



## **EXECUTIVE SUMMARY**

This evaluation characterizes the range of workplace involvement in the H1N1 vaccination campaign, successes and challenges, and collaboration with public and private sector partners.

### **Methodology**

ASTHO conducted key informant interviews with public health and workplace representatives. The information gleaned from these interviews was used to inform a survey of public health representatives, to further quantify their perceptions on how their health agency collaborated with workplaces during the H1N1 Influenza response and identify lessons learned, successes and challenges. ASTHO administered the survey to senior deputies, directors of public health preparedness, and vaccine implementation leads in 19 states: Alaska, California, Colorado, Iowa, Illinois, Indiana, Missouri, Montana, North Carolina, New Jersey, New York, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, Utah, Washington, Wyoming and New York City. These states were selected for geographic representation and are a sample of states that actively collaborated with workplaces during the H1N1 Influenza response. In addition to state health department representatives, local health department representatives were also surveyed with the assistance of the National Association of County and City Health Officials.

### **Overview of Findings**

Workplace collaborations are not new for some jurisdictions. Most of these relationships have been ongoing since 1990. Many local and state health departments indicate they have collaborations in place with workplaces of varied sizes. Health departments generally indicated that for the H1N1 vaccination campaign they collaborated with all workplaces that requested vaccine.

Many health departments required the workplaces receiving H1N1 vaccine to report the doses administered to the health department. However, obtaining these data was challenging for a number of reasons, including lack of Internet access in some places. In addition, reporting was not timely.

There was some concern among public health representatives about the ability of workplaces to adhere to prioritization recommendations for vaccine administration. Prior to H1N1, respondents answered that although they believed some workplaces would recognize the importance of vaccinating target groups, they also believed others would vaccinate whoever came in. After H1N1, respondents indicated that hospitals and clinics did a great job with vaccinating priority populations. They also believed that other sites (corporations) should not receive vaccine until priority populations have been vaccinated. There was little shift in opinion from pre-H1N1 to post-H1N1 among health department representatives as to whether or not workplaces would adhere to prioritization guidelines.

### **Limitations**

There are several weaknesses to this evaluation. First, although the original intent was to distribute a survey to both public health and workplace representatives, fielding the survey to workplaces in a manner that would maintain their anonymity was not feasible. Therefore, the goal of this evaluation was reworked to focus only on the public health perspective. However, the perspective of businesses and workplaces is absent from this evaluation and could be very useful in providing additional and different



## Findings from an Evaluation of Public Health and Workplace Collaborations During the 2009-10 H1N1 Influenza Pandemic

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perspectives and recommendations to improve future partnerships. Second, the survey response rate was low, which may affect the representativeness of the findings. Third, it is likely that at some health departments more than one individual completed the survey. This means some health departments may be over represented in the results while others may only be represented once. Further, because respondents were not asked to identify the state in which they work, it is not possible to confirm consistent responses within states if there were multiple respondents from that state. Lastly, because of the small number of respondents from state health departments, comparing survey results from state and local health department representatives was not informative.

### **Conclusions**

Most surveyed health departments had partnered with businesses at one point or another prior to or during the H1N1 response; however, the collaboration was more likely to occur at the local health department level than the state health department level. Public health agencies were interested in partnering with workplaces to provide another accessible and convenient type of location for people to be vaccinated, reaching a population that is generally healthy and often less likely to seek out the pandemic and seasonal influenza vaccine. Establishing strong and sustaining impactful relationships early on and prior to an emergency event is important; maintaining those relationships is crucial to a strong and valued partnership that would augment public health preparedness and response efforts. Additional funding and resources would be beneficial to improve these partnerships, including more staff to devote to nurturing these relationships and ensuring consistent and open communication.

## **Introduction**

The vaccination campaign during the 2009-10 H1N1 influenza pandemic was an unprecedented undertaking carried out as a public-private partnership. Vaccine was purchased by the federal government and allocated to states in proportion to population size. States enrolled vaccine providers and determined where vaccine would be shipped as it came available. States' engagement with workplaces for the H1N1 vaccination campaign varied in amount designated for workplaces and timing of directing vaccine to workplaces. This evaluation characterized the range of workplace involvement in the H1N1 vaccination campaign, including successes and challenges, factors influencing decisions to partner with workplaces, barriers to workplace involvement, and collaboration with public and private sector partners.

## **Methodology**

Key informant interviews were conducted with state and local public health agency staff, among those interviewed was public health representatives from Iowa, Maryland, Massachusetts, New York, South Carolina and Texas, and workplace representatives, including those from the National Business Group on Health and Microsoft.

