at own discretion, or (3) follow the CDC’s 14-day school closure guideline.<sup>4</sup> In addition, different communities had different responses to hosting school-aged athletic events. For example, while Texas officials cancelled high school athletic events from April 30 to May 11, the Illinois High School Association continued to host all of its spring sporting events during the same time period.<sup>5</sup>

During this period of intense communications, which covered the World Health Organization (WHO) transitions from Pandemic Phase 3 through to Pandemic Phase 6, IDPH grew concerned that its stakeholders may not have been receiving timely, accurate, and helpful information consistently on every pandemic issue.

Recognizing that a pandemic can potentially include two to three “waves” of intensive outbreaks over a 12-month period and include a mass vaccination program, IDPH foresaw an opportunity to prepare for the “second wave” by better understanding what measures it could take to improve its messaging to, and communications with, local stakeholders.

## Survey Solution

IDPH decided to use the brief lull in transmissions over the summer to assess the effectiveness of its communication efforts before the next pandemic wave hit Illinois in fall 2009. IDPH wanted to make sure its H1N1 messaging was reaching the right audiences and that its messaging was timely, accurate, and, most importantly, useful to its stakeholders, key stakeholders, and the public.

IDPH’s solution was to evaluate its own communications system by directly engaging its key stakeholders with an electronic survey. While IDPH had never used an electronic survey to garner feedback during a disease outbreak before, it believed an informal but targeted electronic survey sent to hundreds of stakeholders and key stakeholders would allow it to: (1) identify strengths and weaknesses of its information sharing during the initial phases of the H1N1 influenza outbreak; (2) use survey results to improve informational messaging timing, content, and delivery before the fall 2009 influenza season; and

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<sup>4</sup> *Fox9 Twin Cities*, MN, 4 May 2009.

<sup>5</sup> *The Chicago Tribune*, 30 April 2009.

(3) identify ways to more effectively use IDPH personnel resources, technology, and communication devices media to disseminate information.

Furthermore, the stakeholder survey approach is considered a sound strategy to assess performance. For example, Thomas et al. suggests that such a survey is an important measure of an agency's performance for large-scale collaborations between levels of government or with many stakeholders. Pandemic response fits this paradigm well.<sup>6</sup>

### **H1N1 Survey Goal**

The subcommittee determined that the goal of the H1N1 survey was to have at least 200 individual stakeholders take the survey and evaluate the effectiveness of IDPH's information sharing and coordination efforts during the initial phase of the pandemic. Specifically, the subcommittee wanted survey participants to identify best practices and solicit recommendations for how IDPH's communication methods might be improved prior to the fall influenza season.

The subcommittee and IDPH decided the best way to achieve this goal would be to embed the H1N1 e-mail invitation with a link to a survey instrument hosted by SurveyMonkey.com<sup>®</sup>.<sup>7</sup> Since IDPH had a pre-existing SurveyMonkey.com<sup>®</sup> account, the survey could easily be posted, accessed by the target audience within a few seconds, and completed in 10 to 15 minutes.

### **Stakeholder Involvement**

Early in the pandemic planning process, IDPH demonstrated a strong commitment to its stakeholders with the creation of the IPIW. The IPIW was formed in 2006 to independently evaluate state and local pandemic plans and recommend best practices and areas for improvement to the IDPH director.<sup>8</sup> IPIW members included representatives from federal, state, county, and local public health departments, as well as hospitals, the Illinois Terrorism Task Force, state agencies, first responders, the Illinois State Board of Education, private businesses, Argonne National Laboratory, the University of Chicago, and professional associations representing hospitals, pharmaceuticals, mental health, and businesses. The IPIW created several subcommittees to organize and focus its stakeholders, one of which was the Best Practices Subcommittee, whose charge is to examine plans, exercises and current emergency public health practices to identify preparedness and response strengths and areas for improvement for IDPH.

In late May 2009, the IPIW's Best Practices Subcommittee (subcommittee), agreed to work with IDPH and assumed the lead development, distribution, and evaluation role for the H1N1 survey.

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<sup>6</sup> John Clayton Thomas, Theodore H. Poister, and Nevbahar Ertas, "Customer, Partner, Principal: Local Government Perspectives on State Agency Performance in Georgia," *Journal of Public Administration Research and Theory* (September 2009).

<sup>7</sup> SurveyMonkey.com<sup>®</sup> is a Web-based application that allows users to write and distribute simple survey tools to a number of specified users. Use of the tool is free up to a certain number of respondents, after which point a fee is charged. Data from the surveys are collected by the Web site and provided to the survey initiator in a form that is transferable to common business software applications such as Microsoft Excel<sup>®</sup>, or statistical software applications.

<sup>8</sup> Illinois Department of Public Health, *Pandemic Flu Milestones* [online: [http://www.idph.state.il.us/pandemic\\_flu/milestones.htm](http://www.idph.state.il.us/pandemic_flu/milestones.htm)], accessed 1 February 2010.

For IDPH, a successful H1N1 electronic survey depended upon its stakeholders. They were utilized at every step in the process, from design to implementation to response. IDPH valued stakeholder investment and collaboration for several reasons:

- The Pandemic Influenza Preparedness and Response Plan (pandemic plan) prioritized stakeholder collaboration during a response.
- The pandemic plan categorized information sharing as the “main thrust” of its coordination and management efforts.<sup>9</sup>
- The pandemic plan required IDPH to “coordinate public health and medical emergency and risk communication messages.”<sup>10</sup>
- The IDPH mission statement lists “stakeholdership and collaboration to achieve coordinated response to community health issues” as an important core function.<sup>11</sup> It was this mission of information sharing and coordination that IDPH desired to evaluate.

Directly appealing to stakeholders is recognized as a best practice for public health risk and crisis communication as documented by Vincent T. Covello. His best practices include identifying important stakeholders, coordinating internal and external communications, and learning what people know and want done about risks through interviews, information exchanges, and surveys.<sup>12</sup> Thomas et al. also suggest best practices that involve government agencies’ stakeholders seeing themselves filling multiple roles, including customers, principals, and overseers.<sup>13</sup> To achieve these best practices, IDPH turned to its largest pandemic stakeholder group, the Illinois Pandemic Flu Workgroup.

## Stakeholder Sources

Before stakeholders were identified and recruited, the subcommittee decided to obtain feedback from a general census of stakeholders instead of trying to capture a representative sample of these groups. To develop the census, the subcommittee developed a list of stakeholders and partner organizations to survey for feedback related to the performance of IDPH guidance communication and informational messaging. The stakeholder list was based on IDPH’s pandemic plan, which defines IDPH’s core stakeholders as public health and health care providers, and the U.S Department of Health and Human Services (HHS) Pandemic Operations Plan Assessment (2009), which recommended more involvement of state agencies in pandemic preparedness and response efforts. After reviewing these documents and assessing which organizations would continue to be most affected by the H1N1 outbreak in fall 2009, the subcommittee recommended targeting the following groups:

- Local health departments,
- Hospitals,
- Private physicians,
- Schools and universities,

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<sup>9</sup> State of Illinois, “Pandemic Influenza Preparedness and Response Plan,” (31 August 2009), 6.

<sup>10</sup> Ibid., 72.

<sup>11</sup> Illinois Department of Public Health, “Mission Statement” [online: <http://www.idph.state.il.us/about/newmission.htm>], accessed 3 December 2009.

<sup>12</sup> Vincent T. Covello, “Best Practices in Public Health Risk and Crisis Communication,” *Journal of Health Communications* 8, (S1) 2003, 5-8.

<sup>13</sup> Thomas et al. (2009).

- Child care centers,
- Private businesses and associations,
- Nursing homes/long-term care facilities, and
- Government agencies (state and non-public health local government agencies).

## **H1N1 Survey Design Process**

With the H1N1 survey audience defined, the subcommittee drafted the H1N1 survey questions. To develop the content for the H1N1 messaging survey questions, the subcommittee utilized three sources: subcommittee members, IDPH staff, and pandemic preparedness documents. Through a series of interviews and meetings with IDPH medical, epidemiological and preparedness staff, the subcommittee formed the original content for the survey questions. To enhance and validate question content, the subcommittee reviewed the following plans and reports:

- IDPH Pandemic Influenza Response Plan (October 2006),
- Illinois Pandemic Tabletop Exercises Recommendations Report (Best Practices Subcommittee, April 2007),
- IDPH Pandemic Influenza Operations Plan (February 2008),
- Chicago Metropolitan Statistical Area (Chicago MSA) JIS-JIC Functional Exercise After-Action Report (Chicago Department of Public Health, September 2008), and
- HHS Pandemic Influenza Operational Plan Assessment (U.S. Department of Health and Human Services, January 2009).

The IDPH and subcommittee conference calls, edits, and several revisions produced 33 survey questions. The questions and the source for each question are listed in Appendix 1.

As part of the process design, IPIW and IDPH decided that H1N1 survey could be completed anonymously. Consequently, an individual could ignore the “Survey Completed By” section and not include their name or organization and still submit a valid survey. More than a quarter of respondents (26 percent) chose to participate in this manner.

### ***Traditional vs. Non-traditional Surveys***

Before embarking with a non-traditional, e-mail based survey in the summer of 2009, the subcommittee weighed the value of conducting a more traditional mail survey. The traditional mailing method is effective and can produce high responder participation rates, as evidenced by a 2007 Homeland Security preparedness survey of local city managers in cities with 100,000 or more residents, published by Christopher Reddick. This study utilized traditional mailing techniques (cover letter, reminder letters, pre-determined mailing list, etc.) to distribute the surveys. The survey was based on a National League of Cities mailing list and sent directly to 191 city managers and garnered a higher-than-expected 66 percent response rate.

Reddick attributes this high response rate to the relative proximity of the survey to the events of 9/11 and the novelty of the topic to the audience. He also writes that a typical mail survey, such as the one issued by the International City/County Management Association (ICMA) to chief administrative officers, usually produces a 40 percent response rate. The survey was comprised primarily of questions aimed at measuring local readiness. Respondents quantified their level of readiness on a Likert scale. The study concluded that

the majority of cities exhibited a high level of Homeland Security preparedness but the majority of respondents found the federal color-coded warning system to be ineffective.<sup>14</sup>

After some discussions, IDPH and the subcommittee determined a formal survey would be too cumbersome, too time consuming, and too expensive an endeavor. IDPH and the IPIW elected to take a simple yet direct approach and embed a link to an online survey instrument in an e-mail. The subcommittee believed this e-mail-only approach would produce appropriate feedback IDPH could quickly digest and turn into actionable intelligence. The subcommittee also felt it would be easier to use an on-line survey that produced instant results instead of going through the expensive and time-consuming step of coding the results. Obtaining feedback at that point in time would give IDPH the time to validate best practices and identify improvement areas prior to traditional influenza season.

### **Survey Distribution**

Identifying e-mail addresses for government, hospitals, and private businesses proved to be an easy task. For example, the business leaders on the subcommittee identified 30 contacts and distributed the survey. Similarly, subcommittee members from the Chicago Department of Public Health and Cook County Department of Public Health produced their own contact e-mail lists and contributed approximately 200 names to the distribution list. However, the subcommittee struggled to find e-mail addresses for non-government agencies, such as private physicians, schools, child care centers, and residential care facilities (nursing homes/long-term care facilities). To try to locate e-mail addresses for these groups, subcommittee members had some success using their own contact lists, state databases and/or the Internet to identify specific e-mails.

In total, subcommittee members were able to identify 549 contacts for the H1N1 survey. The e-mail lists were divided into IDPH's six public health regions: West Chicago, Rockford, Peoria, Champaign, Edwardsville, and Marion. In addition, the Illinois State Medical Society (7,000 physicians) agreed to post the H1N1 survey on its Web site; however, the H1N1 survey was not e-mailed to any of the Illinois State Medical Society members.

### **E-Mail Distribution**

Subcommittee members distributed an e-mail inviting other stakeholders to participate in the H1N1 messaging survey (the e-mail invitation appears in Appendix C). The IDPH Office of Preparedness and Response regional staff members also helped to distribute the survey via e-mail to local health departments. Subcommittee members often sent a personal invitation to their contacts to respond to the survey. This method proved quite effective and resulted in a 43 percent H1N1 survey response rate of 237 official respondents out of 549 contacts. Per the Reddick study, this response rate would slightly exceed the expected response rate generated by a traditional mail survey to emergency management professionals.<sup>15</sup>

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<sup>14</sup> Christopher G. Reddick, "Homeland Security Preparedness and Planning in US City Governments: A Survey of City Managers," *Journal of Contingencies and Crisis Management* 15, (September 2007), 165-166.

<sup>15</sup> *Ibid.*, 157.

### **H1N1 Survey Demographics**

The 237 stakeholders from partner organizations who participated in the H1N1 survey fall within 12 categories. Table 1 below lists the elements targeted by the survey and the number of respondents from each.<sup>16</sup> Selected organizations were e-mailed a survey of 26 questions asking respondents to rate performance on a 5-point Likert Scale (this research tool measures respondents' agreement or disagreement with a statement). Seven additional open-ended questions addressed issues of performance, organizational information acquisition habits, and information needs through open-ended responses.

Please refer to Table 1, which organizes respondents into specific groups.

**Table 1: Survey Categories: organization of respondent agencies into specific groups.**

<b>Survey Universe</b>		<b>Organizational Grouping</b>
<b>N - Respondents</b>	<b>Categories</b>	
62	Unknown	Unknown (Anonymous)
44	County Health Department	Local Health Department
27	School District	Schools, Universities, and Child Care Centers
26	Hospital	Hospitals
16	Business	Private Business
14	Home Health Provider	Private Medical Practice
10	Residential Care Facility	Residential Care Facility
9	Private Medical Practice	Private Medical Practice
6	Local Health Dept	Local Health Department
4	University	Schools, Universities and Child Care Centers
4	Professional Association	Private Business (3); Hospitals (1)
4	State Agency/Partner	Government
3	City Department/Partner Agency	Government
2	Emergency Mgt Agency	Government
2	State Health Department	Government
2	State Agency/Other	Government
1	Federal Agency (VA)	Government
1	Community College	Schools, Universities, and Child Care Centers
237	Total	

The IPIW employed a non-probability survey methodology to collect data from the selected elements. The survey was conducted using the online tools provided by SurveyMonkey.com<sup>®</sup>. Respondents were sent an e-mail message with a link to the survey. Several of the IDPH Office of Preparedness and Response regional staff offices also sent one reminder e-mail to the local health departments in their jurisdiction. In total, 237 people responded to the survey between July 17 and September 30, 2009, more than 88 percent during the first three weeks. Responses over the succeeding 12 weeks were sporadic. Respondents for

<sup>16</sup> There are 64 respondents for whom no information related to organization type is known. This data is included in the overall analysis of responses. The survey was not available to the general public, leading us to believe that there is little possibility the data set has been tainted by responses from uninvited participants.

whom organizational affiliation is known represented 160 discrete organizations, or functions within organizations.

## **Survey Instrument**

The survey consisted of 33 questions in three constructions: scaled response, open-ended or narrative response, and ranking response. Each of these will be dealt with separately in describing the survey instrument, as well as in the analysis of responses.

### ***Scaled-Response Questions***

The first 26 questions on the survey asked the respondent to rate on a scale of one to five (1–5) their agreement with a statement. Respondents also had the option not to reply by selecting “Don't Know.” The scaled-response questions can be categorized into five groups: IDPH performance evaluation, IDPH information usefulness, policy recommendations for IDPH and local health departments, IDPH communication tools evaluation, and stakeholder preferences. Please refer to Appendix A for a complete list of the scaled-response questions.

### ***Open-Ended Response Questions***

Seven questions asked respondents to provide open-ended responses. Two questions asked respondents to evaluate the strengths and weaknesses of IDPH's information sharing campaign. Other questions focused on the frequency with which respondents sought information from the IDPH Web site and/or help line, communication issues that IDPH did not address, topics for IDPH to address during WHO Pandemic Phase VI, respondents' preferred methods for receiving IDPH communications, and the respondent sources for obtaining H1N1 messaging information during the initial response. Please refer to Appendix A for a list of the open-ended questions (questions 27–33).

## **Analysis of Results**

The analysis of survey results will be presented in segments. First is a general analysis of the survey responses based on the entire sample of responses ( $N = 237$ ). Following the general analysis will be results based on the type of organization for whom the respondent is answering. These sub-units are grouped based on the survey universe as shown in Table 1.

### **Analysis of Results: All Responses**

This section is presented in five parts. Questions are grouped into five general evaluation categories, with two of the general categories further broken down to sub-categories. This approach is used to group questions with similar scope. The five evaluation categories are:

1. General Performance Evaluation: clear, timely, accurate, and relevant H1N1 messages issued.
2. Information Usefulness: H1N1 messages enhanced stakeholders' response efforts.
3. Policy Recommendations: H1N1 messages aided coordination efforts among federal, state, and local stakeholders.
4. Communication Tools: effectiveness of conference calls, Web site, fax, and network alerts.
5. Stakeholder Preferences: proper amount of alerts, updates, and guidance issued.

## General References

IDPH received generally high marks for the effectiveness of its messaging campaign. Table 2 shows the results for questions related to general messaging practices. Most respondents agreed or strongly agreed with statements regarding the clarity, timeliness, and accuracy of IDPH messages. The majority of respondents also stated that IDPH prioritized the most critical H1N1 information for them during this time period and most agreed that IDPH issued clear social distancing measures.

In terms of prioritization, IDPH's goal was to disseminate the right amount of information to a diverse audience base. Too much information requires the recipient to parse through material to find what is important. If messages are seen as too broad or unrelated to the organization receiving them, IDPH's ability to prioritize information may be called into question. For example, while a majority (54 percent) of respondents found IDPH's social distancing instructions helpful, 10 percent of the responders disagreed with those instructions, 12 percent did not know if the social distancing measures were helpful and another 23 percent were neutral on this subject. Subsequently, IDPH may want to revisit what social distancing measures it is recommending and how it is passing this information along. Refer to Table 2 below, which summarizes general performance.

**Table 2: General Performance Evaluation: clarity and timeliness of informational messages.**

General Performance Evaluation							
<b>1. IDPH issued clear H1N1 influenza outbreak informational messages during WHO Phase 3.</b>							
Number (N)	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
236	24%	45%	69%	15%	9%	3%	4%
<b>2. IDPH issued H1N1 messages in a timely manner during WHO Phases 3–5.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
234	25%	43%	68%	14%	11%	2%	6%
<b>3. IDPH prioritized the most critical H1N1 information for your organization.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
232	16%	41%	57%	19%	13%	1%	10%
<b>4. IDPH medical and non-medical messages/information was accurate.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
232	23%	46%	69%	16%	5%	1%	8%
<b>5. IDPH issued clear social distancing measures.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	18%	36%	54%	23%	10%	1%	12%

## Informational Usefulness

Table 3 indicates that IDPH provided useful information to stakeholders during the initial stages of the H1N1 outbreak. How those agencies acted on that information is a measure of the usefulness of that information. In general, IDPH messages were well targeted to the appropriate personnel at stakeholder agencies; 74 percent of respondents indicated that IDPH’s H1N1 messages were read by an appropriate staff person(s). Moreover, the information disseminated influenced the majority of stakeholders to act: 64 percent of respondents stated that IDPH’s initial communications helped them respond to the outbreak and 57 percent of respondents indicated they were influenced by IDPHs’ messages to activate their own emergency response plans.

Given that 34 percent of respondents were not influenced by IDPH’s messages (question 8), IDPH may interpret this in three ways: 1) the responding organization was prepared and informed, and because of that were moving toward action independent of the IDPH information; 2) or the organization disagreed with the actions being recommended; 3) or respondents found the messages to be of marginal relevance.

**Table 3: Information Usefulness: impact of IDPH’s instructions and messages.**

Information Usefulness							
<b>6. IDPH messages issued during WHO Phases 3–5 were read by the organization’s appropriate staff person(s).</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
216	41%	33%	74%	7%	7%	2%	11%
<b>7. IDPH H1N1 messages and instruction helped your organization respond to the outbreak.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
227	24%	40%	64%	14%	11%	4%	6%
<b>8. IDPH messages influenced your organization’s decision to activate emergency response plan(s).</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
221	22%	35%	57%	17%	15%	2%	8%

## Policy Recommendations

The eight questions summarized in Table 4 have embedded policy recommendations, effectively polling the stakeholder agencies as to what policy changes they want IDPH to adopt. Six questions were related to the relationship between counties/cities and the state, while two questions elicited responses related to how local health departments should operate a “self” evaluation. Specifically, respondents want IDPH to do the following:

- Seventy-two percent of respondents do not want IDPH to customize CDC messages/updates; however, 84 percent of local health departments favored customizing IDPH messages/updates with local data.
- Respondents want IDPH to open a joint information center (JIC) (72 percent).
- Respondents want IDPH to establish phone bank hotlines that coordinate messaging with county/local health departments and hospitals (78 percent).
- Respondents want IDPH to establish separate phone bank hotlines for hospitals, private medical providers, and health clinics (69 percent).

While 84 percent of respondents believe IDPH should be issuing informational messages during disease outbreaks, only 32 percent of respondents believe IDPH should not make any changes in the way it delivers information to stakeholders prior to the 2009 seasonal/H1N1 influenza season. With 32 percent of respondents neutral on this issue and 25 percent directly calling for IDPH to improve its communication delivery system, this finding represents one of the strongest critiques of IDPH information sharing efforts. In this finding, respondents are either dissatisfied (25 percent) or indifferent (32 percent) toward IDPH’s current message dissemination system. Consequently, IDPH should investigate this finding further and learn what specific changes stakeholders are calling for and consider implementing them prior to the next disease outbreak.