A survey was developed based on the key informant interviews and administered to a sample of state and local health departments to assess their perspectives on partnering with workplaces. The survey was directed to senior deputies, directors of public health preparedness, and vaccine implementation leads (VIL) in 19 states: Alaska, California, Colorado, Iowa, Illinois, Indiana, Missouri, Montana, North Carolina, New Jersey, New York, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, Utah, Washington, Wyoming and New York City. These states were selected for geographic representation and representation from a variety of state sizes. Lastly, the sample was selected to ensure no overlap with states participating in the ASTHO H1N1 Influenza Public Health and Pharmacy Collaboration Survey. This was done so as not to burden potential survey respondents. In addition to those state health department representatives, local health department representatives were also sent the survey with the assistance of the National Association of County and City Health Officials (NACCHO). The survey was sent to a total of 382 state and local health agency staff; 90 represent states and 290 locals. The survey was administered over two months in late summer 2010.

## **Survey Results**

The survey was completed by 104 respondents for a response rate of 27 percent. Twenty-eight identified as state public health representatives (31 percent of state health agency staff contacted), 68 as local public health representatives (23 percent of local health agency staff contacted), 1 as "other" representative and 7 did not respond to the question. Figure 1 depicts the roles of the respondents during the H1N1 vaccination program. Of the 104 respondents, 22 percent were the health official, 16 percent were the preparedness director, 14 percent were the immunization program manager, 17 percent responded "other", and 31 percent did not respond. "Other" responses included administrator, health educator for immunization program, nursing director and pandemic influenza coordinator.

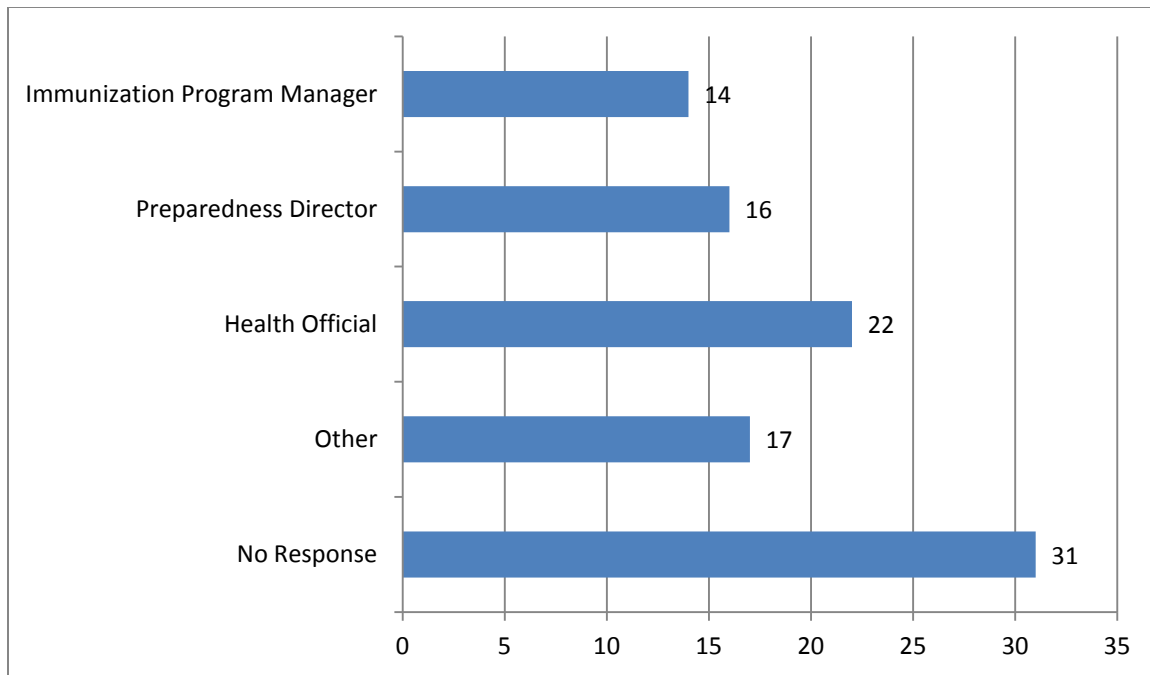


Figure 1: Job Titles/Roles of the Survey Respondents

Eighty-three percent of respondents had partnered with workplaces before the H1N1 Influenza pandemic, while 16 percent had not previously partnered with workplaces.<sup>1</sup> When this is analyzed for state and local public health respondents, 91 percent of local public health representatives indicated their health department had previously partnered with workplaces, while 63 percent of state public health representatives indicated a previous partnership with workplaces. Figure 2 illustrates the ways public health agencies partnered with workplaces prior to April 2009: 48 percent indicated workplaces were included in their pandemic planning activities or they were involved in workplaces' pandemic planning, and 16 percent indicated they provided health education materials for businesses to use in their workplace. Other ways public health agencies partnered with businesses included holding vaccination clinics for workplace; involving workplaces in mass dispensing planning; providing education on business continuity, planning and pandemic influenza; providing the seasonal influenza vaccine for workplaces; consulting with one another; or holding worksite wellness clinics for biometric screenings or wellness early detection.