**Table 4: Policy Recommendations: respondents’ information coordination preferences.**

Policy Recommendations							
<b>State</b>							
<b>9. Unless state guidance differs, IDPH should not customize CDC messages/updates.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	37%	35%	72%	15%	5%	0%	8%
<b>State</b>							
<b>11. IDPH phone bank “hotlines” should coordinate hotline activities with local health departments and hospitals.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	43%	35%	78%	8%	0%	1%	12%
<b>State</b>							
<b>12. Hospitals, private medical providers and health clinics should have a separate IDPH hotline to call for information/clarification on laboratory testing and/or treatment guidelines.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	43%	26%	69%	16%	3%	2%	10%
<b>State</b>							
<b>23. IDPH should open a joint information center (JIC) to coordinate messaging during statewide disease outbreaks.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
227	30%	42%	72%	16%	3%	1%	9%

<b>State</b>							
<b>25. IDPH should issue information messages during international/national disease outbreaks like H1N1.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
228	29%	55%	84%	8%	2%	0%	5%
<b>State</b>							
<b>26. IDPH should not make any changes in the way it delivers information to your organization in preparation for the seasonal flu season (October 2009) and potential H1N1 vaccination campaigns.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
230	6%	26%	32%	32%	20%	5%	11%
<b>County/Local</b>							
<b>10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	39%	45%	84%	7%	3%	1%	5%
<b>County/Local</b>							
<b>24. Local health departments should open their own JIC during statewide disease outbreaks like H1N1.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	17%	30%	47%	27%	14%	1%	12%

## Communication Tools

The next group of questions addressed different methods of communication employed by IDPH: conference calls, e-mails, faxes, Health Alert Network, and the IDPH Web site. There is wide variation in the responses related to IDPH messaging media evaluations as indicated by Table 5. Because many stakeholders have access to only one or two of the media, or did not know about some of the means of communications that were available to them, a significant number of respondents replied “Don't know” to questions in this portion of the survey. For the messaging media available to all stakeholders, for example, the IDPH Web site, respondents were positive in their evaluation. Well over half found the information provided via this communications media to be timely and useful, and the format of documents found there easy to understand and follow.

However, IDPH’s use of traditional communication tools like the fax system and conference calls came into question by the respondents. Given the dissatisfaction and indifference respondents had toward IDPH’s message delivery system in general (policy question 26), it is not surprising that two major communication tools scored poorly. For example, only 44 percent of respondents agreed that IDPH’s conference calls were helpful and only 24 percent found the fax system an effective means of communication.

In addition to these low scores, many of the respondents were unaware IDPH even utilized these communication tools during emergencies. While there could be many reasons why 27 percent of respondents were not aware of IDPH's conference calls, the overall low score (2.7 of 5.0) should motivate IDPH to learn why one of their main communication tools was not considered useful or considered at all. For future disease outbreaks, assuming IDPH will continue to partner with private medical practices, long-term care facilities, schools, and private businesses, it could benefit IDPH to learn the reason why conference calls scored fairly low. For example, IDPH could learn if stakeholder groups, such as private physicians, schools, etc., did not value the conference calls because of content, method of delivery, or simply because these groups and others were left off the invitation list.

Quite possibly, the conference calls were not helpful because other respondents did not know about them, they could not participate because of employer rules/regulations, or they were not invited. Whatever the reason, if IDPH intends to continue using conference calls as a communications tool during disease outbreaks with multiple stakeholder groups, it may want to investigate why 9 percent of respondents did not like the calls and why another 27 percent had no knowledge of them. Gaining this information could help IDPH restructure its conference calls to make them more useful and accessible to all respondents. With a more thorough analysis, IDPH may determine that it has to use different communication tools and methods to properly engage non-medical stakeholder groups, such as schools.

Similarly, 33 percent and 37 percent of respondents did not know that IDPH used faxes and the H-HAN, respectively, to communicate with stakeholders during large-scale disease events such as the H1N1 outbreak. While the H-HAN is a tool designed for hospitals, the fact that many medical professional respondents working in either private practice or residential care did not know if this is a useful communications tool should raise some concerns for IDPH. Because the potential for medical professionals to work in a variety of healthcare settings, IDPH may want to consider educating its medical stakeholders about the value of the H-HAN, which more than 70 percent of hospitals found useful during this initial H1N1 outbreak period.

At a minimum, IDPH should ensure hospital-based and private physicians know the H-HAN is part of its Health Alert Network secure Web portal designed exclusively for hospitals. One immediate step IDPH could take would be to invite any interested stakeholder to join the HAN so they can receive automatic alerts about public health events directly from the HAN alerting system. Once a HAN member, a stakeholder could then approach IDPH about gaining access to the H-HAN, if appropriate. As recommended for policy question 26, IDPH should investigate these findings and use stakeholder feedback to learn how it can deploy these communication tools more effectively in future disease outbreaks.

The dissatisfaction with IDPH's conference calls and fax system, and the fact that only 32 percent of respondents do not want IDPH to change its delivery information system (question 26), represents the greatest area for improvement for IDPH. Quite possibly, by improving the content and organization of the conference calls and revamping its fax and H-HAN systems, IDPH could easily overcome the low scores for its H1N1 information messaging delivery system.

**Table 5: Communication Tools Evaluation: effectiveness of conference calls, fax system, H-HAN, and web site.**

<b>IDPH Communication Tools Evaluation</b>							
<b>13. IDPH's H1N1 Influenza conference calls were helpful to your organization</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	20%	24%	44%	20%	7%	2%	27%
<b>14. IDPH's written messaging format (faxes, e-mails, documents, etc.) is easy to understand/follow.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	19%	51%	70%	15%	3%	2%	11%
<b>17. IDPH's fax system is an effective means of communication during a disease outbreak like H1N1.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	5%	19%	24%	27%	10%	5%	33%
<b>18. IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool during a disease outbreak.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	19%	28%	47%	12%	1%	3%	37%
<b>19. IDPH's Web site provided timely and useful information.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	19%	45%	64%	16%	5%	1%	14%

### **Stakeholder Informational Preferences**

Table 6 provides a summary of IDPH's stakeholder preferences as relates to messaging frequency, management of the IDPH Web site and the transmittal of electronic documents. Stakeholders were positive in their assessment of IDPH's performance in terms of issuing alerts, updates and guidance. For example, only 16 percent of respondents felt that IDPH issues too many alerts. In terms of frequency, instead of multiple or random updates occurring throughout the day, respondents favor receiving one update summary with all the relevant information once per day. However, if there is there is a time-sensitive guidance requiring action, then respondents want to be notified immediately.

Similar to the policy section, the majority of respondents had direct recommendations for IDPH:

- Seventy-seven percent of respondents want IDPH to post guidance for physicians and hospitals on the IDPH Web site.
- Sixty-nine percent of respondents want to receive only one update per day from IDPH unless there is an emergency.
- Sixty-seven percent of respondents want the IDPH Web site to be updated once per day.
- Fifty-five percent of respondents want IDPH’s messages to include links to other relevant Web sites.

Please refer to Table 6 below for a scoring summary of respondents’ preferences.

**Table 6: Stakeholder preferences for receiving information during a disease outbreak.**

<b>IDPH Stakeholder Preferences</b>							
<b>Messaging Frequency</b>							
<b>15. IDPH issued too many H1N1 alerts, updates, guidance, etc., during WHO Phases 3-6.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
230	6%	10%	16%	24%	40%	7%	13%
<b>16. Your organization would prefer to receive just one update from IDPH each day unless there is emergency guidance requiring immediate distribution.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
230	28%	41%	69%	12%	10%	2%	7%
<b>IDPH Web site</b>							
<b>20. IDPH's Web site should be updated 1x per day.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
228	26%	41%	67%	16%	7%	1%	10%
<b>21. Guidance for physicians and hospitals should be posted on the IDPH Web site.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
228	35%	42%	77%	9%	3%	0%	11%
<b>Electronic Document Transmittal</b>							
<b>22. IDPH's messages should include Web site links to updated information rather than attaching entire documents.</b>							
N	Strongly Agree	Agree	Agreement Subtotal	Neutral	Disagree	Strongly Disagree	Don't know
229	16%	39%	55%	23%	13%	3%	6%

## Open-Ended Questions

Evaluating the open-ended questions (fill-in-the blank/select preferences, questions 27–33) of the H1N1 survey (listed below) gave IDPH a better picture of how stakeholders want to receive information during a public health emergency. When asked to provide direct feedback on IDPH’s messaging campaign, respondents identified the strengths and areas for improvement listed in Table 7.

**Table 7: Open-Ended Questions: Stakeholder assessment of IDPH’s informational messages.**

Organizational Group	Strengths	Areas for Improvement
County/Local Health Depts.	Timely messaging	Conference call format.
Schools, Univ., Child Care	Clear, easy to understand messages	Better direction for school administrators, parents and students.
Government Agencies	Clear messages	Provide updated information.
Hospitals	Timely messaging	Coordination with local health, hospitals and elected officials.
Private Medical Practice	Informative messages	Information dissemination.
Private Business	Timely Messaging	Inclusion of businesses in messaging campaign.
Residential Care	Provided current information	Use e-mail more often to communicate.
Unknown Organizations	Accurate messages	Better communication and coordination with partners.

These questions also helped clarify which communication issues and topics were of concern to stakeholders. For example, 52 percent of respondents informed IDPH that they visited the IDPH Web site and/or used the IDPH help line to gain information at least one time per day during the initial stage of the H1N1 outbreak. IDPH also learned that 53 percent of respondents believed that IDPH already had addressed their specific H1N1 communication issue(s). Although respondents listed a wide variety of future topics for IDPH to address during WHO Pandemic Phase VI, over a quarter (27 percent) of respondents did ask for more detailed information about H1N1 vaccine policies and a small cluster (7 percent) wanted more guidance on school closure. Please see Table 8.

**Table 8: Open-Ended Questions: stakeholder access, issues and topics.**

H1N1 Messaging Survey Open-Ended Questions: Stakeholder Access, Issues and Topics		
29. How often did your organization access the IDPH Web site and/or Help line during the H1N1 response (e.g., 1x per day)? (N=175)	30. Are there any communication issues specific to your organization IDPH did not address during the H1N1 outbreak (April 2009–present)? (N=130)	31. What topics do you want IDPH to address now that WHO has declared Pandemic Phase 6? (N= 109)
At least 1x per day: 52% (91/175)	No: 53% (69/130)	H1N1 Vaccine: 27% (29/109) School Closure: 7% (8/109)

Through these open questions, IDPH also learned that stakeholders prefer to receive information about H1N1 via e-mail and from the IDPH Web site. Based on 190 responses in which the respondents could select multiple preferences, the leading communication tool preferences were e-mail, which was selected

184 times, and the IDPH Web site, which was selected 107 times. Since IDPH traditionally relies upon conference calls to communicate directly with stakeholders, its third-place ranking (selected 76 times), should motivate IDPH to consider using e-mail and its Web site to promote the use of conference calls or find innovative ways to get its H1N1 message across using preferred communication preferences such as e-mail and the Web site. Table 9 summarizes open-ended questions for communication.

**Table 9: Open-Ended Questions: Stakeholder communication preferences.**

<b>H1N1 Messaging Survey Open-Ended Questions: Stakeholder Communication Preferences</b>							
32. Please prioritize your organization's preferred method for receiving IDPH communication (N=190):							
E-Mail	IDPH Web site	Conference Calls	H-HAN	Cell Phone	Landlines	Other: (SharePoint, Facebook, Twitter, etc.)	Blackberry
Selected 184x	Selected 107x	Selected 76x	Selected 55x	Selected 46x	Selected 32x	Selected 31x	Selected 23X

The last open-ended question also helped IDPH identify where and how often stakeholders obtain their H1N1 information. Thirty percent of respondents relied on only one source (e.g., IDPH, CDC, media, etc.) for H1N1 information and updates; however, 70 percent of respondents utilized two to six sources to retrieve their information. This finding represents both a challenge and an opportunity for IDPH. On the one hand, IDPH should feel confident that its stakeholders access IDPH outlets (Web site, help lines, etc.) for their information gathering and consumption; however, respondents are also accessing other government Web sites, as well as various established media and independent Web sites, that may or may not contain H1N1 information that is compatible with IDPH's pandemic guidance and recommendations. Table 10 summarizes open-ended questions for information sources.

**Table 10: Open-Ended Questions: Stakeholder informational sources.**

<b>H1N1 Messaging Survey Open-Ended Questions: Stakeholder Information Source Preferences</b>						
33. Please indicate where your organization received H1N1 messaging information from during the response (N=183/?):						
One Source	Two Sources	Three Sources	Four Sources	Five Sources	Six Sources	Subtotal: 2 or more Sources
30% (55)	17% (31)	22% (41)	13% (23)	17% (31)	1% (2)	70%

Table 11 summarizes respondent stakeholder groups H1N1 information sources and priority source for H1N1 information gathering:

**Table 11: Stakeholder H1N1 information sources and priorities.**

<b>Respondent Stakeholder Group</b>	<b>Number of H1N1 Information Sources</b>	<b>H1N1 Priority Information Source(s)</b>
LHD	5	IDPH and CDC (tie)
Hospitals	5	IDPH and CDC (tie)
Schools	5	IDPH
Private Medical Practices	5	IDPH
Private Business	5	CDC
Residential Care Facilities	1	IDPH
Government Agencies	5	IDPH
Anonymous Organizations	5	IDPH and CDC (tie)

A potential issue that could arise from this type of multi-source information gathering is that respondents from these stakeholder groups and, quite possibly, the public will compare and contrast IDPH’s disease instructions with other government, media and independent Internet sources. In a worst case scenario, IDPH’s informational messaging could be supplanted by misinformation coming from a more popular local TV station or media Web site, especially if IDPH does nothing to rectify inaccurate or misleading information.

This finding should support IDPH’s efforts to continue or enhance its media monitoring to confirm that a consistent public health message is being transmitted by federal, state and local public health officials at all times. It will also require IDPH to do its due diligence and investigate media outlets and popular Internet sites to ensure that H1N1 facts and IDPH updates are reported accurately. Given the confusion that can occur early in any emergency response, it is important for leading response agencies, like IDPH, to proactively issue protective action recommendations and simultaneously monitor its governmental partners and the media to ensure the public is receiving the right information at the right time.

### **Analysis of Results: Organizational Comparison**

To conduct an organizational comparison, respondents were classified into eight organizational groups and similar organizations were joined together (e.g., professional associations merged with the private business group). Smaller survey classes, which individually would not have generated a large enough sample, were aggregated into one of these eight organizational groups:

- Local health departments,
- Hospitals,
- Schools, universities/colleges and child care centers,

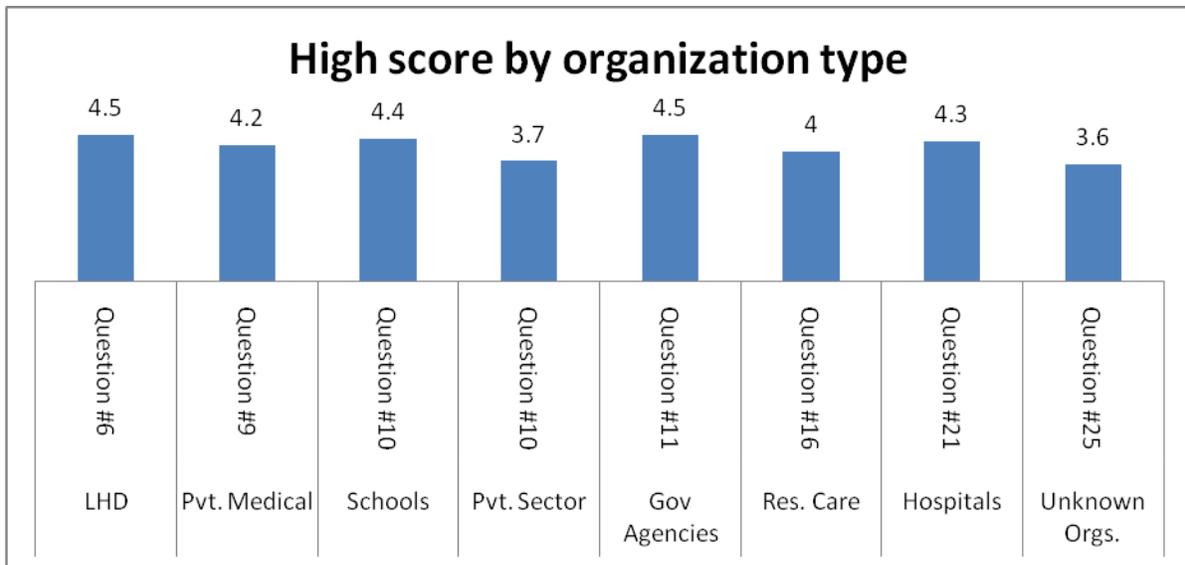
- Government agencies,
- Private medical practice,
- Private businesses and professional associations,
- Residential care (nursing homes/long-term care facilities), and
- Unknown organizations (agencies that remained anonymous).

**High Scores**

When comparing the highest scores, 25 percent of the organizational groups (schools and private businesses) favor local customization of IDPH messages/updates (question 10). On the other hand, private medical practices want IDPH to closely follow federal guidance and not reformat/customize CDC messages (question 9).

Other high scores reflect that IDPH did a good job getting information to the right staff person in local health departments (question 6), and there is an overall desire for multi-agency coordination: government agencies favor IDPH coordinating phone bank hotline activities with local health departments/hospitals (question 11). Hospitals were most concerned with IDPH posting medical guidance on its Web site (question 21) and unknown or anonymous organizations favor IDPH taking a leadership role in disseminating information during the outbreak of a disease like H1N1 (question 25). Residential care facilities want information from IDPH, but they want it restricted to one update per day unless an emergency situation arises (question 16).

Figure 1 contains a summary of high scores per organizational group (5.0 Strongly Agree; 4.0 Agree; 3.0 Neutral; 2.0 Disagree; 1.0 Strongly Disagree).



**Figure 1: High Score by Respondents' Organization Type (Questions Summarized Below)**

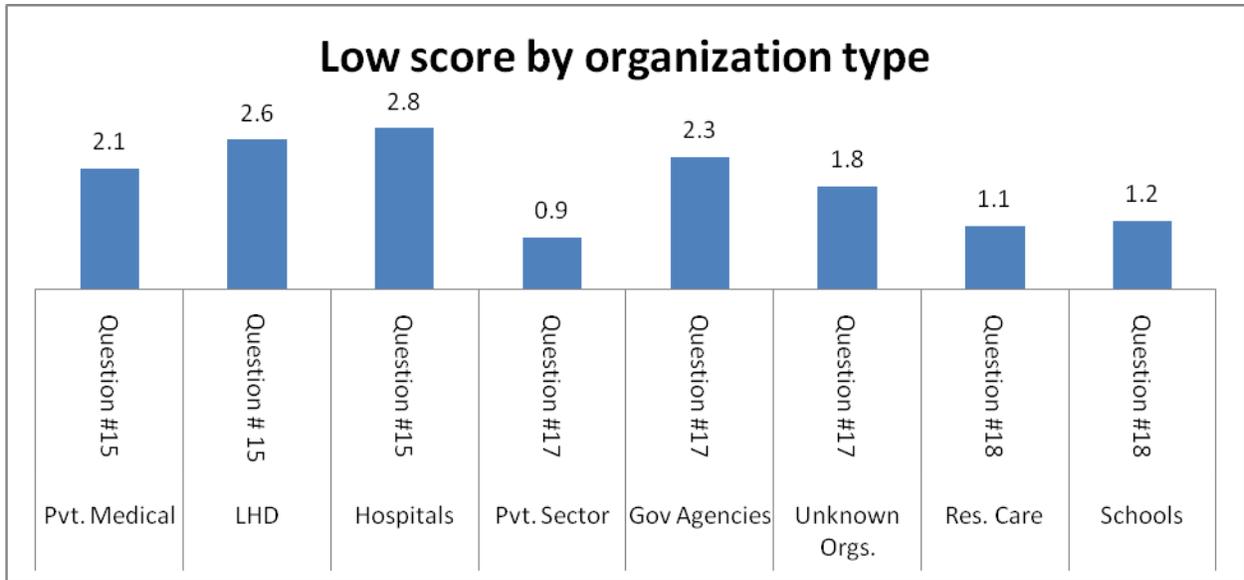
<p><i>Q.6: IDPH's messages were read by your organization's appropriate staff person(s).</i></p> <p><i>Q.9: Unless state guidance differs, IDPH should not reformat and/or customize CDC messages/updates.</i></p> <p><i>Q.10: Local health departments should continue to customize IDPH H1N1 messages.</i></p> <p><i>Q. 11: IDPH phone bank "hotlines" should coordinate activities with LHDs/hospitals.</i></p> <p><i>Q. 16: Your organization would prefer to receive just one update from IDPH unless emergency situation.</i></p> <p><i>Q.21: Guidance for physician and hospital should be posted on IDPH Web site.</i></p>
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### **Low Scores**

When comparing organizations' low scores, the groups tended to cluster around three main areas: (1) number of IDPH alerts, (2) IDPH fax distribution system and (3) H-HAN communication tool. Thirty-eight percent of the organizational groups surveyed did not feel that IDPH issued too many alerts/updates during WHO Phases 3–6 (question 15). However, 38 percent of the groups stated that IDPH's fax system was an ineffective means of communication (question 17) and 25 percent of the organizational groups did not find IDPH's H-HAN a useful communication tool during the initial stages of the H1N1 outbreak in Illinois (question 18). Based on these results, IDPH should reevaluate how it intends to use its fax system and H-HAN in the future. Figure 2 contains a summary of the low scores.

An overall summary of the scoring scale is provided in the table below.

<b>Rating Statement</b>	<b>Score</b>
Strongly Agree	5.0
Agree	4.0
Neutral	3.0
Disagree	2.0
Strongly Disagree	1.0
Don't Know	N/A



**Figure 2: Respondents' Low Scores (Questions Summarized Below).**

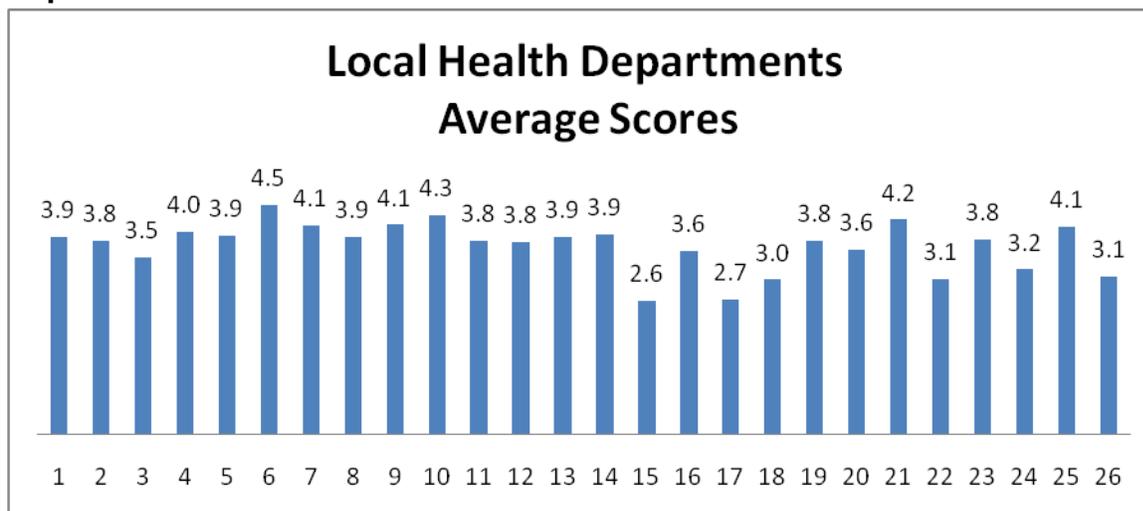
*Q.15: IDPH issued too many H1N1 alerts, updates, guidance, etc. during WHO Phases 3 - 6.*

*Q.17: IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1*

*Q.18: IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool to use during a disease outbreak.*

A detailed summary of each organizational group that participated in the H1N1 survey is provided on the following pages, and additional information is detailed in Appendix C.

## Analysis of Results: County and Local Health Departments



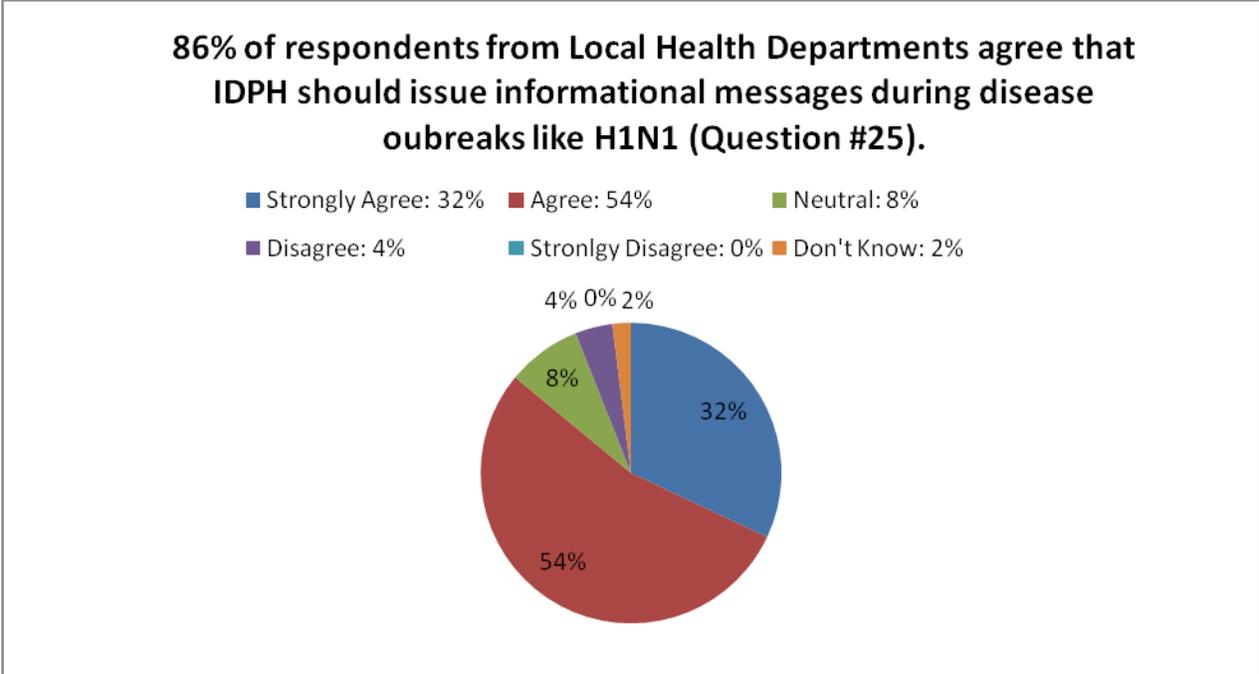
**Figure 3: County and Local Health Department Scores**

Fifty county and local health departments officially responded to the H1N1 survey and the majority found IDPH’s messaging and communication efforts timely, accurate and useful. IDPH received high scores for sending alerts, updates and guidance to the appropriate local health department (LHD) staff person (question 6: 4.5/5.0 score); further, 60 percent of the respondents strongly agreed that IDPH sent their instructions to the right LHD official. Ninety-two percent of LHD respondents also believed they should be able to customize IDPH messages/guidance with local statistics (question 10: 4.3/5.0) and 88 percent of respondents agreed that IDPH should post disease guidance for physicians and hospitals on the IDPH Web site (question 21: 4.2/5.0).

Further, certain IDPH H1N1 messaging tactics scored quite highly with LHDs. Table 12 shows questions that received “strongly agree” and “agree” ratings of 85 percent or better.

**Table 12: LHD High Scores: Summary of usefulness and usability of IDPH messaging.**

H1N1 Survey Question	Rating Score	Strongly Agree %	Agree %	Total %
6. IDPH’s messages (alerts, updates, guidance, instructions, etc.) issued during WHO Phases 3–5 were read by your organization’s appropriate staff person(s).	4.5	60%	36%	96%
7. IDPH H1N1 messages and instruction helped your organization respond to the outbreak.	4.1	28%	60%	88%
25. IDPH should issue information messages during international/national disease outbreaks like H1N1.	4.1	32%	54%	86%
14. IDPH’s written messaging format (faxes, e-mails, documents, etc.) is easy to understand and follow.	3.9	16%	70%	86%



**Figure 4: State Responsibility Assumptions of Local Health Departments**

Other high scores indicated that LHDs want to maintain their independence, but they want IDPH to closely follow federal guidelines. Interestingly, when it came to customizing H1N1 alerts or guidance, LHDs felt strongly that they should be able to customize IDPH’s alerts/guidance with local data and statistics, but they did not want IDPH customizing CDC messages/updates unless IDPH guidance differed. A summary of responses is shown in Table 13.

**Table 13: High Scores: Customization preferences of local health departments.**

H1N1 Question	Rating Score	Strongly Agree %	Agree %	Total %
<i>10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.</i>	4.3	38%	54%	92%
<i>9. Unless state guidance differs, IDPH should not reformat and/or customize Centers for Disease Control and Prevention (CDC) messages/updates.</i>	4.1	52%	36%	88%

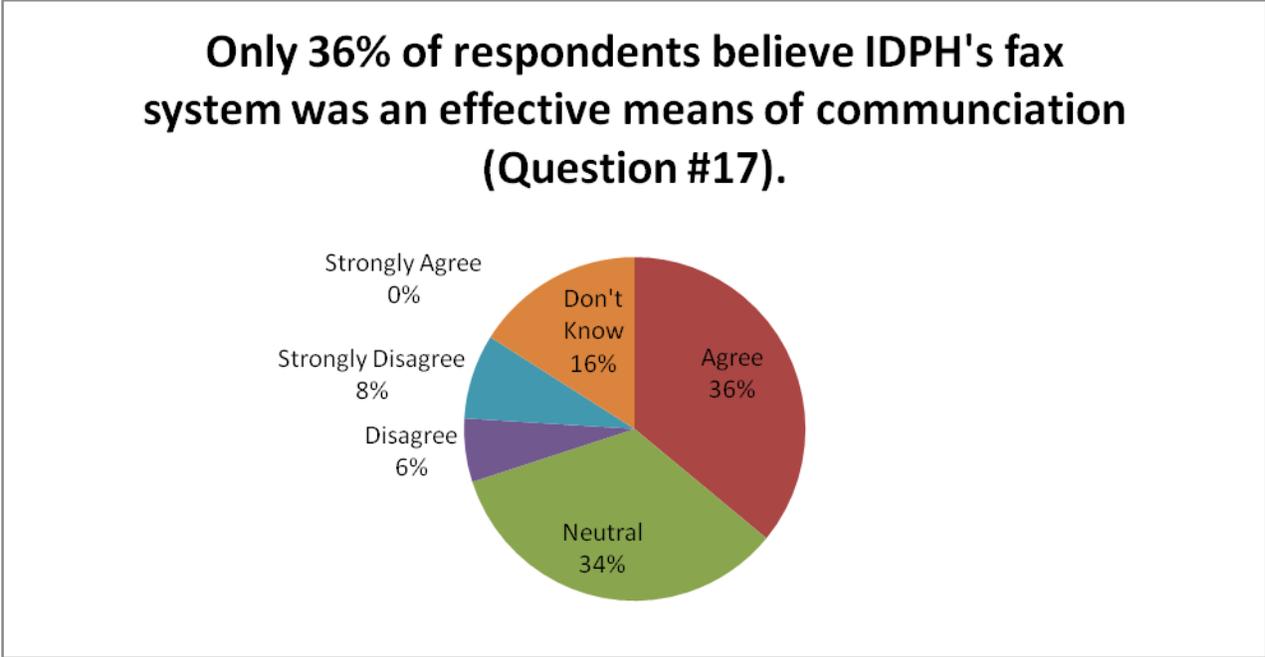
The majority of LHDs felt the number of alerts issued by IDPH were appropriate, with 42 percent of respondents to question 15 (2.6/5) expressing disagreement and 8 percent strong disagreement that “IDPH issued too many H1N1 alerts, updates, guidance, etc., during WHO Phases 3–6.” It was more difficult to gauge whether LHDs wanted to establish internal JICs. For example, in response to question 24 (3.2/5.0), 34 percent of LHDs agreed and 34 percent were neutral over the idea of running their own JIC. Similarly, in response to question 26 (3.1/5.0), 36 percent of the respondents agreed and 36 percent remained neutral as to whether IDPH should make any changes in its delivery communication methods in preparation for a second H1N1 wave and the seasonal flu season.

However, LHDs did have some concerns with IDPH messaging dissemination system. For example, only 36 percent of respondents felt IDPH’s fax system was an effective means of communication (question 17: 2.7/5.0) and 26 percent of respondents did not know if the H-HAN (question 18: 3.0/5.0) is a useful communication tool to use during a disease outbreak like H1N1. Although the H-HAN is a part of the idph.com secure Web portal reserved for hospitals, it should cause some concern for IDPH that one of its main allies in the field does not know if the H-HAN is a useful communication system for local hospitals. Other low scores indicated that LHDs would rather have e-mails with attached documents than Web site links and 20 percent of respondents hoped IDPH would change its H1N1 message delivery system prior to the fall seasonal influenza season and anticipated H1N1 vaccination campaign.

Those questions that elicited some disagreement or uncertainty (20 percent or higher) are summarized in Table 14 below.

**Table 14: Low Scores: Messaging preferences of local health departments.**

<b>H1N1 Question, Score, and IDPH Action</b>	<b>Rating Score</b>	<b>Strongly Disagree %</b>	<b>Disagree %</b>	<b>Don't Know</b>	<b>Total %</b>
<i>15. IDPH issued too many H1N1 alerts, updates, guidance, etc. during WHO Phases 3–6.</i>	2.6	8%	42%	2%	52%
<i>22. IDPH's messages should include Web site links to updated information rather than attaching entire documents.</i>	3.1	2%	28%	2%	32%
<i>17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.</i>	2.7	8%	6%	16%	30%
<i>18. IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool to use during a disease outbreak.</i>	3.0	2%	0%	26%	28%
<i>26. IDPH should not make any changes in the way it delivers information to your organization in preparation for the seasonal flu season (October 2009) and potential H1N1 vaccination campaigns.</i>	3.1	2%	18%	4%	24%
<i>16. Your organization would prefer to receive just one update from IDPH each day unless there is emergency guidance requiring immediate distribution.</i>	3.6	2%	18%	2%	22%



**Figure 5: Local Health Department’s Communication Methodology Evaluation**

***Open-Ended Comments***

Seven of the 33 H1N1 survey questions (questions 27–33) were open-ended, allowing respondents to provide their own comments or select from a list of communication preferences (questions 32 and 33). Therefore, when asked to provide direct feedback on IDPH’s H1N1 messaging campaign, LHDs identified the following strength and improvement area:

- Strength: timeliness of H1N1 message dissemination (28 percent: 10 of 36 respondents);
- Area for Improvement: conference call format (50 percent: 17 of 34 respondents).

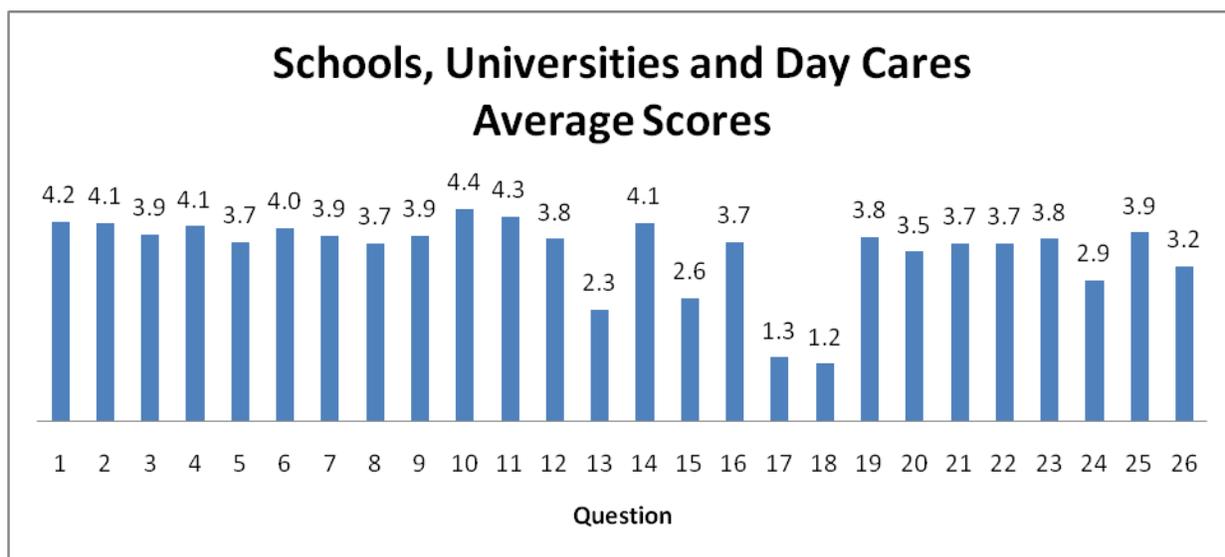
Results from the other open-ended questions, which are summarized in Table 15 below, indicate that most LHDs frequented IDPH’s Web site at least one time (1x) per day and that IDPH did a good job addressing specific communication issues of LHDs during this initial outbreak period. LHDs also informed IDPH they wanted more information about vaccine development and distribution strategies, school closing and social distancing measures. As reflected below, LHDs relied on e-mail as a primary communication tool and 69 percent of respondents obtained their H1N1 information from two or more sources (e.g., IDPH, CDC, media, Internet, etc.) during this time period. Significantly, 76 percent of the respondents to question 33 indicated that IDPH was a main source of H1N1 information. Please refer to the table below.

Please refer to Table 15 on the following page which details the local health department responses to the open-ended questions.

**Table 15: Local health department feedback, open-ended response questions.**

<b>H1N1 Messaging Survey Open-Ended Questions: LHD Feedback</b>				
27. How often did your organization access the IDPH Web site and/or Help line during the H1N1 response (e.g., 1x per day) (N=48)	30. Are there any communication issues specific to your organization IDPH did not address during the H1N1 outbreak (April 2009–present)? (N=33)	31. What topics do you want IDPH to address now that WHO has declared Pandemic Phase 6? (N= 36)	32. Please prioritize your organization’s preferred method for receiving IDPH communication: (N=47)	33. Please indicate where your organization received H1N1 messaging information from during the response: (N=48)
At least 1x per day: 46%	No: 54%	H1N1 vaccine development and deployment: 50%	E-mail (selected 44x)	One Source @ 31% --IDPH (10%) --CDC (10%) --LHD (8%) --media (2%)
Never: 8%	SNS Guidance: 12%	School closure: 8%	Conference calls (selected 32x)	Three Sources @ 28% --Combination of IDPH, CDC, LHD, media and Internet.
	Other: Tamiflu distribution guidance.	Social distancing: 8%	IDPH Web site (selected 28x)	Five Sources @ 20% --Combination of IDPH, LHD, CDC, media, Internet and other.
	Other: mask guidance.	Other: what messages should we be giving to the public?	H-HAN (selected 25x)	Four Sources @ 17% --Combination of IDPH, CDC, LHD, media and Internet.
	Other: as a small local, not included in some conference calls.	Other: confirmed cases information.	Cell phone (selected 22x)	Six Sources @ 4% --IDPH, CDC, LHD, media, Internet and other.
	Other: a hotline established?	Other: planning assumptions for the fall.	Landline (selected 17x)	
	Other: IDPH HAN overwhelmed an already cluttered information flow.	Other: Use of masks.	Other: combination of Blackberry, Twitter, Facebook and SharePoint (selected 22x)	

## Analysis of Results: Schools, Universities and Child Care Centers



**Figure 6: Summary of Scores from Schools, Universities and Child Care Centers**

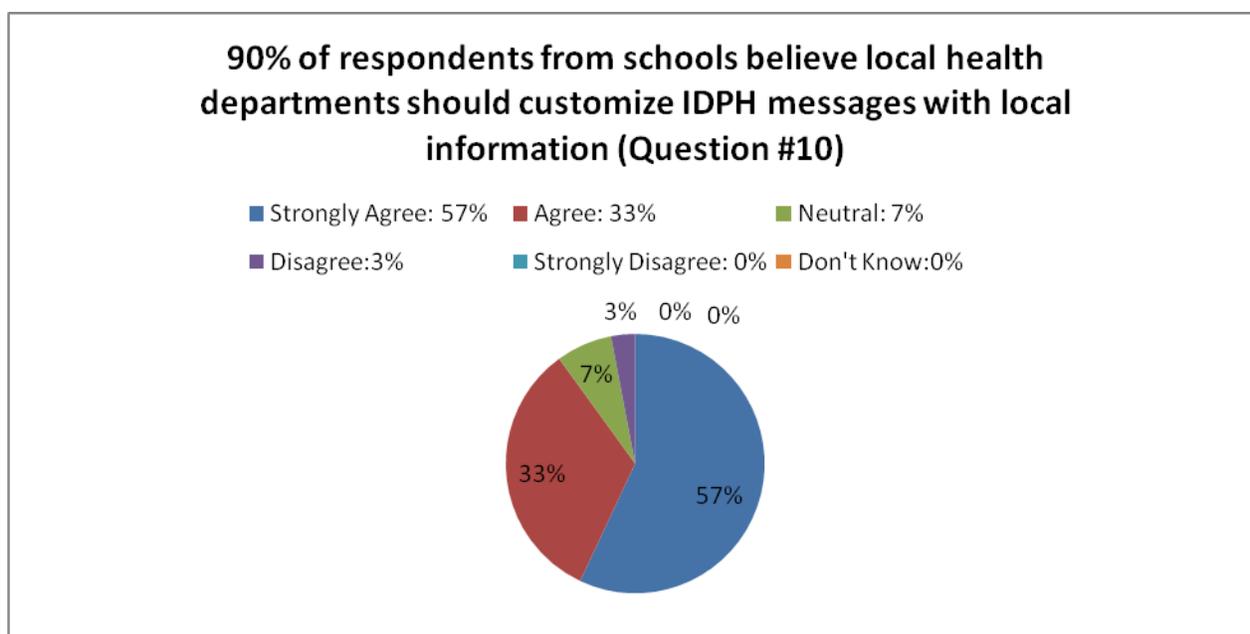
Thirty representatives from schools, universities and child care centers (schools) participated in the survey and the majority found IDPH’s messaging to be clear, timely and easy to understand. Interestingly, this group favored local autonomy and local, state and hospital coordination. For example, the highest scores supported LHD customization of IDPH H1N1 messages (question 10: 4.4/5.0) with 57 percent of respondents selecting the “strongly agree” preference for LHDs to add local data and statistics to IDPH messages/instructions. Similarly, 57 percent of the respondents to question 11 (4.3/5.0) “strongly agreed” with the efforts of IDPH to coordinate its phone bank hotlines with LHDs and hospitals.

Further, certain IDPH H1N1 messaging tactics scored quite highly with the school group. Table 16 summarizes a portion of the data related to evaluation and preferences for respondents from schools, universities and child care centers. Questions for which combined “strongly agree” and “agree” rating scores of 85 percent or better are highlighted in Table 16.

Please refer to Table 16, which details school respondent high scores.

**Table 16: Evaluation and preference summary for schools, universities, and child care.**

H1N1 Question, Score and IDPH Action	Rating Score	Strongly Agree %	Agree %	Total %
10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.	4.4	57%	33%	90%
1. IDPH issued clear H1N1 influenza outbreak informational messages during WHO Phase 3 (April 24, 2009–April 28, 2009)–WHO Phase 5 (April 29, 2009–June 11, 2009).	4.2	33%	57%	90%
11. IDPH phone bank “hotlines” should coordinate hotline activities with local health departments and hospitals.	4.3	57%	33%	90%
2. IDPH issued H1N1 messages in a timely manner during WHO Phases 3–5 (Apr 24, 2009–Jun 11, 2009).	4.1	37%	50%	87%
14. IDPH’s written messaging format (faxes, e-mails, documents, etc.) is easy to understand and follow.	4.1	30%	57%	87%
6. IDPH alerts read by appropriate staff person.	4.0	30%	57%	87%
25. IDPH should issue information messages during international/national disease outbreaks like H1N1.	3.9	17%	70%	87%



**Figure 7: Message Customization Preferences of School Respondents**

However, some of the questions that produced the low scores from schools, universities and child care centers should be of concern to IDPH because they indicate that either these groups were not included in certain outreach methods, they disregarded such efforts or they were totally unaware of them. For example, questions relating to conference calls, IDPH’s fax distribution system and the H-HAN all received low scores because a large number of respondents did not know if these communication tools were effective. It is understandable that this group would not be aware of the H-HAN since that serves hospitals, but IDPH should be slightly concerned that this stakeholder group seems to not understand how IDPH is

communicating with hospitals during disease outbreaks like H1N1. This represents an opportunity for IDPH to better inform schools and all stakeholder groups how it uses the HAN and/or H-HAN to coordinate response efforts with hospitals. Consequently, IDPH may want to investigate further why the majority of school respondents are unaware of the H-HAN and why its conference calls and its fax system were rated so poorly.