<sup>1</sup> Percentages may not always sum to 100 due to rounding error or the possibility of multiple response selection by survey participants.

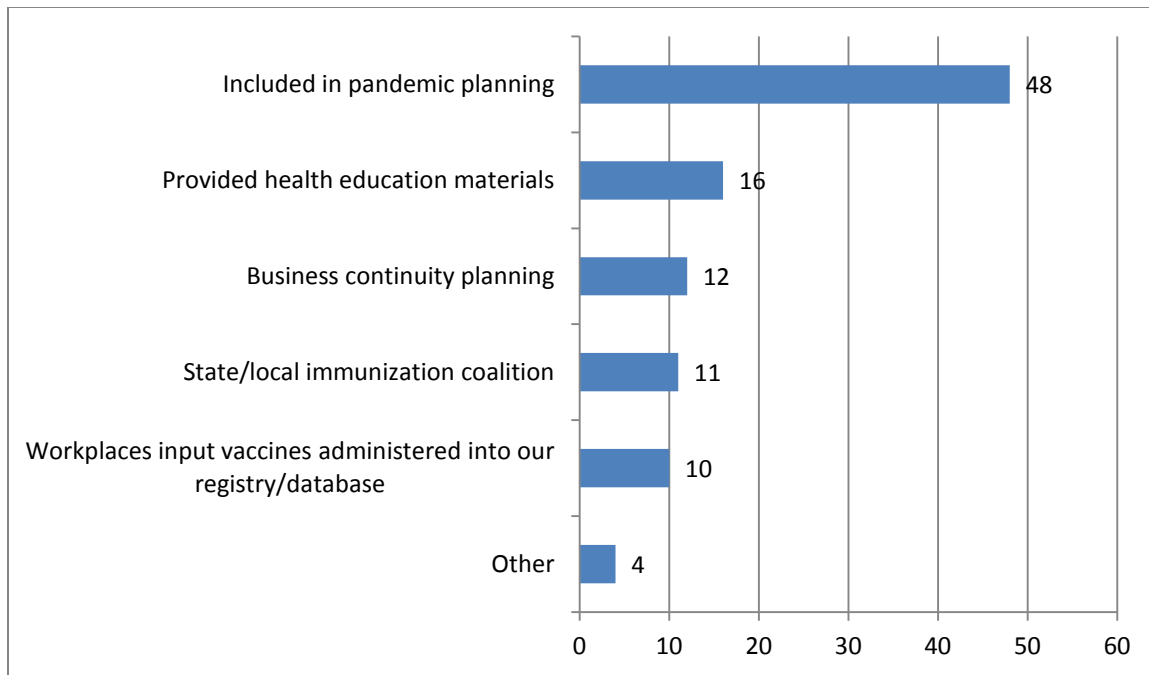


Figure 2: Ways Public Health Agencies Partnered with Workplaces Prior to April 2009

For those public health agency respondents who indicated they did partner with workplaces prior to the emergence of the H1N1 Influenza Pandemic strain in April 2009, partnerships began in 1990 or later, with the average around 2004.

The 16 percent of public health agency staff who had not previously partnered with workplaces provided several reasons for not doing so, including the opportunity did not arise (43 percent), preferred to work with other partners (24 percent), didn't know how to reach the right person (10 percent), had not considered it (10 percent), and did not want to (5 percent). Or workplace vaccination was a local responsibility.

Of the 104 respondents, 68 percent actively targeted workplaces as sites for the H1N1 vaccine, and 32 percent indicated they did not actively target workplaces. Thirty-nine respondents did not answer this question. Among those responding to the question, there was a distinct difference between state and local public health, with 57 percent of state public health representatives and 79 percent of local public health department representatives indicating their health department actively targeted workplaces as providers for the H1N1 vaccine.

The following questions were answered only by respondents who indicated their state or local health department actively partnered with workplaces during the H1N1 pandemic, and they represented a jurisdiction where workplaces directly ordered the H1N1 vaccine.