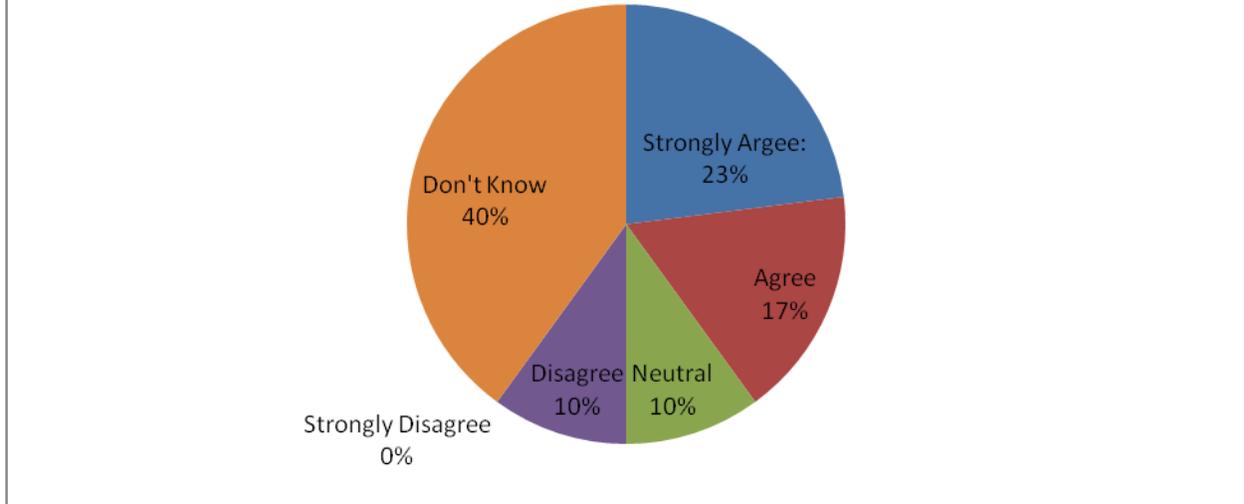
Given the early impact H1N1 was having on school-aged children in Illinois, it would be important for IDPH to learn why the schools did not use these tools. It may be that the schools were not invited to the conference calls or they did not receive any faxes. If so, IDPH should learn what the best methods are for communicating with them during a disease outbreak like H1N1. Since the past three pandemics affected school-aged children (1957, 1968 and 2009), IDPH could confirm a new communication strategy with this key stakeholder group before the next large-scale disease outbreak occurs in the country, e.g., inviting them to join the HAN.

Table 17 below summarizes the respondents' low scores.

**Table 17: Messaging tool knowledge, schools, universities, and child care.**

<b>H1N1 Question, Score and IDPH Action</b>	<b>Rating Score</b>	<b>Strongly Disagree %</b>	<b>Disagree %</b>	<b>Don't Know %</b>	<b>Total %</b>
<i>18. IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool to use during a disease outbreak.</i>	1.2	0%	0%	67%	67%
<i>17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.</i>	1.3	0%	3%	60%	63%
<i>13. IDPH's H1N1 Influenza conference calls were helpful to your organization.</i>	2.3	0%	10%	40%	50%

## Only 40% of schools found IDPH's conference calls helpful (question #13).



**Figure 8: Evaluation of IDPH's Communication Methodology**

### ***Open-Ended Questions***

When asked to provide direct feedback on IDPH's H1N1 messaging campaign, the school group identified the following strength and improvement area:

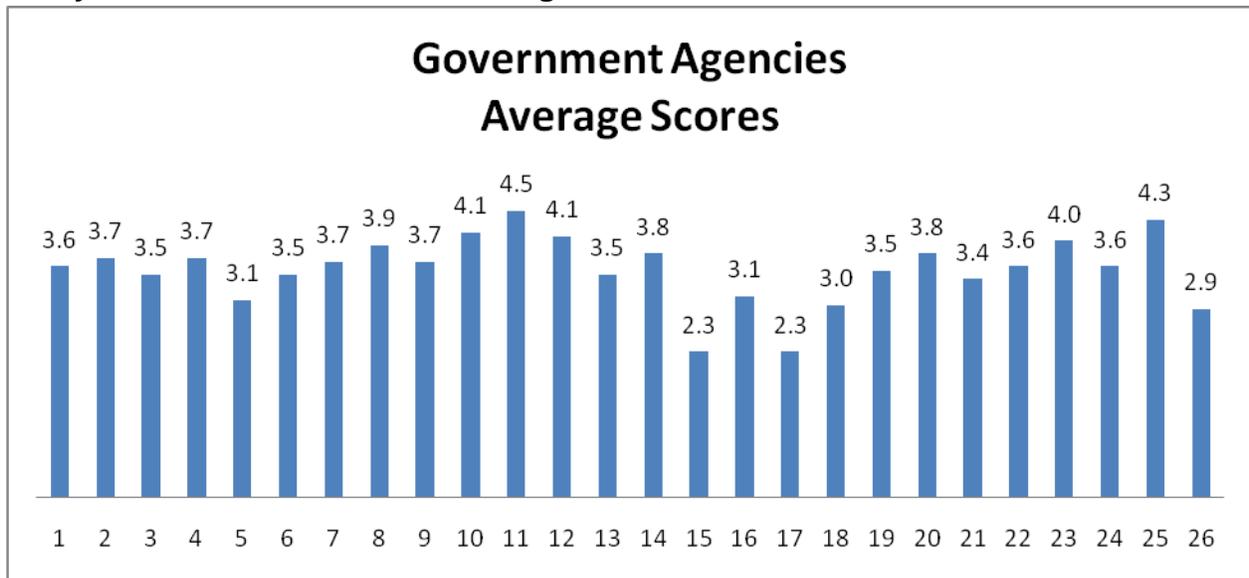
- Strength: clear and easy to understand messages (40 percent: 8 of 20 respondents);
- Area for Improvement: clearer directions for administration, school nurses and parents (50 percent: 9 of 18 respondents).

Results from the other open-ended question (summarized in Table 18 below) indicate that most school respondents frequented IDPH's Web site at least one time per day and that IDPH did a good job addressing specific communication issues during this initial outbreak period. Other feedback for IDPH included providing more instruction and information on school closure, school H1N1 guidance and public health vaccination plans. As reflected below, LHDs relied on e-mail as a primary communication tool and 77 percent of respondents obtained their H1N1 information from two or more sources (e.g., IDPH, CDC, media, Internet, etc.). Significantly, 86 percent of the respondents to question 33 indicated that IDPH was a main source of their H1N1 information messaging.

**Table 18: Schools, universities, and child care feedback, open-ended response questions.**

<b>H1N1 Messaging Survey Open-Ended Questions: Schools, Universities and Child Care</b>				
29. How often did your organization access the IDPH Web site and/or Help line during the H1N1 response (e.g., 1x per day). (N=28)	30. Are there any communication issues specific to your organization IDPH did not address during the H1N1 outbreak (April 2009–present)? (N=18)	31. What topics do you want IDPH to address now that WHO has declared Pandemic Phase 6? (N=17 )	32. Please prioritize your organization’s preferred method for receiving IDPH communication. (N=28)	33. Please indicate where your organization received H1N1 messaging information from during the response. (N=30)
At least 1x per day: 53%	No: 61%	School closure: 29%	E-mail (selected 26x)	One source @ 23% --IDPH (16%) --CDC (3%) --LHD (3%)
2x–3x per week: 14%	Student exclusion letter guidance: 16%	H1N1 guidance: 23%	IDPH Web site (selected 20x)	Three sources @ 23% --Combination of IDPH, LHD, CDC, media and Internet.
	Other: inconsistency among physicians / testing procedures.	IDPH vaccination program: 23%	Conference calls (selected 10x)	Two sources @ 20% --Combination of IDPH and LHD; IDPH and CDC; IDPH and media; LHD and other.
	Other: information sent to schools should go ONLY to school nurse first!	Other: more information on what schools need to do.	Land line (selected 5x)	Five sources @ 16% --Combination of IDPH, CDC, LHD, media and Internet.
			Cell phone (selected 4x)	Four sources @ 16% --Combination of IDPH, CDC, media, Internet and other.
			Blackberry (selected 4x)	
			H-HAN (selected 2x)	

## Analysis of Results: Government Agencies



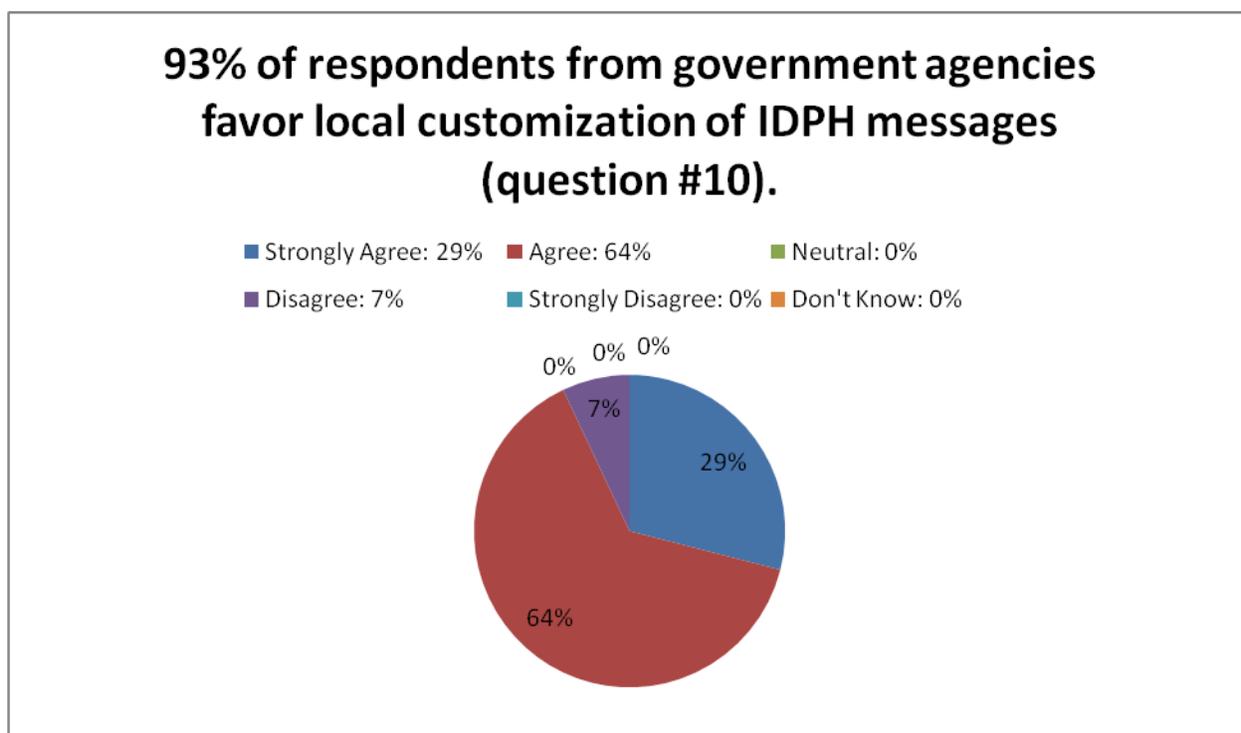
**Figure 9: Summary of Scores from Government Agencies**

Fourteen representatives from federal, state government and local (non-public health) agencies in Illinois participated in the survey and the vast majority (93 percent) stated that IDPH should issue information messages during international and national disease outbreaks such as the H1N1 outbreak (question 25: 4.3/5.0); moreover, 43 percent of respondents “strongly agreed” this is an important role for IDPH. Fifty-seven percent of government agencies also strongly favored IDPH coordinating phone bank hotlines with LHDs and hospitals (question 11: 4.5/5.0); government agencies also wanted IDPH to establish a separate hotline for hospitals and private medical providers to obtain laboratory and treatment guidelines (question 12: 4.1/5.0). Public agencies also favored IDPH opening a JIC to coordinate federal, state and local messaging (question 23: 4.0/5.0). Not surprisingly, the majority of respondents favored LHDs customizing IDPH H1N1 messages/updates with local information and statistics (question 10: 4.1/5.0).

As reflected in Table 19 below, local autonomy and coordination scored quite highly with government agencies. Table 19 summarizes a portion of the preference responses of government agencies. Combining the “strongly agree” and “agree” rating categories, several responses scored 75 percent or better.

**Table 19: High Scores: User preferences of government agencies other than health departments.**

H1N1 Question, Score and IDPH Action	Rating Score	Strongly Agree %	Agree %	Total %
11. IDPH phone bank “hotlines” should coordinate hotline activities with local health departments and hospitals.	4.5	57%	36%	93%
25. IDPH should issue information messages during international/national disease outbreaks like H1N1.	4.4	43%	50%	93%
10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.	4.2	29%	64%	93%
23. IDPH should open a joint information center (JIC) to coordinate federal, state and local messaging during statewide disease outbreaks like H1N1.	4.0	43%	36%	79%
14. IDPH’s written messaging format (faxes, e-mails, documents, etc.) is easy to understand and follow.	3.7	14%	64%	78%



**Figure 10: Government Agency Message Formatting Preference**

Most government agencies believed IDPH’s messages influenced the decision to activate their response plans (question 8: 3.9/5.0): 36 percent of respondents “strongly agreed” and 36 percent “agreed” that IDPH’s messages influenced them. Fifty-seven percent of respondents to question 15 felt that IDPH did not issue too many alerts during WHO Phase 3–Phase 6 (question 15: 2.1/5.0).

While government agencies were supportive of IDPH’s message methodology, some respondents were concerned with IDPH’s messaging dissemination system. For example, 43 percent of respondents want

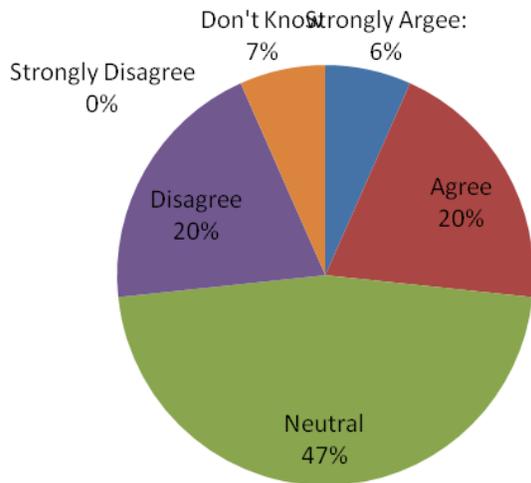
more than one update per day from IDPH during non-emergency periods (question 16: 3.1/5.0) and while there was some dissatisfaction with IDPH’s fax system (question 17: 2.3/5.0), more than a quarter of respondents did not know if IDPH’s faxes are appropriate for disease outbreaks like H1N1. One result that should cause some concern for IDPH is 29 percent of state and local government agency respondents did not know whether IDPH’s H-HAN was an effective means of communication (question 18). Similar to the LHD stakeholder group, IDPH may want to investigate this finding to learn whether other government agencies are unaware that one of IDPH’s key support roles is to manage the H-HAN. Although the H-HAN is a part of the idph.com secure Web portal reserved for hospitals, it should cause some concern for IDPH that its fellow government partners do not know if the H-HAN is a useful communication system for local hospitals.

In addition, respondents to question 26 (2.9/5.0) felt IDPH should make some changes in the way it delivers information prior to the seasonal influenza season and a mass vaccination campaign; further, only 27 percent of respondents believed IDPH should not make any information delivery changes prior to 2009 seasonal flu season. Those questions that elicited some disagreement or uncertainty from the respondents’ perspectives are summarized in Table 20.

**Table 20: Low Scores: Messaging frequency and delivery preferences of government agencies.**

<b>H1N1 Question, Score and IDPH Action</b>	<b>Rating Scores</b>	<b>Disagree %</b>	<b>Don’t Know %</b>	<b>Total %</b>
<i>16. Your organization would prefer to receive just one update from IDPH each day unless there is emergency guidance requiring immediate distribution.</i>	3.1	43%	0%	43%
<i>17. IDPH’s fax system was an effective means of communication to use during a disease outbreak like H1N1.</i>	2.3	7%	27%	34%
<i>18. IDPH’s Hospital-Health Alert Network (H-HAN) is a useful communication tool to use during a disease outbreak.</i>	2.9	0%	29%	29%
<i>26. IDPH should not make any changes in the way it delivers information to your organization in preparation for the seasonal flu season (October 2009) and potential H1N1 vaccination campaigns.</i>	2.9	20%	7%	27%

**Only 27% of government respondents believe IDPH should not make any changes in the way it delivers information (question #26)**



**Figure 11: Respondents' Evaluation of IDPH Information Dissemination Policies**

***Open-Ended Questions***

When asked to provide direct feedback on IDPH's H1N1 messaging campaign, government agencies identified the following strength and improvement area:

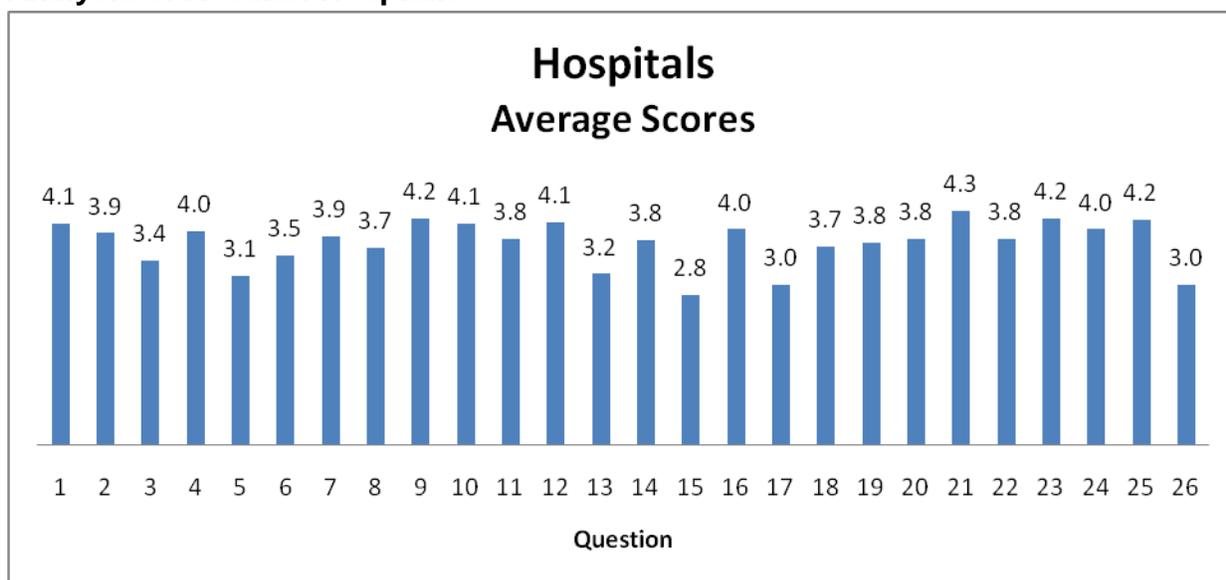
- Strength: clear and easy to understand messages (42 percent: 3 of 7 respondents), IDPH Web site (38 percent: 3 of 8 respondents);
- Area for Improvement: provide updated information (25 percent: 2 of 8 respondents).

Results from the other open-ended questions indicate that a majority of government agencies frequented IDPH's Web site at least one time per day and their specific communication issues were met. Respondents also stated that they wanted IDPH to provide more information about prison H1N1 vaccination plans. As reflected below, government agencies relied on e-mail as a primary communication tool and 61 percent of respondents obtained their H1N1 information from two or more sources (e.g., IDPH, CDC, Internet, etc.). Significantly, 91 percent of the respondents to question 33 indicated that IDPH was a main source of their H1N1 information messaging. See Table 21 below.

**Table 21: Government agency feedback, open-ended response questions.**

<b>H1N1 Messaging Survey Open-Ended Questions: Government Agency Feedback</b>				
29. How often did your organization access the IDPH Web site and/or Help line during the H1N1 response (e.g., 1x per day). (N=9)	30. Are there any communication issues specific to your organization IDPH did not address during the H1N1 outbreak (April 2009– present)? (N=9)	31. What topics do you want IDPH to address now that WHO has declared Pandemic Phase 6? (N=8 )	32. Please prioritize your organization’s preferred method for receiving IDPH communication. (N=14)	33. Please indicate where your organization received H1N1 messaging information from during the response. (N=12)
At least 1x per day: 55%	No: 56%	Vaccination plan for prisons: 25%	E-mail (selected 14x)	One source @ 41% --IDPH (80%) --CDC (20%).
2x–3x per week: 22%	Unknown or not applicable: 22%	Other: what local government should be doing to prepare BETTER.	IDPH Web site (selected 6x)	Three sources @ 25% --Combination of IDPH, LHD, CDC, media and Internet.
	Other: speaking directly with administrative health care staff	Other: all related information for protection of citizens; special populations.	Cell phone (selected 4x)	Two sources @ 17% --Combination of IDPH and LHD; IDPH and media.
		Closure procedures and efforts required to re-open facilities.	H-HAN (selected 4x)	Four Sources @ 17% --IDPH, CDC, media and Internet.
		How can I better assist them?	Conference calls (3x)	
			Land line (selected 2x)	
			Blackberry (selected 2x)	

## Analysis of Results: Hospitals



**Figure 12: Summary of Scores from Hospitals**

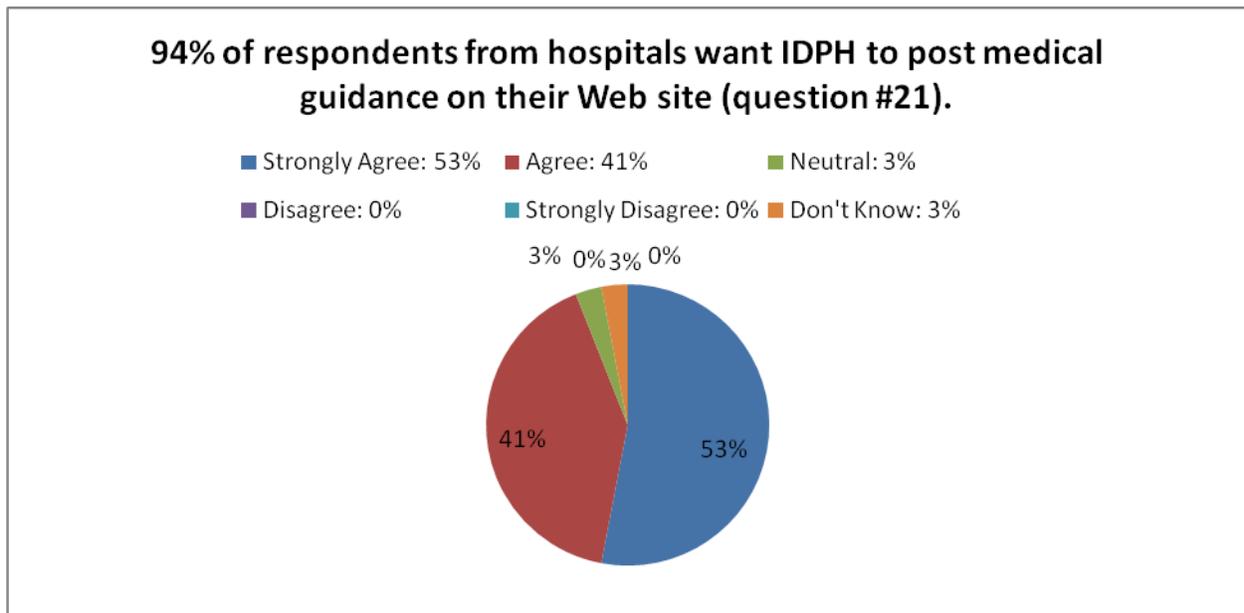
The 29 respondents in this category seemed fairly pleased with the job the IDPH did during the H1N1 messaging campaign. Respondents liked the timeliness of the messages (question 2: 3.9/5.0) and they believe IDPH should take a leadership role in disseminating information during the outbreak of a disease like H1N1 (question 25: 4.2/5.0). A strong majority of respondents, 72 percent, also found the H-HAN a useful communication tool to use during a disease outbreak. Furthermore, they indicated in open-ended questions that they received concise, relevant information regarding the necessary measures to be taken.

Although mostly pleased with IDPH's performance, there were a few areas that respondents felt could improve. A strong majority (94 percent) of the respondents believe that guidance for physicians and hospitals should be placed directly on IDPH's Web site (question 21: 4.5/5.0). This is due to their need for specific information regarding an outbreak. Similarly, in response to question 12 (4.1/5.0), 52 percent of hospital administrators "strongly agreed" and 28 percent "agreed" that IDPH should create a separate hotline just for medical professionals (e.g., hospitals, private medical practice and health clinics). These responses also likely result from the specific guidelines that such organizations would need during a pandemic.

In addition, 83 percent of respondents felt LHDs should continue to customize IDPH messages/updates with specific information about local response areas (question 10). Higher scores from hospitals supported IDPH use of its Web site to provide guidance to medical professionals, opening a statewide JIC and the clarity of the H1N1 messages released. Table 22 shows the survey elements that, when combining the "strongly agree" and "agree" rating categories, scored 80 percent or better.

**Table 22: Hospital preferences and general evaluation.**

H1N1 Question, Score and IDPH Action	Rating Score	Strongly Agree %	Agree %	Total %
21. Guidance for physicians and hospitals should be posted on the IDPH Web site.	4.3	53%	41%	94%
25. IDPH should issue information messages during international/national disease outbreaks like H1N1.	4.2	41%	45%	86%
1. IDPH issued clear H1N1 influenza outbreak informational messages during WHO Phase 3 (April 24, 2009–April 28, 2009)–WHO Phase 5 (April 29, 2009–June 11, 2009).	4.1	38%	45%	83%
10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.	4.1	41%	42%	83%
23. IDPH should open a joint information center (JIC) to coordinate federal, state and local messaging during statewide disease outbreaks like H1N1.	4.2	48%	34%	82%
12. Hospitals, private medical providers and health clinics should have a separate IDPH hotline to call and obtain more information/clarification on laboratory testing and/or treatment guidelines	4.1	52%	28%	80%

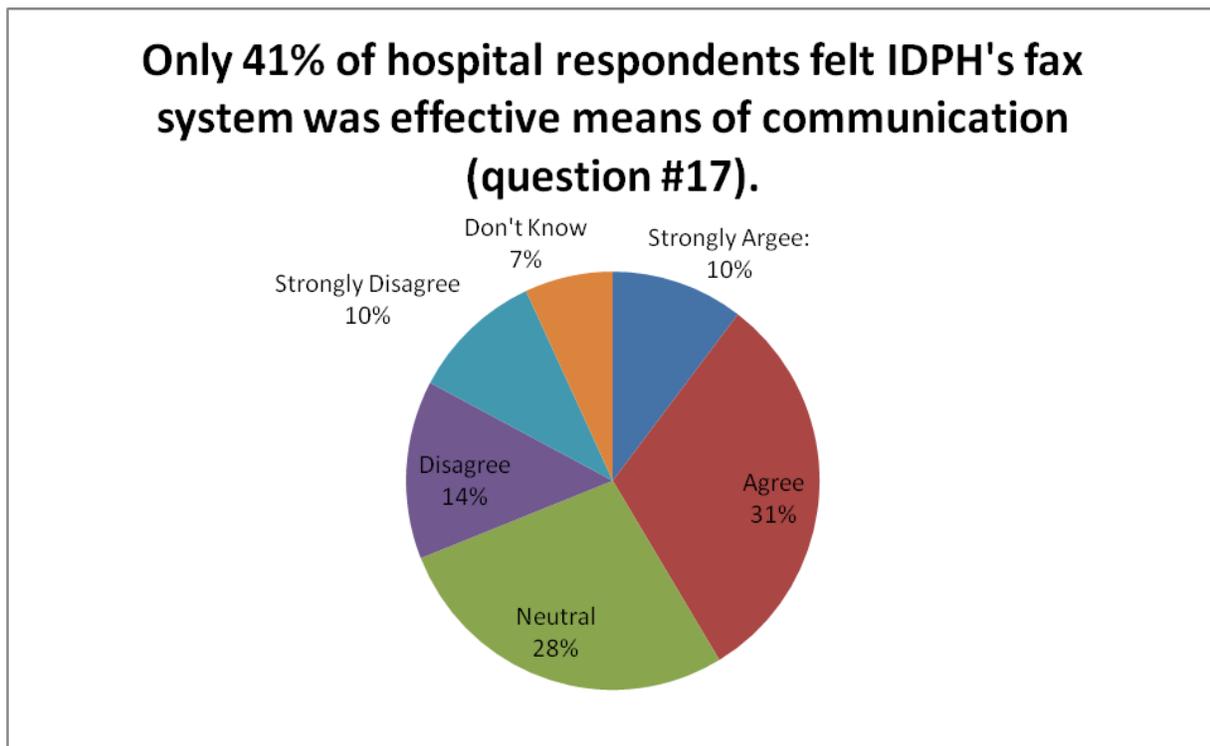


**Figure 13: Hospital Respondent Opinion Related to Posting Medical Guidance**

Several questions did elicit lower scores from the hospitals. Most notably, only 31 percent of respondents indicated that IDPH should not make any changes in the way it delivers H1N1 informational messages prior to the 2009 seasonal influenza season. Similar to the government agency respondents, hospitals also would like IDPH to adjust their communications system. This finding should prompt IDPH to learn how it can better engage the hospital in the near and long-term because they are a critical disease outbreak partner. Other low scores are summarized in Table 23.

**Table 23: Low Scores: Hospital communication tool evaluations.**

H1N1 Question	Rating Score	Disagree %	Strongly Disagree %	Don't Know %	Total %
15. IDPH issued too many H1N1 alerts, up guidance, etc. during WHO Phases 3–6.	2.8	31%	3%	7%	41%
17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.	3.0	14%	10%	7%	31%
26. IDPH should not make any changes in the way it delivers information to your organization in preparation for the seasonal flu season (October 2009) and potential H1N1 vaccination campaigns.	3.0	14%	17%	3%	31%
5. IDPH issued clear social distancing measures.	3.1	15%	3%	10%	28%



**Figure 14: Evaluation of IDPH Communication Tools**

**Open-Ended Questions**

When asked to provide direct feedback on IDPH’s H1N1 messaging campaign, hospitals identified the following strength and improvement area:

- Strength: IDPH issued messages in a timely manner (52 percent: 9 of 17 respondents);
- Area for Improvement: coordination with local health, hospitals and elected officials (43 percent: 7 of 16 respondents).

Results from the other open-ended question indicate that a majority of hospitals frequented IDPH's Web site at least one time per day and their specific communication issues were met. With the onset of WHO Phase 6, hospitals indicated they did want more information on a variety of topics such as vaccine distribution, legal recommendations for visitors/family members to hospitals and identification of an official source of information that all government agencies can follow. As reflected below, hospitals relied on e-mail as a primary communication tool and 60 percent of respondents obtained their H1N1 information from two or more sources (e.g., IDPH, CDC, Internet, etc.). Significantly, 76 percent of the respondents to question 33 indicated that IDPH was a main source of their H1N1 information messaging.

Please refer to Table 24 on the following page for a detailed summary of hospitals respondents' open-ended questions.

**Table 24: Hospital feedback, open-ended response questions.**

29. How often did your organization access the IDPH Web site and/or IDPH Help line during the H1N1 response, e.g., 1x per day, 1x per week, never, etc. (N=23)

30. Are there any communication issues specific to your organization that IDPH did not address during the H1N1 outbreak (April 2009–present)? (N=17)

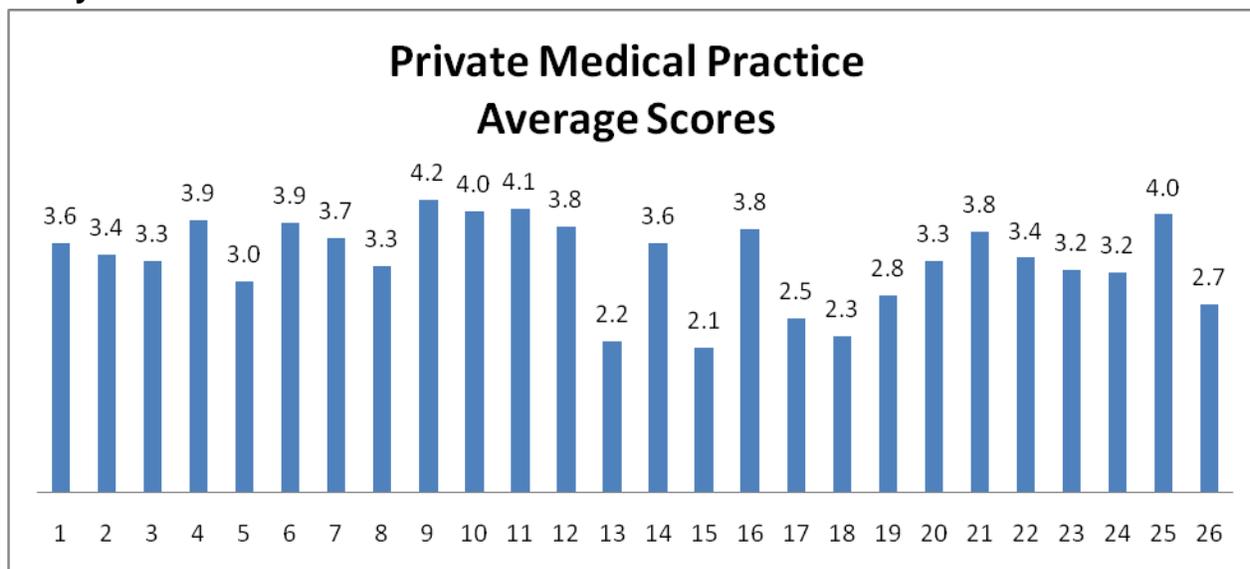
31. What topics do you want IDPH to address now that WHO has declared Pandemic Phase 6? (N=14)

32. Please prioritize your organization's preferred method for receiving IDPH communication.

33. Please indicate where your organization received H1N1 messaging information from during the response. (N=25)

At least 1x per day: 73%	None: 47%	None: 14%	E-mail (selected 23x)	One source @ 40% -LHDs @ 20% -IDPH @ 16% -Internet @ 4%
2x per week: 8%	Other issues: communication issues, guidance with quarantine.	Other topics: Prompt release and distribution of vaccine when available.	IDPH Web site (selected 17x)	Three sources @ 28% Combination of IDPH, LHD, CDC, Internet, media and "other" (HAN).
	Other: visitor and family guidance for home.	Legal issues regarding non-compliant visitors and patients, prioritization of supplies and resources.	H-HAN (selected 13x)	Two sources @ 24% Combination of IDPH and LHD; IDPH and CDC; and LHD and CDC
	Other: recommendations on treatment for employee exposure were not clear, more direct information on delivery of medications.	Who is the official source of information for the state and city public health organizations? If IDPH is following NIMS it must be hospital to city and city to state.	Conference calls (selected 10x)	Five sources @ 8% -Combination of IDPH, LHD, CDC, media and Internet.
	Other: too many to detail in this short space.	What physicians should do?	Cell phone (selected 4x)	
	Other: when NOT to go to emergency dept. (when you're not sick).	Info for patients, guide for physicians; travel update info.	Land line (selected 3x)	
		EMS protection	Blackberry (selected 3x)	
			Other (selected 8x)	

## Analysis of Results: Private Medical Practice



**Figure 15: Summary of Scores from Private Medical Practices**

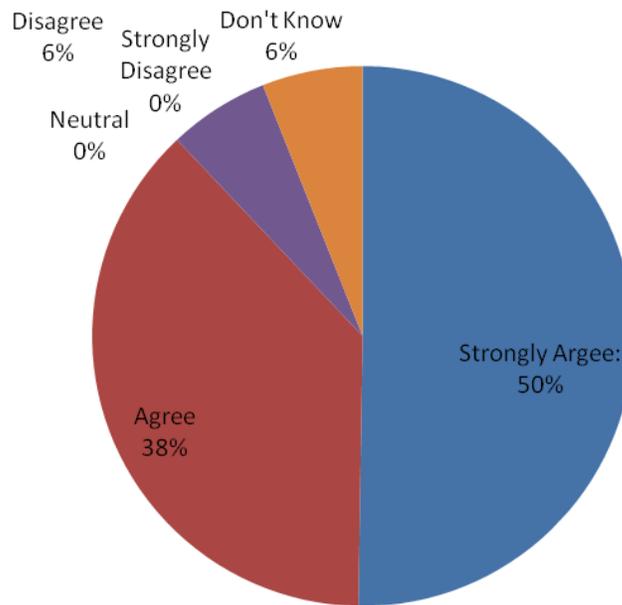
Twenty-three respondents from private medical practices were also largely pleased with IDPH’s messaging campaign. Similar to hospitals, respondents from this group want LHDs to continue customizing H1N1 messages/updates (question 10: 4.0/5.0) and they believe IDPH plays a key role in disseminating information during international/national disease outbreaks (question 25: 4.0/5.0). Nearly 80 percent of respondents agreed that IDPH issued medical and nonmedical information accurately (question 4: 3.9/5.0) and 75 percent of respondents acknowledged that IDPH’s messages reached the correct staff persons in private medical practices (question 6: 3.9/5.0). Sixty-two percent also felt that the messages were easy to read (question 14: 3.6/5.0). The comprehensiveness of the information was also frequently cited as a benefit and respondents encouraged IDPH to coordinate phone bank hotlines with LDHs and hospitals (question 11: 4.1/5.0).

Further, certain IDPH H1N1 messaging tactics scored quite highly with private medical practice respondents. Per Table 25 below, when combining the “strongly agree” and “agree” rating categories, several responses scored 85 percent or better:

**Table 25: User preferences of private medical practice.**

H1N1 Question, Score and IDPH Action	Rating Score	Strongly Agree %	Agree %	Total %
11. IDPH phone bank “hotlines” should coordinate hotline activities with local health departments and hospitals.	4.1	50%	38%	88%
10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.	4.0	50%	38%	88%
25. IDPH should issue information messages during international / national disease outbreaks like H1N1.	4.0	25%	63%	88%

**88% of private medical practice respondents want IDPH to coordinate phone banks with LHDs and hospitals (question #11).**



**Figure 16: Private Medical Practice “Hotline” Preference**

Fifty-one percent of private medical practices surveyed did not feel IDPH issued too many alerts during the initial response stage (question 15: 2.1/5.0). However, respondents provided low scores for IDPH’s communication tools. For example, the combination of the “don’t know” and “disagree” responses to IDPH’s fax system (question 17: 2.5/5.0) and conference calls (question 13: 2.2/5.0) suggests that the respondents either ignored IDPH’s these tools, they were not a priority group for IDPH or they were not allowed to access these tools because of internal constraints. Whatever the reason, it should compel IDPH to investigate how it can make these tools more attractive to a core stakeholder group like private physicians.

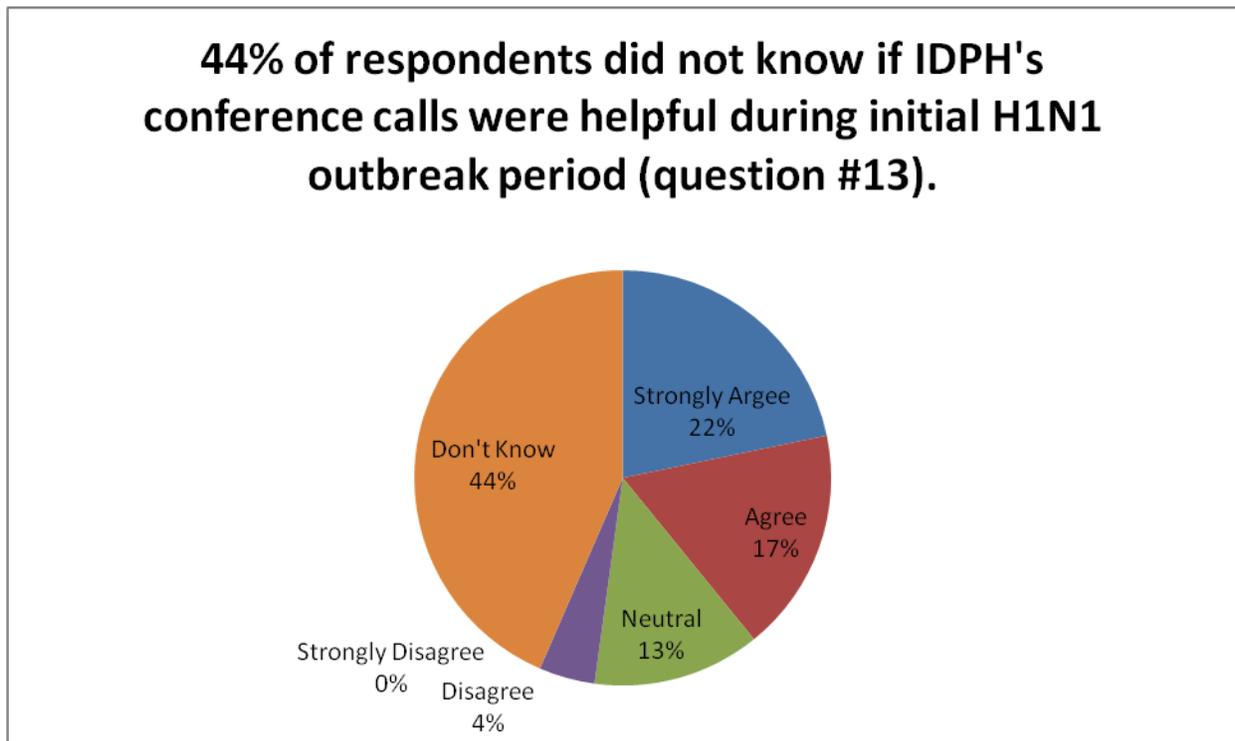
While private medical practices are not members of the H-HAN, the fact that 37 percent do not know if it is a useful communication tool should prompt IDPH to consider educating private practices about it. Even though the H-HAN is a part of the idph.com secure Web portal reserved for hospitals, it should cause some concern for IDPH that “front line” health care professionals like the private physicians participating in this survey do not know if the H-HAN is a useful communication system for local hospitals.

However, if conducting an educational campaign to private physicians is not an option, then IDPH should ensure they have HAN accounts so they can receive immediate notifications during public health response operations that may or may not involve their clients. Since many private physicians, nurses, and administrative staff are affiliated and/or collaborate with hospitals, it would serve IDPH well to ensure the

entire medical community understands the purpose, differences and capabilities of both the HAN and the H-HAN. Table 26 summarizes the private medical practices' low scores:

**Table 26: Low Scores: Private practice communications tool evaluations.**

H1N1 Survey Questions	Rating Score	Disagree %	Strongly Disagree %	Don't Know %	Total %
15. IDPH issued too many H1N1 alerts, updates, guidance, etc., during WHO Phases 3–6.	2.1	38%	13%	8%	59%
13. IDPH's H1N1 Influenza conference calls were helpful to your organization.	2.2	4%	0%	44%	48%
17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.	2.5	13%	4%	25%	42%
18. IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool to use during a disease outbreak.	2.3	0%	4%	33%	37%



**Figure 17: Private Medical Practice Evaluation of IDPH's Communication Tools**

**Open-Ended Questions**

There were a few other areas of the messaging system respondents felt needed improvement. One of the problems with the system that was mentioned in open-ended questions was the redundancy of the information. For example, many of the respondents either “agreed” or “strongly agreed” that IDPH should limit its messages to just one per day, unless emergency actions needed to be taken (question 16: 3.8/5.0).

When asked to provide direct feedback on IDPH’s H1N1 messaging campaign, the private medical practice organizations identified the following strength and improvement area:

- Strength: informative (33 percent: 4 of 12 respondents);
- Area for Improvement: information dissemination (20 percent: 2 of 10 respondents).

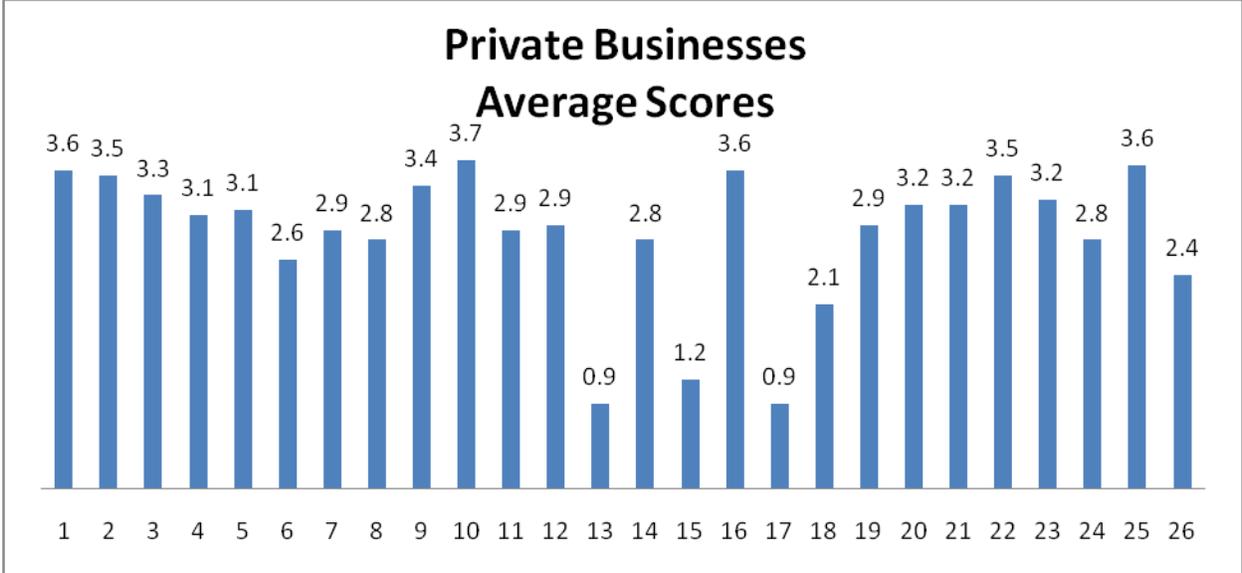
Results from the other open-ended questions (summarized in Table 27 below) indicate a majority of the private medical practice agencies frequented IDPH’s Web site at least one time per day and their specific communication issues were met. Other feedback for IDPH included improving communication channels and providing more vaccination guidance. As reflected below, private medical practices relied on e-mail as a primary communication tool and 74 percent of respondents obtained H1N1 information from two or more sources (e.g., IDPH, CDC, Internet, etc.). Significantly, 82 percent of respondents to question 33 indicated that IDPH was a main source of their H1N1 information messaging.