Workplace and employer involvement included a range of small to large companies and corporations, providing convenient access for people who otherwise may not expend time and effort to find the vaccine. Figure 3 illustrates the size of the workplaces that health departments partnered with for the

H1N1 vaccine distribution. Health department partnerships with small businesses (54 percent) and mid-sized businesses (66 percent) were more common than with large corporations (29 percent).<sup>2</sup> In addition to varying sizes, respondents also indicated that their health department partnered with a variety of workplace types. These include other state and local agencies (30 percent), private sector businesses (26 percent), nonprofit organizations (45 percent) and schools or universities where vaccine was specifically provided for staff and faculty (21 percent).

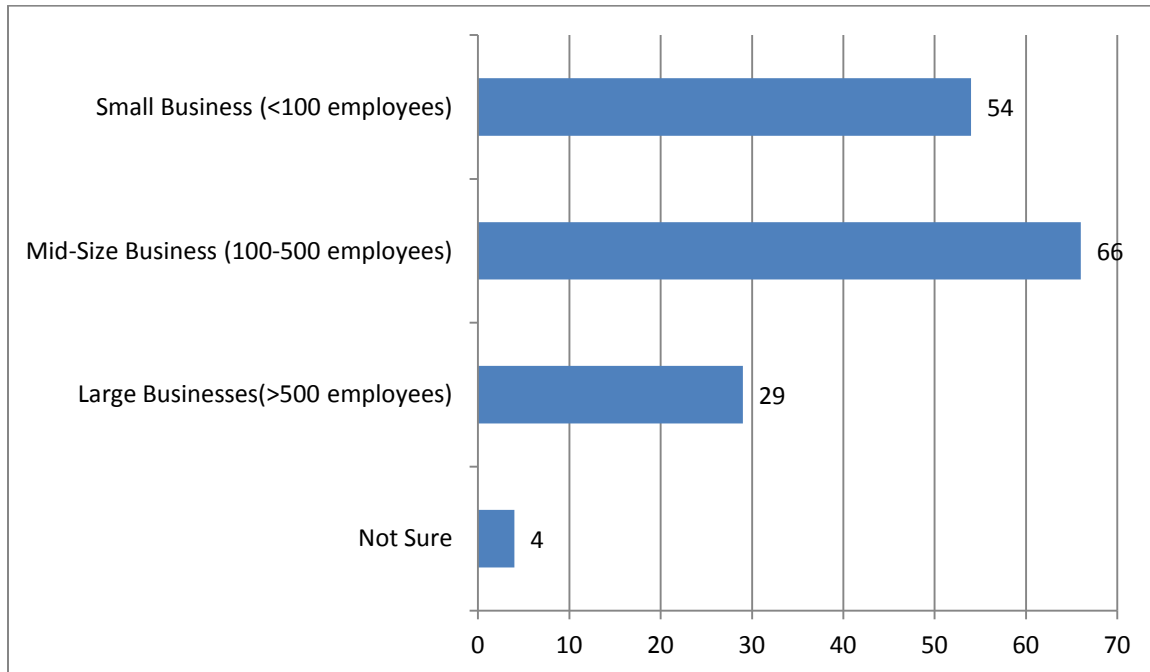


Figure 3: Sizes of Workplaces Health Departments Partnered with for H1N1 Influenza Vaccine Distribution

When asked about the primary consideration for choosing which workplaces to partner with, 15 percent responded employee demographics, 5 percent responded geographic location and 15 percent responded a previous relationship. Twelve percent responded other reasons, including the number of employees or size of the workplace, employees that met priority groups for vaccination, and workplaces that had the ability to administer vaccine. Fifty-three percent responded that all workplaces that requested vaccine were selected.

Respondents were then asked, “When your agency first sent H1N1 vaccine to workplaces, did it do so to targeted areas or any workplace?” Among the 55 responses, 49 percent were unsure, 33 percent sent the vaccine to targeted areas, and 18 percent sent the vaccine to any workplace. For those who sent the H1N1 vaccine to targeted areas, most indicated they did so based on the CDC guidelines for priority groups, hospitals and doctors’ offices in order to immunize health care workers, larger employers, those that reported having pregnant women, and those with a current relationship.

<sup>2</sup> Respondents were able to check all categories which apply so percentages exceed 100 percent.