**Table 27: Private medical practice feedback, open-ended response questions.**

29. How often did your organization access the IDPH Web site and/or IDPH Help line during the H1N1 response, e.g., 1x per day, 1x per week, never, etc. (N=20)	30. Are there any communication issues specific to your organization that IDPH did not address during the H1N1 outbreak (April 2009–present)? (N=9)	31. What topics do you want IDPH to address now that WHO has declared Pandemic Phase 6? (N=9)	32. Please prioritize your organization’s preferred method for receiving IDPH communication. (N=22)	33. Please indicate where your organization received H1N1 messaging information from during the response. (N=23)
At least 1x daily: 50%	No: 44%	None: 33%	E-mail (selected 22x)	Two sources @ 35% -Combination of IDPH, CDC, Internet, etc.
Never: 20%	Other: need more language translations.	Other: keep us posted as to changes as we approach fall.	IDPH Web site (selected 11x)	One source @ 26% IDPH @ 8% CDC @ 8% Other @ 8% Internet @ 4%
2–4x per week: 15%	Clinic and homecare recommendations were lacking.	N95 usage	H-HAN (selected 4x)	Five sources @ 22% -Combination of IDPH, LHD, CDC, media and Internet.
	Staff and patients wanted to have specific information re: how protect themselves. Our info comes from the ID dept via CDC, IDPH, county health dept.	Be very clear on who is treated, esp. per pediatric patients. Treat all persons who test positive? Do you treat contacts? Use of Tamiflu in children <1 yr old?	Landlines (selected 3x)	Three Sources @ 13% -Combination of IDPH, LHD, CDC, media, Internet.

	Must communicate better with chain pharmacies. Wal-Mart pharmacists knew nothing.	Whether to vaccinate individuals who likely had natural infection with H1N1 this season already.	Conference calls (selected 3x)	Four sources @ 4% -Combination of IDPH, LHD, CDC and Internet.
		Travel advisories; current stats, work-force resources.	Cell phones (selected 1x)	

**Analysis of Results: Private Business**

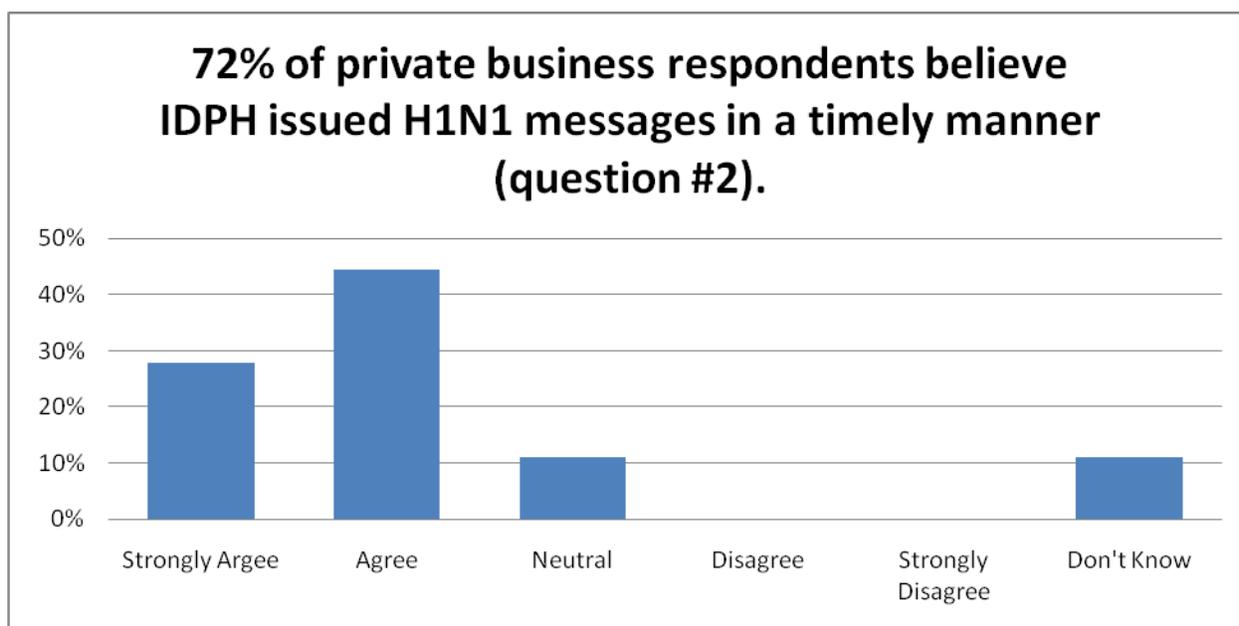


**Figure 18: Summary of Scores from Private Business**

Nineteen private business respondents had a mixed reaction to IDPH’s messaging system. Similar to other groups of respondents, some of the common strengths cited in the open-ended questions included comprehensive, relevant and quick information. Like other organizational groups, private businesses agreed IDPH has a leadership role in communicating messages during international/national disease outbreaks (question 25: 3.6/5.0) and 72 percent of respondents either “strongly agreed” or “agreed” that IDPH issued timely H1N1 messages (question 2: 3.5/5.0). Similar to other stakeholder groups, they want LHDs to continue to customize H1N1 messages with local information (question 10: 3.7/5.0). In addition, 69 percent of the respondents to question 3 agreed that IDPH prioritized the most critical H1N1 information for their organization. A summary of those questions in which 70 percent or more of private businesses “strongly agreed” or “agreed” are listed in Table 28.

**Table 28: High Scores: Private business, state responsibilities, and performance.**

H1N1 Question, Score and IDPH Action	Rating Score	Strongly Agree %	Agree %	Total %
25. IDPH should issue information messages during international/national disease outbreaks like H1N1.	3.6	17%	67%	84%
10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.	3.7	33%	50%	83%
16. Your organization would prefer to receive just one update from IDPH each day unless there is emergency guidance requiring immediate distribution.	3.6	17%	65%	82%
1. IDPH issued clear H1N1 influenza outbreak informational messages during WHO Phase 3 (April 24, 2009–April 28, 2009)–WHO Phase 5 (April 29, 2009–June 11, 2009).	3.6	28%	44%	72%
2. IDPH issued H1N1 messages in a timely manner during WHO Phases 3–5 (April 24, 2009– June 11, 2009).	3.5	28%	44%	72%



**Figure 19: Private Sector Evaluation of Message Timeliness**

Interestingly, 61 percent of business respondents to question 15 (1.2/5.0) did not think IDPH issued too many alerts, but 72 percent of respondents prefer to receive only one update from IDPH daily, unless an emergency situation arises (question 16: 3.6/5.0). Although the private sector seems to be in favor of receiving H1N1 messaging from IDPH, only 45 percent of respondents to question 8 stated IDPH’s messages influenced their decision to activate relevant emergency response plans. When assessing public health and hospital coordination, 61 percent of businesses did encourage IDPH to establish a separate hotline to be used by the medical community (question 12: 2.9/5.0); 61 percent would also like IDPH to set up phone bank “hotlines” to coordinate state, local and hospital response activities (question 11: 2.9/5.0).

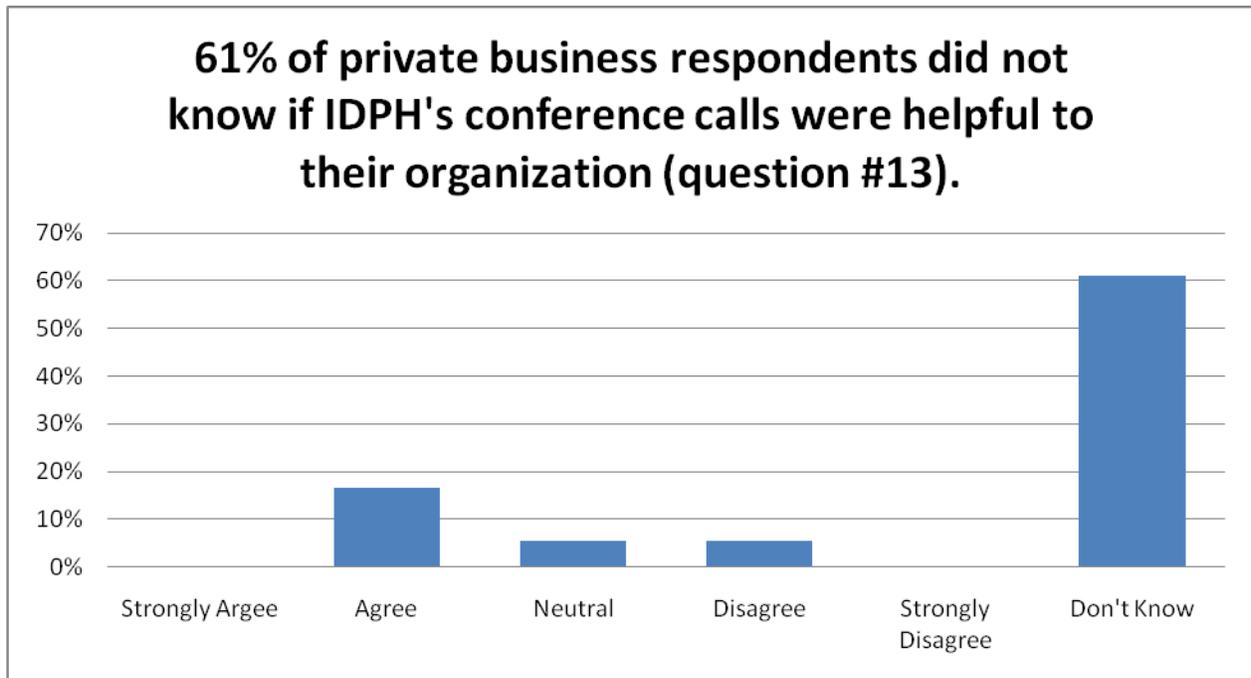
However, if IDPH intends to include the private sector as a key stakeholder in future disease outbreaks, it is apparent that more outreach is needed to make them a part of the informational chain. Given that

61 percent of respondents did not know whether IDPH conference calls were effective (question 13: 0.9/5.0) and 67 percent did not know whether IDPH’s fax distribution system was an effective means of communication (question 17: 0.9/5.0), it can be reasonably assumed that they were either not invited to participate, totally unaware of these efforts or they ignored IDPH outreach efforts.

In some cases, private businesses may not have been allowed to participate in these calls and IDPH should learn how to overcome this hurdle if it truly wants the private sector to help IDPH coordinate informational messaging among employers, employees and their families during disease outbreaks like H1N1. Whatever the reason, if IDPH wants more private sector involvement, then IDPH should consider inviting private business to participate in the dialogue via communication tools, such as conference calls, e-mail blasts (with links to relevant Web sites) or fax distribution. Survey questions eliciting lower scores from businesses are summarized in Table 29 below.

**Table 29: Low Scores: Private sector evaluation of IDPH communication practices.**

<b>H1N1 Question</b>	<b>Rating Score</b>	<b>Disagree %</b>	<b>Strongly Disagree %</b>	<b>Don't Know %</b>	<b>Total %</b>
<i>15. IDPH issued too many H1N1 alerts, updates, guidance, etc. during WHO Phases</i>	1.2	44%	17%	28%	89%
<i>13. IDPH's H1N1 Influenza conference calls were helpful to your organization.</i>	1.2	6%	0%	61%	67%
<i>17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.</i>	0.9	0%	0%	67%	67%
<i>26. IDPH should not make any changes in the way it delivers information to your organization in preparation for the seasonal flu season (October 2009) and potential H1N1 vaccination campaigns.</i>	2.4	11%	6%	11%	28%
<i>6. IDPH's messages (alerts, updates, guidance, instructions, etc.) issued during WHO Phases 3–5 were read by your organization's appropriate staff person(s).</i>	2.6	11%	0%	28%	39%



**Figure 20: Private Sector Evaluation of IDPH Communication Tools.**

***Open-Ended Questions***

When asked to provide direct feedback on IDPH’s H1N1 messaging campaign, private businesses identified the following strength and improvement area:

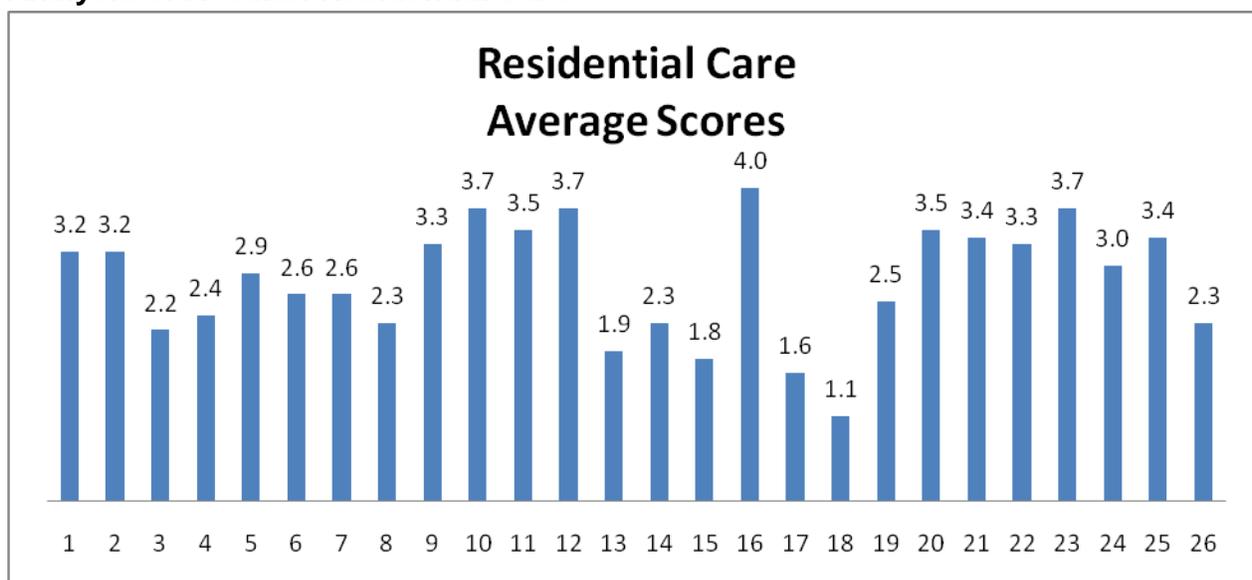
- Strength: timely messaging (38 percent: 3 of 8 respondents);
- Area for Improvement: inclusion of businesses in messaging campaign (50 percent: 4 of 8 respondents).

Results from the other open-ended question (summarized in Table 30 below) indicate less than half (38 percent) of businesses frequented IDPH’s Web site at least one time per day and their specific communication issues were met. Private businesses provided IDPH with many suggestions for future topics, such as a more inclusive approach to businesses, helping businesses prioritize response strategies and defining state triggers for response actions. As reflected in Table 30 below, private businesses relied on e-mail as a primary communication tool and 79 percent of respondents obtained their H1N1 information from two or more sources (e.g., IDPH, CDC, Internet, etc.). A majority of respondents (58 percent) indicated that IDPH was a main source of their H1N1 information messaging (question 33).

**Table 30: Private sector feedback, open-ended response questions.**

29. How often did your organization access the IDPH Web site and/or IDPH Help line during the H1N1 response, e.g., 1x per day, 1x per week, never, etc. (N=16)	30. Are there any communication issues specific to your organization that IDPH did not address during the H1N1 outbreak (April 2009–present)? (N=9)	31. What topics do you want IDPH to address now that WHO has declared Pandemic Phase 6? (N=10)	32. Please prioritize your organization's preferred method for receiving IDPH communication. (N=19)	33. Please indicate where your organization received H1N1 messaging information from during the response. (N=19)
At least 1x per day: 38%	None: 88%	Respondents addressed multiple topics as listed below:	E-mail (selected 18x)	Five sources @ 37% -Combination of IDPH, LHD, CDC, media, Internet and other.
At least 1x per week: 31%	Other: why WHO had a different PHASE than CDC.	State-triggered activity.	Conference calls (selected 9x)	Three Sources @ 16% -Combination of IDPH, LHD, CDC, media and other.
Never: 19%		Relevant topics.	IDPH Web site (selected 7x)	One Source @ 16% -CDC @ 5% -LHD @ 5% -Internet @ 5%
		Amending plans to meet the current situation vs. individual WHO phase.	Blackberries (selected 4x)	Two sources @ 21% -CDC and Internet
		Introduce the private sector to your services.	SharePoint (selected 2x)	Four sources @ 5% -Combination of IDPH, CDC, Internet and other.
		What is happening on the local level?	Cell phone (selected 1x)	No sources @ 5%
		Anything to assist in making appropriate response decisions.	Facebook (selected 1x)	Other sources included WHO, Reuters and BBC.

## Analysis of Results: Residential Care

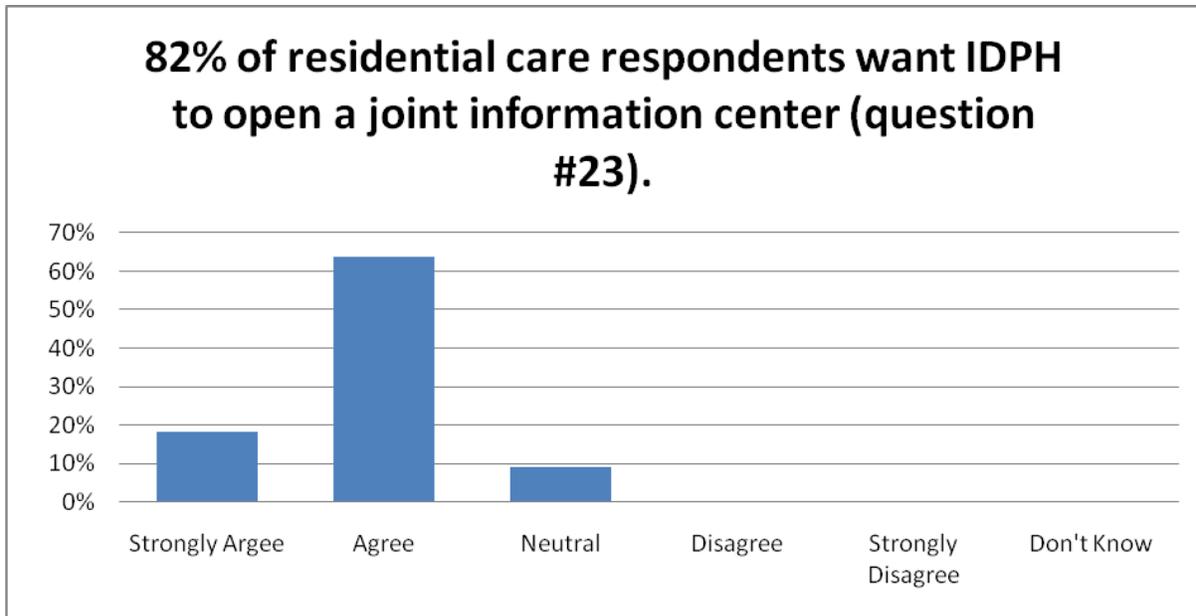


**Figure 21: Summary of Scores from Residential Care Facilities**

In essence, the 10 residential care facility respondents want IDPH to take a more active role in coordinating information during outbreaks of disease, such as H1N1. For example, 82 percent of respondents to question 23 (3.7/5.0) highly favored IDPH opening a JIC to coordinate federal, state and local communications and messaging. Although respondents felt strongly that IDPH should send only one message per day (question 16: 4.0/5.0), they want IDPH to post physician and hospital guidance directly on the IDPH Web site (question 21: 3.4/5.0). These results are not surprising; given the nature of extended care facilities and the information they need to care for their residents. In addition, many of the respondents in this category supported the establishment of a separate hotline for health care agencies (question 12: 3.7/5.0), as well as a hotline that doctors could use to directly access IDPH (question 11: 3.5/5.0). Table 31 summarizes the scores in which respondents “strongly agreed” or “agreed.”

**Table31: Residential care facility practice preferences at state and local level.**

H1N1 Question, Score and IDPH Action	Rating Score	Strongly Agree %	Agree %	Total %
23. IDPH should open a Joint information center (JIC) to coordinate federal, state and local messaging during statewide disease outbreaks like H1N1.	3.7	18%	64%	82%
16. Your organization would prefer to receive just one update from IDPH each day unless there is emergency guidance requiring immediate distribution.	4.0	55%	18%	73%
10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.	3.7	36%	36%	72%
12. Hospitals, private medical providers and health clinics should have a separate IDPH hotline to call and obtain more information/clarification on laboratory testing and/or treatment guidelines.	3.7	45%	27%	72%



**Figure 22: Residential Care Facility Evaluation of IDPH Information Dissemination Policies**

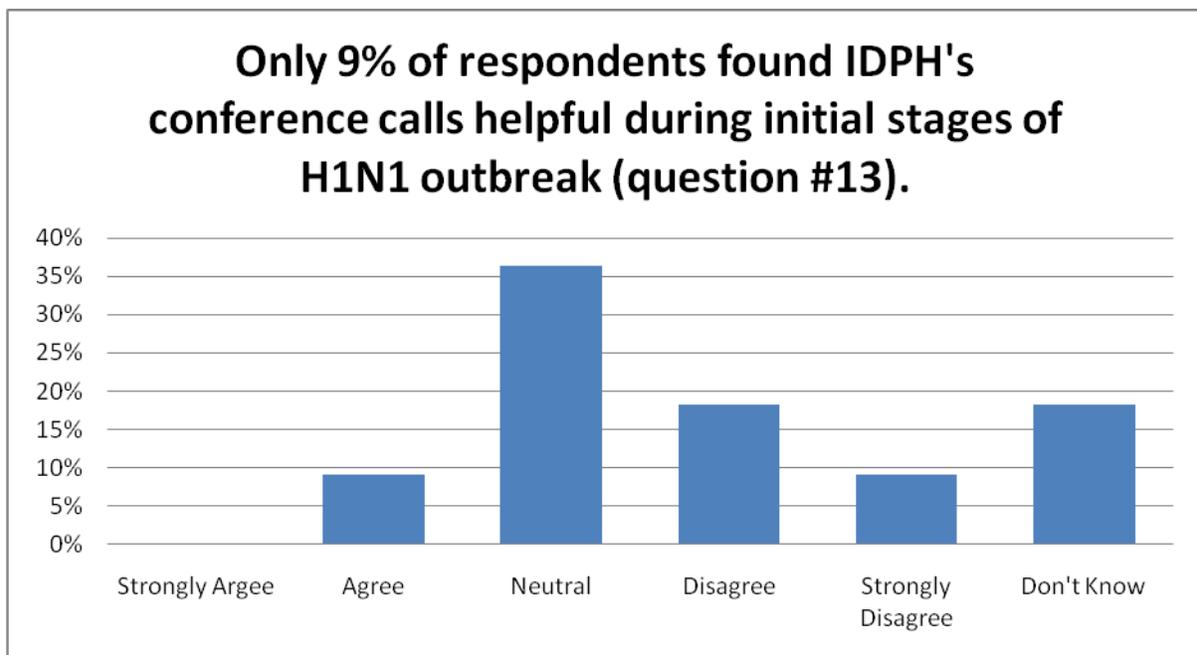
Similar to the private sector scores, these responses indicate that IDPH should revisit its communication strategy for residential care facilities. In response to questions dealing with IDPH conference calls (question 13: 1.9/5.0) and the fax system (question 17: 1.6/5.0), respondents either disagreed or were unsure whether these communication tools were effectively used during the initial stages of the outbreak. For example, only 9 percent of respondents found IDPH’s conference calls helpful, 36 percent were neutral on the subject, 27 percent disagreed that they were helpful and 18 percent did not know if the conference calls were helpful. Further, only 36 percent of respondents to question 7 (2.6/5.0) felt that IDPH’s messages and instructions helped them respond and only 27 percent of respondents to question 8 (2.3/5.0) felt that IDPH’s messages influenced their decision to activate their emergency response plans.

What should cause IDPH concern is that the nursing homes or long-term care facilities are unaware of IDPH’s outreach efforts, indifferent to them or not a high priority for IDPH’s H1N1 messaging. Similar to private medical practices, residential care facilities did not know the effectiveness of the H-HAN. While this is not a surprise since they are not members of the H-HAN, IDPH may want to consider informing this medical care group how the H-HAN is used to support hospital communications during a public health event. At a minimum, IDPH should invite members of this stakeholder group to join and use the HAN. With the potential for long-term care/nursing home residents to move into a hospital for care, and 45 percent of respondents unfamiliar with the H-HAN it is reasonable to assume that IDPH would want to keep this group well informed during seasonal and/or novel disease outbreaks. Further, IDPH may want to ensure that physicians affiliated with both hospitals and residential care facilities know how to access the H-HAN and HAN during a public health event in Illinois.

Survey questions eliciting lower scores from residential care respondents are summarized in Table 32.

**Table 32: IDPH communication effectiveness, residential care facilities.**

H1N1 Question	Rating Score	Disagree %	Strongly Disagree %	Don't Know %	Total %
18. IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool to use during a disease outbreak.	1.1	0%	18%	45%	63%
17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.	1.6	27%	18%	18%	63%
15. IDPH issued too many H1N1 alerts, update guidance, etc. during WHO Phases 3–6.	1.8	27%	9%	18%	54%
13. IDPH's H1N1 Influenza conference calls were helpful to your organization.	1.9	18%	9%	18%	45%



**Figure 23: Evaluation of IDPH's Communication Tools, Residential Care Facilities**

**Open-Ended Questions**

When asked to provide direct feedback on IDPH's H1N1 messaging campaign, residential care representatives identified the following strength and improvement area:

- Strength: provided current information (33 percent: 2 of 6 respondents);
- Area for Improvement: use e-mail to communicate information (28 percent: 2 of 7 respondents).

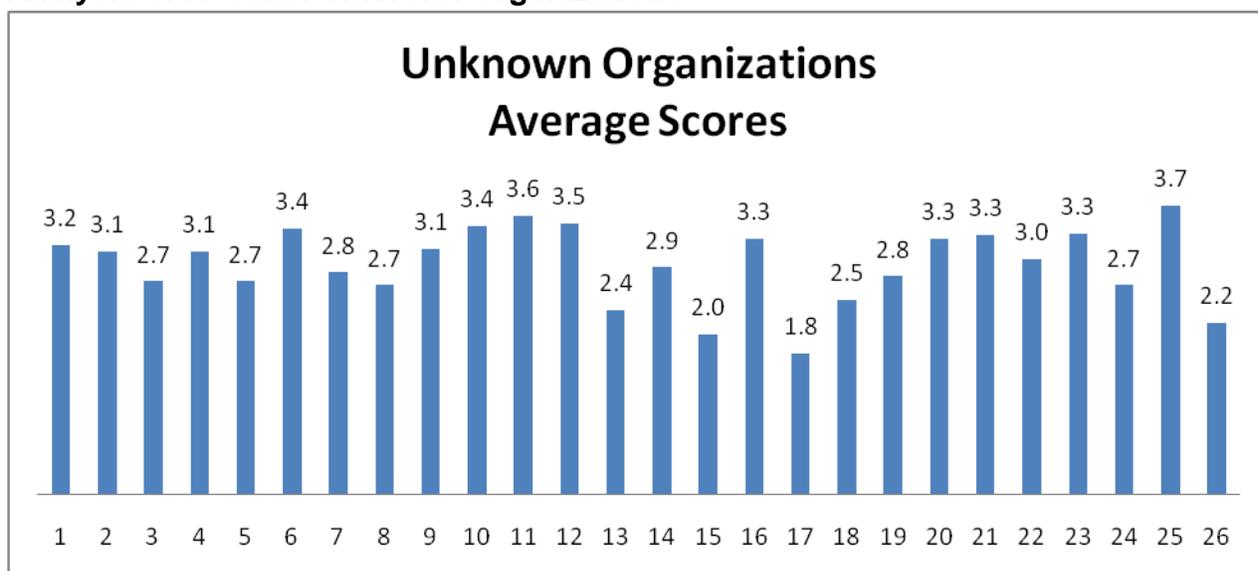
Results from the other open-ended question (summarized in Table 33 below) indicate that IDPH's Web site was not a high priority for a majority of the residential care respondents; only 22 percent visited it two to three times per week. Only 38 percent of respondents to question 30 felt IDPH specifically addressed

their communication issues. Regarding new topics to address, respondents had a variety of responses, ranging from the desire to “get on the HAN” to obtaining more information about H1N1 vaccinations. As reflected in Table 33 below, respondents relied on e-mail as a primary communication tool and 56 percent of respondents obtained their H1N1 information from two or more sources (e.g., IDPH, CDC, LHD, etc.). A majority of respondents (77 percent) to question 33 indicated that IDPH was a main source of their H1N1 information messaging.

**Table 33: Residential care facilities’ responses to open-ended questions.**

29. How often did your organization access the IDPH Web site and/or IDPH Help line during the H1N1 response, e.g., 1x per day, 1x per week, never, etc. (N=9)	30. Are there any communication issues specific to your organization that IDPH did not address during the H1N1 outbreak (April 2009–present)? (N=8)	31. What topics do you want IDPH to address now that WHO has declared Pandemic Phase 6? (N=5)	32. Please prioritize your organization’s preferred method for receiving IDPH communication. (N=9)	33. Please indicate where your organization received H1N1 messaging information from during the response. (N=7)
2–3 times per week: 22%	None: 38%	Note: no consensus so respondents’ feedback listed below.	E-mail (selected 9x)	One source @44% -IDPH @ 22% -Internet @22%
Not many times/Never: 22%	Other: POSTERS AND VERBAL COMMUNICATION BY MANAGEMENT.	Get LONG TERM CARE ON THE HAN!!!	IDPH Web site (selected 4x)	Three sources @ 22% -IDPH, LHD, CDC, media and Internet
	“Long term care is NOT ON THE HAN!!!!”	Vaccination.	Cell phones (selected 4x)	Two sources @ 11% -IDPH and CDC
	E-mail is more helpful than fax, would be helpful if sent also to the Corporate office and not just facilities.	Continue messages, and let providers know how to get vaccine.	Blackberries (selected 3x)	Four sources @ 11% -Combination of IDPH, CDC, media and Internet
	How to get on a waiting list for the vaccine.	Availability of Tamiflu and security of same.	Other (selected 1x): HAN; Facebook; Twitter and SharePoint.	Five Sources @ 11% -Combination of IDPH, LHD, CDC, media and Internet

## Analysis of Results: Unknown Organizations



**Figure 24: Summary of Scores from Unknown Organizations**

Sixty-two respondents chose to participate in the survey, but not identify themselves. Overall, these respondents tended to be a little more critical of IDPH than organizations that identified themselves. For example, only 22 percent of respondents either agreed or strongly agreed that IDPH does not have to change the way it delivers its information prior to the start of the seasonal influenza season in fall 2009 (question #26: 2.2/5.0). In comparison, other stakeholder had higher rating scores and a larger percentage of respondents who strongly agreed/agreed that IDPH should not make any changes. Please see Table 34 below.

**Table 34: Anonymous respondents scoring comparison for Question 26.**

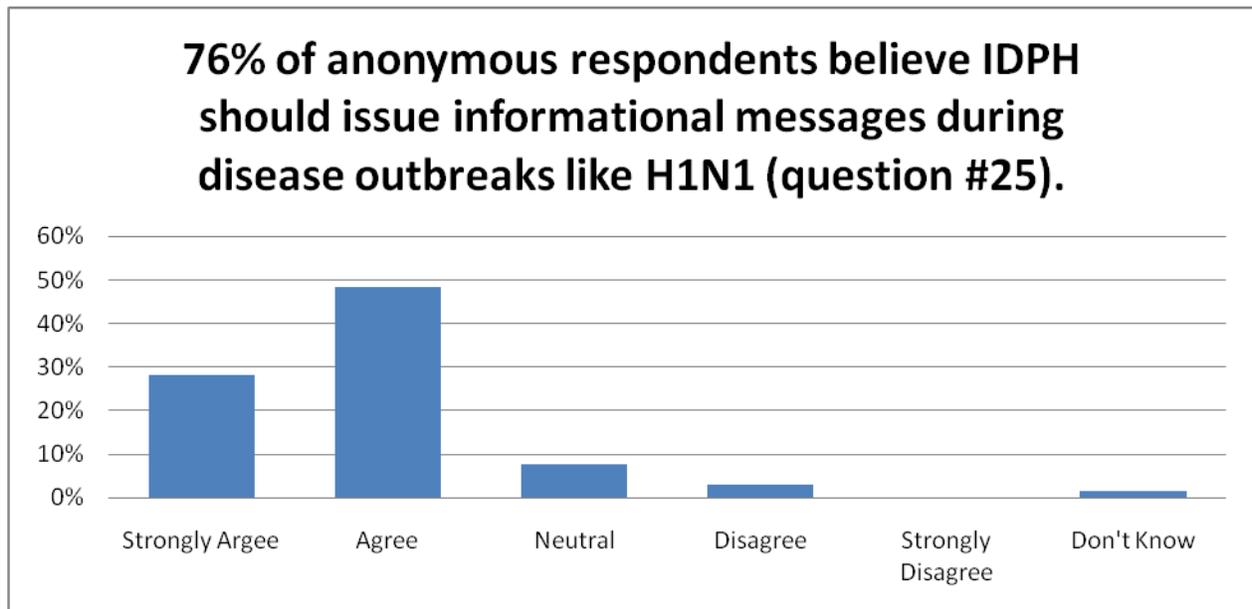
Stakeholder Group	Question #26 Score	Percentage of Respondents Strongly Agree/Agree IDPH does not have to change its informational delivery prior to 2009 seasonal influenza season.
Schools	3.2	44%
LHDs	3.1	40%
Hospitals	3.0	31%
Government Agencies	2.9	27%
Private Medical Practice	2.7	33%
Private Businesses	2.4	28%
Residential Care Facilities	2.3	27%
Unknown Organizations	2.2	22%

Further, 30 percent directly disagreed or strongly disagreed that IDPH should maintain the same delivery methods for the fall 2009 influenza season; only residential care facility respondents (45 percent) had a higher dissatisfaction rate than the anonymous respondents. However, not all of the scoring was as critical of IDPH; rather, scores reflected a desire by the respondents for IDPH to coordinate more during a large-scale disease outbreak like the H1N1 pandemic.

Higher scores for this group centered on coordination issues with 73 percent of respondents agreeing that IDPH should establish phone bank “hotlines” for LHDs and hospitals (question 11: 3.6/5.0) and 66 percent advocating that IDPH establish a JIC during statewide outbreaks of disease such as H1N1 (question 23: 3.4/5.0). Respondents also want IDPH to allow LHDs the flexibility to customize IDPH’s H1N1 instructions and messages with local statistics and data (question 10: 3.5/5.0). Importantly, 76 percent of anonymous respondents believe IDPH should play a key role in disseminating informational messages during outbreaks such as the H1N1 outbreak (question 25: 3.6/5.0). Per Table 35 below, when combining the “strongly agree” and “agree” rating categories, several responses scored 65 percent or better.

**Table 35: High Scores: IDPH responsibilities as viewed by unknown organizations.**

H1N1 Question, Score and IDPH Action	Rating Score	Strongly Agree %	Agree %	Total %
25. IDPH should issue information messages during international/national disease outbreaks like H1N1.	3.6	28%	48%	76%
11. IDPH phone bank “hotlines” should coordinate hotline activities with local health departments and hospitals.	3.6	36%	38%	73%
10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.	3.5	30%	39%	69%
16. Your organization would prefer to receive just one update from IDPH each day unless there is emergency guidance requiring immediate distribution.	3.3	23%	44%	67%
23. IDPH should open a joint information center (JIC) to coordinate federal, state and local messaging during statewide disease outbreaks like H1N1.	3.4	27%	39%	66%



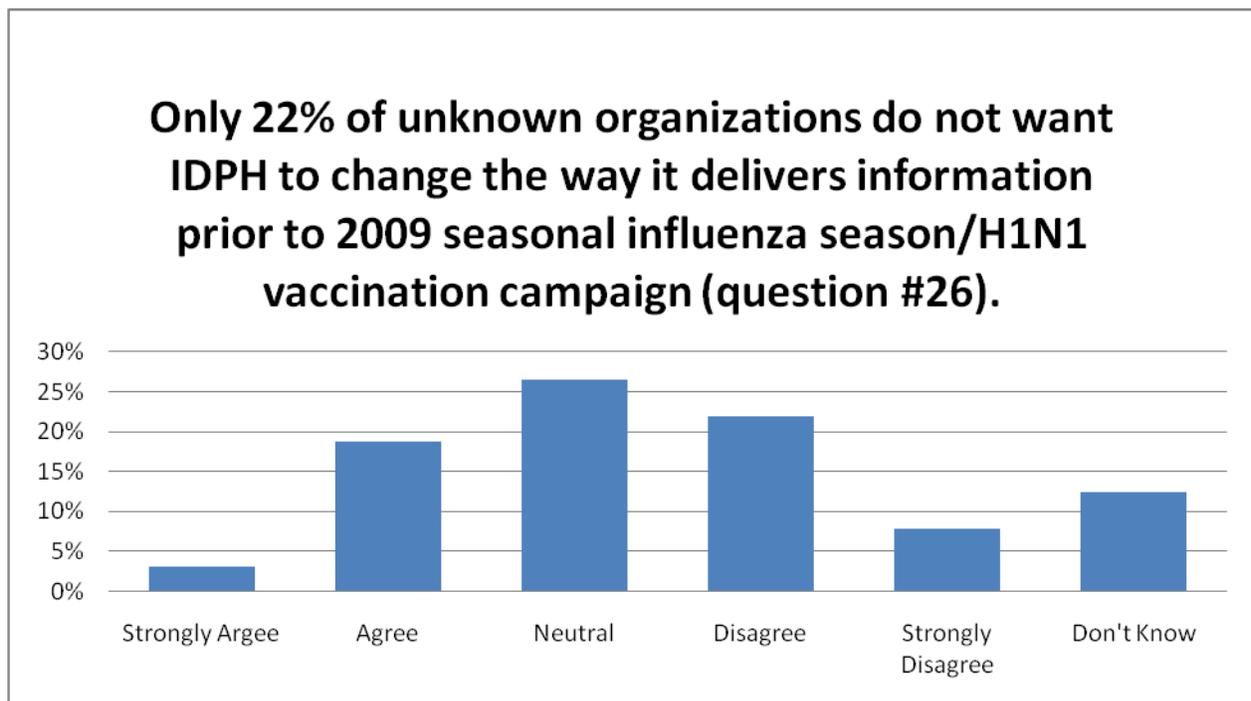
**Figure 25: IDPH Role Appropriate, Unidentified (Anonymous) Respondents**

While most respondents agreed that IDPH did not issue too many alerts (question 15: 2.0/5.0), more than 1 out of 3 of the respondents were concerned with the IDPH messaging dissemination system. For example,

only 15 percent of respondents agreed that the IDPH fax system is an effective means of communication (question 17: 1.8/5.0) and only 32 percent of respondents found IDPH’s conference calls helpful (question 13: 2.4/5.0). In addition, respondents did not feel IDPH’s social distancing messages (question 5: 2.7/5.0), IDPH H1N1 instructions (question 7: 2.8/5.0) or the IDPH Web site helped them respond to the outbreak (question 19: 2.8/5.0). Those questions that generated at least 30 percent or more of disagreement or uncertainty scoring from the respondents’ perspective are summarized in Table 36.

**Table 36: Low Scores: General assessment of IDPH performance and messaging tools by unknown organizations.**

H1N1 Question, Score and IDPH Action	Rating Score	Disagree %	Strongly Disagree %	Don't Know %	Total %
17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.	1.8	16%	3%	28%	47%
26. IDPH should not make any changes in the way it delivers information to your organization in preparation for the seasonal flu season (October 2009) and potential H1N1 vaccination campaigns.	2.2	22%	8%	13%	43%
3. IDPH prioritized the most critical H1N1 information for your organization.	2.7	20%	3%	11%	34%
18. IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool to use during a disease outbreak.	2.5	3%	0%	30%	33%
13. IDPH's H1N1 Influenza conference calls were helpful to your organization.	2.4	6%	3%	23%	32%



**Figure 26: Evaluation of IDPH’s Information Dissemination Methodology**

### ***Open-Ended Questions***

When asked to provide direct feedback on IDPH's H1N1 messaging campaign, the unidentified organizations identified the following strength and improvement area:

- Strength: accurate messages (38 percent: 3 of 8 respondents);
- Area for Improvement: better communication and coordination with stakeholders (33 percent: 4 of 12 respondents).

Results from the other open-ended question (summarized in Table 37 below) indicate a majority of the unidentified agencies frequented IDPH's Web site at least one time per day, but less than half of respondents (40 percent) indicated their specific communication issues were met. Other feedback for IDPH included improving communication channels and providing more vaccination guidance. As reflected in Table 37 below, unidentified agencies relied on e-mail as a primary communication tool and 58 percent of respondents obtained their H1N1 information from two or more sources (e.g., IDPH, CDC, Internet, etc.). A majority of respondents (64 percent) to question 33 indicated that IDPH was a main source of their H1N1 information messaging.

**Table 37: Unknown organization feedback, open-ended response questions.**

<b>H1N1 Messaging Survey Open-Ended Questions: Unknown Organization Feedback</b>				
29. How often did your organization access the IDPH Web site and/or Help line during the H1N1 response (e.g., 1x per day). (N=22)	30. Are there any communication issues specific to your organization IDPH did not address during the H1N1 outbreak (April 2009 – present)? (N=10)	31. What topics do you want IDPH to address now that WHO has declared Pandemic Phase 6? (N=10 )	32. Please prioritize your organization's preferred method for receiving IDPH communication. (N=28)	33. Please indicate where your organization received H1N1 messaging information from during the response. (N=28)
At least 1x per day: 72%	No: 40%	Vaccination plans: 20%	E-mail (selected 28x)	One source @ 42% ---IDPH (18%) ---CDC (114%) ---LHD (7%) ---Internet (3%)
1x per week: 14%	Legal issues: 20%	Other Topics – see below:	IDPH Web site (selected 14x)	Two sources @ 17% --Combination of IDPH with LHD, CDC, Internet and media and CDC and media.
	Other: we were not notified of the phone conferences.	COMMUNICATION! You have got to start talking to us so we are working together.	Conference calls (selected 9x)	Three Sources @ 17% --Combination of IDPH, LHD, CDC, media and Internet.
	Have an e-mail address with quick response for local agencies only.	Continuity of information for all involved.	H-HAN (selected 7x)	Four sources @ 17% --Combination of IDPH, LHD, CDC, media and Internet.
	They did not provide state-specific guidance, just recycled CDC.	Medical care	Blackberry (selected 7x)	Five sources @ 7% Combination of IDPH, LHD, CDC, media and Internet.
	Public Information Officers (PIOs) did not connect/communicate.	Not important now. CDC is main communicator.	Cell phone (selected 6x)	
		Local incident rates.	Land line (selected 2x)	
		Follow SHEA, APIC, AHA, etc., support droplet precaution rather N-95 respirators for pt. care.	Other (selected 1x): Facebook, Twitter, SharePoint	

## Conclusion

The process and results of the H1N1 messaging survey represent a best practice that other health departments and emergency management agencies can replicate to improve coordination efforts with stakeholder groups during both emergency preparedness and response phases. Importantly, the H1N1 survey confirmed IDPH's messages were influencing stakeholders' decisions to activate their pandemic plans and initiate response operations. While there was some dissatisfaction with IDPH's delivery of information and communication tools, such as the fax system, this report should demonstrate to IDPH that its core partners believe it has the ability and expertise to issue timely and accurate instructions that can help them respond to a large-scale disease outbreak in Illinois.

The conclusion will focus on three main areas: (1) the survey development process, (2) survey results: best practices and areas for improvement and (3) recommendations: next steps.

### ***The Survey Development Process: Stakeholder Inclusion and Pandemic Plans***

The survey instrument itself was an asset to the study. The design, implementation and distribution of the survey involved stakeholders through each step of the process. Public health and hospital practitioners in the field who understood exactly what information IDPH needed to improve its messaging system designed the instrument, thus increasing its quality. State and local health department stakeholders, as well as representatives from the hospital and private sector stakeholder groups, helped edit the survey questions. All member of the subcommittee, which was made up of representatives from LHD, hospital and private sector stakeholder groups, played a large role in recruiting other stakeholders like schools, private medical practices and residential care facilities to participate in the survey. Specifically, subcommittee members reached out to stakeholder groups, oftentimes personally, to gain their participation in the survey.

The strengths of the survey design became apparent in the uncharacteristically high return rate. As mentioned earlier, this study drew a 43 percent return rate, a high rate seldom seen in e-mail-based survey research. The excellent return rate is undoubtedly a result of IDPH's desire to involve a diverse group of stakeholders in the design process. Another factor was the timing of this survey, which occurred in the early stages of Illinois' pandemic response efforts. Combining a timely topic with an interested audience during the early stages of the H1N1 response greatly contributed to the success of this survey.

This process can be replicated in numerous other settings. By valuing direct feedback from its stakeholders, any public health department or emergency management agency can follow IDPH's lead and develop electronic surveys that garner important feedback and help set the course for future response operations. Also, by timing the survey to occur early in a long-term response or recovery operation, other organizations should be able to generate similar response rates. Quite simply, this study can be replicated by both public and private organizations willing to learn how to become a more effective internal organization and external response partner.

Another positive element of the design process worth imitating is the way the subcommittee developed the content for the survey questions. By drawing the subject matter for the survey questions from IDPH's pandemic plans and exercise after action reports, the subcommittee ensured relevant planning assumptions and current improvement planning recommendations were embedded in the questions. The use of key documents in developing questions ensured the researchers gained valuable insight to the impact IDPH's plans and policies were having on its stakeholders. In addition, question content was enhanced by interviews with key IDPH preparedness, epidemiology and response staff.

Given the success of this survey and the substantial amount of data it generated, IDPH should consider distributing a brief, comprehensive “best practices” guide summarizing its H1N1 stakeholder survey process and results for other state and LHDs. This guide would be an excellent resource because it would instruct readers how to work with stakeholders and use current preparedness plans to produce a survey that will garner at least a 40 percent participation rate. Generalization of the results of this study into a brief guide will ensure the process and results transcend the borders of Illinois.

### ***Survey Results: Best Practices***

#### ***Overall Agreement***

IDPH should continue to play a leadership role in communicating disease outbreak information; 84 percent of respondents believe IDPH should issue informational messages during international and national outbreaks of diseases like H1N1. IDPH should continue to issue clear, accurate and timely informational messages/updates during these outbreaks because they did motivate a majority of respondents to activate their own plans (57 percent) and respond to the H1N1 outbreak (64 percent). In addition, IDPH should retain and build upon the telephone and/or e-mail distribution lists it used to issue H1N1 messages, because 74 percent of the respondents indicated that instructions and updates were read by the organizations’ appropriate staff person(s).

Although difficult fiscal times present a challenge, IDPH should continue to devote personnel to developing and issuing instructions, guidance and updates. Based on the fact that 70 percent of respondents found IDPH’s written messages easy to understand and another 64 percent found H1N1 information/updates on the IDPH Web site timely and useful, IDPH should continue to devote personnel resources to produce simple, yet direct, messages and use its Web site to promote those public health instructions and recommendations.

In addition, this study illustrates another important best practice: Web-based surveys can be used to elicit timely feedback for public agencies during emergency response operations. The benefits of this survey method extend far beyond the use of state health departments. Any agency engaged with a variety of stakeholders can take the lessons accrued from the methodological design of this study. Web-based surveying is relatively new; thus the benefits of this method should be widely distributed.

#### ***Survey Results: Areas for Improvement***

The dissatisfaction with IDPH’s conference calls, fax system and H-HAN, combined with the finding that only 32 percent of respondents do not want IDPH to change its delivery information system, represent the greatest areas for improvement for IDPH. Quite possibly, by improving the content and organization of the conference calls, revamping its fax system and better explaining the purpose of the H-HAN to non-hospital stakeholders, IDPH could easily overcome these poor rankings of its H1N1 information messaging delivery system.

Along those lines, IDPH should consider reaching out to those survey respondents who were more critical of their communication system, such as universities, private medical practices, private businesses and residential care facilities, and engage them more in the information sharing process. By including a more diverse audience in its e-mail and point-of-contact database, IDPH would gain a stronger sense of how its H1N1 messaging system is impacting the entire community. One potential solution would be for IDPH to offer HAN accounts to those private medical practitioners, residential care facilities’ staff and

representatives from any other stakeholder group who want to be a part of the state's public health alert system.

Respondents were also quite candid about their desire to see IDPH improve its coordination efforts. For example, 72 percent of respondents want IDPH to open a JIC; 78 percent want IDPH to establish phone bank hotlines that coordinate messaging with local health departments and hospitals and 69 percent want IDPH to establish separate phone bank hotlines for hospitals, private medical providers and health clinics.

### ***Recommendations: Next Steps***

The involvement of key stakeholders, pandemic preparedness plans and the excellent return rate should motivate IDPH to conduct more surveys to improve its preparedness and response missions. IDPH should continue to work with the IPIW to preserve its best practices and to help address areas for improvement. Specifically, IPIW can help IDPH investigate why there is dissatisfaction with certain communication tools and help IDPH identify solutions before the next major health incident.

As for best practices, IDPH should continue to devote its resources to producing accurate and timely disease information messages that are easy to understand and follow. Further, IDPH should continue to use e-mail as a primary means to disseminate information and make its Web site the source for accurate and up-to-date disease outbreak information. Since IDPH's information messaging system helped the majority of stakeholders respond to the H1N1 outbreak, IDPH should continue to devote time and effort to disease message preparation, dissemination and monitoring.

While the majority of respondents were pleased with the timeliness and accuracy of IDPH's H1N1 information dissemination system, there are some areas that IDPH can improve upon:

(1) Conference calls: IDPH should consider reformatting the way it promotes and conducts its conference calls. This can be done by announcing calls on the IDPH Web site and sending agendas in advance to all relevant parties. In addition to agendas, IDPH can issue conference call guidelines (via e-mail) prior to the call so everyone respects and follows the agenda and "ground rules" for speaking. To ensure a wider audience, IDPH should consider hosting several conference calls with schools, private businesses, private medical practices and long-term care facilities so all stakeholder groups understand the purpose and direction of the state's response efforts. These calls would occur less frequently than calls to LHDs and hospitals, but they would underscore IDPH's efforts to build a community-wide response to large-scale disease outbreaks like H1N1.

(2) Fax system: IDPH should only use its fax system for those stakeholders who rely on faxes as a primary communication tool. While this may involve another survey to determine who relies on fax machines as a primary communication device, it could save IDPH considerable time and effort in the long term, especially a during crisis situation.

(3) H-HAN: While 72 percent of hospital respondents agreed the H-HAN is a useful communication tool to use during a disease outbreak, the majority of respondents are not familiar with this communications tool. It is understandable that schools, private businesses and some government agencies would not know about the H-HAN, but other members of the medical care community in Illinois should at least have a basic understanding of how this alert system works. Since some health care professionals work in both hospitals and in residential care facilities or private medical practices, IDPH should consider educating this

audience about the H-HAN. IDPH should consider conducting an educational campaign about the HAN and H-HAN with all stakeholder groups to ensure all response partners understand how IDPH intends to use these communication tools during its response efforts.

For example, with 45 percent of residential care facilities, 33 percent of private medical doctors and 7 percent of hospitals selecting the “Don’t Know” option when asked to rate the effectiveness of the H-HAN, it appears IDPH has some knowledge-building to undertake with these key stakeholder groups. Based on these responses, IDPH could produce H-HAN fact sheets for medical providers simply describing how it will be used during public health events. For those physicians and nurses who work in multiple health care settings, IDPH should ensure that they can access the HAN or the H-HAN from their different work sites. Given the actual and potential number of influenza patients who travel to and from these health-care providers, IDPH should consider addressing this finding prior to the next influenza season.

(4) IDPH should obtain the e-mail addresses of those stakeholders who were either dissatisfied or underrepresented in this survey and add them to their e-mail database. IDPH should aggressively recruit representatives from universities, child care centers, private businesses, physicians and residential care agencies. This will give IDPH instant access to a wider database of key contacts that can be reached rapidly during emergency/disaster situations. In addition, IDPH could use this expanded list to elicit rapid quality-improvement feedback with surveys similar to the one conducted for this study. While this survey produced 549 e-mail addresses, IDPH should strive to expand this list to at least 1,000 names before the autumn 2010 influenza season.

(5) With 70 percent of respondents reporting they get their H1N1 information from two or more sources (e.g., IDPH, CDC, LHDs, the media and the Internet), IDPH could expand its media monitoring efforts. Specifically, IDPH should consider using its communication staff to adopt the following practices:

(1) actively engage in media monitoring efforts to ensure IDPH recommendations are consistent with other federal and local public health agencies; (2) expand media monitoring efforts to non-government outlets, such as Internet news sources and independent health Web sites, to confirm IDPH’s and/or the government’s official public health message is accurately portrayed on a daily basis.

(6) Respondents also had several other direct recommendations for IDPH to follow:

- Do not customize CDC informational messages, guidance and updates.
- Allow County and LHDs to customize IDPH guidance/updates with local data.
- Open a JIC during a statewide disease outbreak.
- Coordinate phone bank Help lines with LHDs and hospitals.
- Establish separate phone bank Help lines for hospitals, private medical providers and health clinics.
- Post guidance for physicians and hospitals on the IDPH Web site.
- Send just one H1N1 informational update per day unless an emergency situation arises.
- Only update IDPH’s Web site one time per day.

### **Overall Success**

In conclusion, respondents to the H1N1 survey were in overall agreement that the information disseminated by IDPH throughout the first phase of pandemic response was well targeted to agency

decision makers. Respondents indicated the information provided by IDPH helped them respond to the H1N1 outbreak and, in many instances, influenced decisions about response plan implementation. Broad agreement on many of the measures indicates the information campaign implemented by IDPH was an overall success. IDPH should promote the informal, Web-based survey process with other states and local health departments prior to the next large-scale disease outbreak in the United States.

## **APPENDICES**

- A. H1N1 Survey Question Sources**
- B. H1N1 Survey Scoring Summary Table by Organizational Groups**
- C. H1N1 Survey E-Mail Invitation**
- D. Illinois Pandemic Workgroup Best Practice Subcommittee Members**

## APPENDIX A: H1N1 Survey Question Sources

H1N1 Survey Question	Source
1. IDPH issued clear H1N1 influenza outbreak informational messages during WHO Phase 3 (April 24, 2009–April 28, 2009)–WHO Phase 5 (April 29, 2009–June 11, 2009).	IDPH Pandemic Plan
2. IDPH issued H1N1 messages in a timely manner during WHO Phases 3–5 (Apr 24, 2009–Jun 11, 2009).	IDPH Pandemic Plan
3. IDPH prioritized the most critical H1N1 information for your organization.	IDPH Interviews
4. IDPH medical and non-medical messages/information was accurate.	IPIW Pandemic Tabletop Exercises (TTX) Recommendations Report
5. IDPH issued clear social distancing measures.	IDPH Pandemic Plan IDPH Interviews
6. IDPH's messages (alerts, updates, guidance, instructions, etc.) issued during WHO Phases 3–5 were read by your organization's appropriate staff person(s).	IDPH Interviews
7. IDPH H1N1 messages and instruction helped your organization respond to the outbreak.	IDPH Interviews
8. IDPH messages influenced your organization's decision to activate relevant emergency response plan(s).	IDPH Interviews
9. Unless state guidance differs, IDPH should not reformat and/or customize Centers for Disease Controls (CDC) messages/updates.	IDPH Interviews
10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.	IDPH Interviews
11. IDPH phone bank "hotlines" should coordinate hotline activities with local health departments and hospitals.	IPIW Pandemic Tabletop Exercises (TTX) Recommendations Report
12. Hospitals, private medical providers and health clinics should have a separate IDPH hotline to call and obtain more information/clarification on laboratory testing and/or treatment guidelines.	IDPH Interviews
13. IDPH's H1N1 Influenza conference calls were helpful to your organization.	IPIW Pandemic Tabletop Exercises (TTX) Recommendations Report
14. IDPH's written messaging format (faxes, e-mails, documents, etc.) is easy to understand and follow.	IDPH Pandemic Plan
15. IDPH issued too many H1N1 alerts, updates, guidance, etc., during WHO Phases 3–6.	IPIW Pandemic Tabletop Exercises (TTX) Recommendations Report
16. Your organization would prefer to receive just one update from IDPH each day unless there is emergency guidance requiring immediate distribution.	IDPH Interviews

17. IDPH's fax system was an effective means of communication to use during a disease outbreak like H1N1.	IDPH Pandemic Plan
18. IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool to use during a disease outbreak.	IDPH Interviews
19. IDPH's Web site provided timely and useful information.	IDPH Pandemic Plan
20. IDPH's Web site should be updated 1x per day.	IDPH Pandemic Plan
21. Guidance for physicians and hospitals should be posted on the IDPH Web site.	IPIW Pandemic Tabletop Exercises (TTX) Recommendations Report
22. IDPH's messages should include Web site links to updated information rather than attaching entire documents.	IDPH Interviews
23. IDPH should open a joint information center (JIC) to coordinate federal, state and local messaging during statewide disease outbreaks like H1N1.	JIS-JIC AAR
24. Local health departments should open their own JIC during statewide disease outbreaks like H1N1.	JIS-JIC AAR
25. IDPH should issue information messages during international/national disease outbreaks like H1N1.	IDPH Interviews
26. IDPH should not make any changes in the way it delivers information to your organization in preparation for the seasonal flu season (October 2009) and potential H1N1 vaccination campaigns.	IDPH Interviews
Open-Ended Questions	Open-Ended Questions
27. Please list the strengths of IDPH's recent H1N1 messaging campaign.	Stakeholder and IDPH Interviews
28. Areas for improvement and recommendations: please state how IDPH can improve its H1N1 messaging.	Stakeholders and IDPH Interviews
29. How often did your organization access the IDPH Web site and/or IDPH helpline during the H1N1 response, e.g., 1x per day, 1x per week, never, etc.	IDPH Interviews
30. Are there any communication issues specific to your organization that IDPH did not address during the H1N1 outbreak (April 2009–present)?	Stakeholders and IDPH Interviews
31. What topics do you want IDPH to address now that WHO has declared Pandemic Phase 6?	Stakeholders and IDPH Interviews
32. Please prioritize your organization's preferred method for receiving IDPH communication (please list #1–#12).	IDPH Interviews
33. Please indicate where your organization received H1N1 messaging information from during the response.	Stakeholder and IDPH Interviews

## APPENDIX B: H1N1 Survey Scoring Summary

H1N1 Survey Question	All	LHDs	Hos.	Schools	Gov.	Pvt. Med.	Pvt. Bus.	Res. Care	Unk.*
<b>N - Respondents</b>	237	50	29	30	14	23	19	10	62
<b>1. IDPH issued clear H1N1 influenza outbreak informational messages during WHO Phase 3 (April 24, 2009–April 28, 2009)–WHO Phase 5 (April 29, 2009–June 11, 2009).</b>	3.7	3.9	4.1	4.2	3.6	3.6	3.6	3.2	3.2
<b>2. IDPH issued H1N1 messages in a timely manner during WHO Phases 3–5 (Apr 24, 2009–Jun 11, 2009).</b>	3.6	3.8	3.9	4.1	3.7	3.4	3.5	3.2	3.1
<b>3. IDPH prioritized the most critical H1N1 information for your organization.</b>	3.3	3.5	3.4	3.9	3.5	3.3	3.3	2.2	2.7
<b>4. IDPH medical and non-medical messages/information was accurate.</b>	3.6	4.0	4.0	4.1	3.7	3.9	3.1	2.4	3.1
<b>5. IDPH issued clear social distancing measures.</b>	3.2	3.9	3.1	3.7	3.1	3.0	3.1	2.9	2.7
<b>6. IDPH’s messages (alerts, updates, guidance, instructions, etc.) issued during WHO Phases 3–5 were read by your organization’s appropriate staff person(s).</b>	3.7	4.5	3.5	4.0	3.5	3.9	2.6	2.6	3.4
<b>7. IDPH H1N1 messages and instruction helped your organization respond to the outbreak.</b>	3.5	4.1	3.9	3.9	3.7	3.7	2.9	2.6	2.9
<b>8. IDPH messages influenced your organization’s decision to activate relevant emergency response plan(s).</b>	3.3	3.9	3.7	3.7	3.9	3.3	2.8	2.3	2.7

<b>9. Unless state guidance differs, IDPH should not reformat and/or customize Centers for Disease Control and Prevention (CDC) messages/updates.</b>	3.8	4.1	4.2	3.9	3.7	4.2	3.4	3.3	3.2
<b>10. Local health departments should continue to customize IDPH H1N1 messages/updates with local information and statistics.</b>	4.0	4.3	4.1	4.4	4.1	4.0	3.7	3.7	3.5
<b>11. IDPH phone bank “hotlines” should coordinate hotline activities with local health departments and hospitals.</b>	3.8	3.8	3.8	4.3	4.5	4.1	2.9	3.5	3.6
<b>12. Hospitals, private medical providers and health clinics should have a separate IDPH hotline to call and obtain more information/clarification on laboratory testing and/or treatment guidelines.</b>	3.8	3.8	4.1	3.8	4.1	3.8	2.9	3.7	3.5
<b>13. IDPH’s H1N1 influenza conference calls were helpful to your organization.</b>	2.7	3.9	3.2	2.3	3.5	2.2	0.9	1.9	2.4
<b>14. IDPH’s written messaging format (faxes, e-mails, documents, etc.) is easy to understand and follow.</b>	3.5	3.9	3.8	4.1	3.8	3.6	2.8	2.3	2.9
<b>15. IDPH issued too many H1N1 alerts, updates, guidance, etc., during WHO Phases 3–6.</b>	2.3	2.6	2.8	2.6	2.3	2.1	1.2	1.8	2.0
<b>16. Your organization would prefer to receive just one update from IDPH each day unless there is emergency guidance requiring immediate distribution.</b>	3.6	3.6	4.0	3.7	3.1	3.8	3.6	4.0	3.3
<b>17. IDPH’s fax system was an effective means of communication to use during a disease outbreak like H1N1.</b>	2.1	2.7	3.0	1.3	2.3	2.5	0.9	1.6	1.8

<b>18. IDPH's Hospital-Health Alert Network (H-HAN) is a useful communication tool to use during a disease outbreak.</b>	2.5	3.0	3.7	1.2	3.0	2.3	2.1	1.1	2.4
<b>19. IDPH's Web site provided timely and useful information.</b>	3.3	3.8	3.8	3.8	3.5	2.8	2.9	2.5	2.8
<b>20. IDPH's Web site should be updated 1x per day.</b>	3.5	3.6	3.8	3.5	3.8	3.3	3.2	3.5	3.3
<b>21. Guidance for physicians and hospitals should be posted on the IDPH Web site.</b>	3.8	4.2	4.3	3.7	3.4	3.8	3.2	3.4	3.3
<b>22. IDPH's messages should include Web site links to updated information rather than attaching entire documents.</b>	3.4	3.1	3.8	3.7	3.6	3.4	3.5	3.3	3.0
<b>23. IDPH should open a joint information center (JIC) to coordinate federal, state and local messaging during statewide disease outbreaks like H1N1.</b>	3.7	3.8	4.2	3.8	4.0	3.2	3.2	3.7	3.4
<b>24. Local health departments should open their own JIC during statewide disease outbreaks like H1N1.</b>	3.1	3.2	4.0	2.9	3.6	3.2	2.8	3.0	2.7
<b>25. IDPH should issue information messages during international/national disease outbreaks like H1N1.</b>	3.9	4.1	4.2	3.9	4.3	4.0	3.6	3.4	3.6
<b>26. IDPH should not make any changes in the way it delivers information to your organization in preparation for the seasonal flu season (October 2009) and potential H1N1 vaccination campaigns.</b>	2.8	3.1	3.0	3.2	2.9	2.7	2.4	2.3	2.2

\*Legend:

1. LHDs: Local health departments
2. Hos.: Hospitals
3. Schools: Schools, universities and child care centers
4. Gov.: Government agencies

5. Pvt. Med.: Private medical practice
6. Pvt. Bus. Private businesses (businesses and professional associations)
7. Res. Care: Residential care (nursing homes/long-term care facilities)
8. Unk: Unknown organizations (agencies that remained anonymous)

## APPENDIX C: H1N1 Survey Invitation

Greetings,

In preparation for the 2009 fall influenza season (seasonal and H1N1), the Illinois Department of Public Health (IDPH) and the Illinois Pandemic Workgroup would like you to participate in an important survey regarding H1N1 influenza information message dissemination. Specifically, we would like you to assess H1N1 communications during WHO Phase 3–WHO Phase 6 (April 2009 – June 2009).

Since your organization plays an important role in the state’s overall preparedness and response efforts, IDPH values your feedback and would ask that you take a few minutes to complete its H1N1 Message Dissemination Survey. The survey is located at [http://www.surveymonkey.com/s.aspx?sm=UNUQh7ELBDoXwfhmovTUhQ\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=UNUQh7ELBDoXwfhmovTUhQ_3d_3d).

This survey, developed by members of the Illinois Pandemic Workgroup Best Practices Committee and IDPH, is being sent to public health officials, hospitals, emergency management officials, medical care professionals, hospitals, schools, day care centers, long-term care centers/nursing homes and private sector business throughout Illinois.

Results of the survey will be drafted into an evaluation report for IDPH. The purpose of the H1N1 messaging report is to confirm best practices and identify areas for improvement that IDPH can address during the fall 2009 influenza season.

On behalf of the Best Practices Committee and the IDPH, I thank you in advance for your help in improving Illinois’ H1N1 preparedness and response efforts. If you have any questions or require additional information, please contact me at your earliest convenience.

Thank you.

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## **APPENDIX D: Illinois Pandemic Influenza Workgroup**

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- Greg Chance, Peoria City/County Health Department, Co-Chair
- Christopher Hoff, Kane County Health Department
- Diane Hoots, Illinois Department of Central Management Services
- Mary Casey-Lockyer, Northwest Community Hospital
- Janet Nuss, Illinois Department of Public Health
- Richard Reb, CRT, Roche Laboratories, Inc.
- Mike Robbins, Chicago Department of Public Health
- Kenneth Soyemi, M.D., Illinois Department of Public Health
- Jeannette Tandez, Cook County Department of Public Health
- Andrew Twombly, Takeda Pharmaceuticals

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