## Findings from an Evaluation of Public Health and Workplace Collaborations During the 2009-10 H1N1 Influenza Pandemic

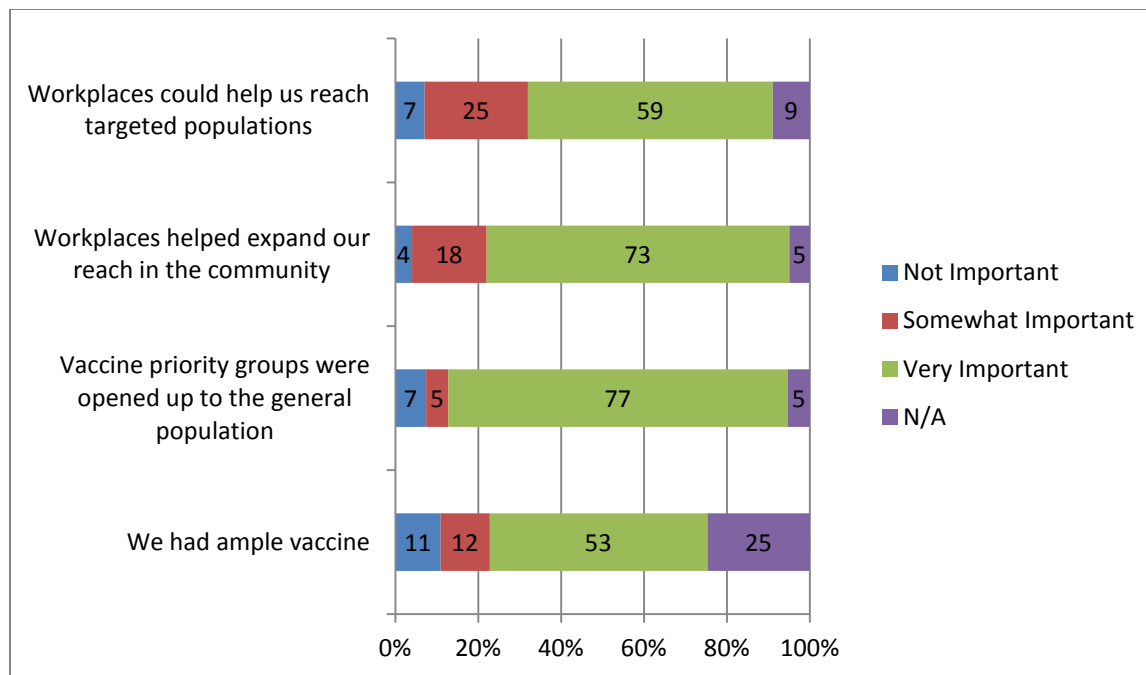
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Respondents were asked to indicate in which month workplaces first began to receive H1N1 vaccine. Among the 28 state health agency respondents, 50 percent indicated October 2009, 10 percent November 2009, 30 percent December 2009, and 10 percent said January 2010. Among the 68 local health agency respondents, 18 percent indicated October 2009, 23 percent November 2009, 45 percent December 2009 14 percent in January 2010.

The high proportion indicating that they directed vaccine to workplaces in October can most likely be explained by some respondents interpreting questions about workplace vaccination to include vaccine directed to health care facilities for vaccination of health care personnel. This is consistent with responses described in the preceding paragraph related to sending vaccine to targeted areas such as hospitals and doctor's offices to immunize health care workers.

Respondents were asked to rate the importance of selected factors in their agency's decision to direct the H1N1 Influenza vaccine to workplaces at the time that it did. As depicted in Figure 4, having ample vaccine, ability of workplaces to reach target populations, and ability of workplaces to expand reach into the community were very important factors. A slightly lower, but still high proportion, reported that expansion of vaccination to the general population was a very important factor. Eighty five percent of respondents who indicated that vaccine was first sent to workplaces in October, compared with 50 percent of those who sent it out after October, responded that workplaces could help them reach targeted populations. This finding is consistent with a subset of respondents, including vaccine directed for vaccination of health care workers in their responses about workplace vaccination.

All other survey responses were compared for those who reported first ordering vaccine for workplaces in October compared with November through January. Responses were not different between the two groups, so results are not presented separately.



*Figure 4: Important Considerations in an Agency's Decision to Direct the H1N1 Influenza Vaccine to Workplaces at the Time It Did (%)*

Figure 5 depicts the relative importance of factors influencing their agency's decision to partner with workplaces. The factors most frequently described as very important included: they wanted the vaccine to be available wherever possible (84 percent), workplaces serve as an accessible and convenient location for people to get vaccinated (75 percent), workplaces could help them reach targeted populations (75 percent), and workplaces helped expand reach in our community (74 percent).



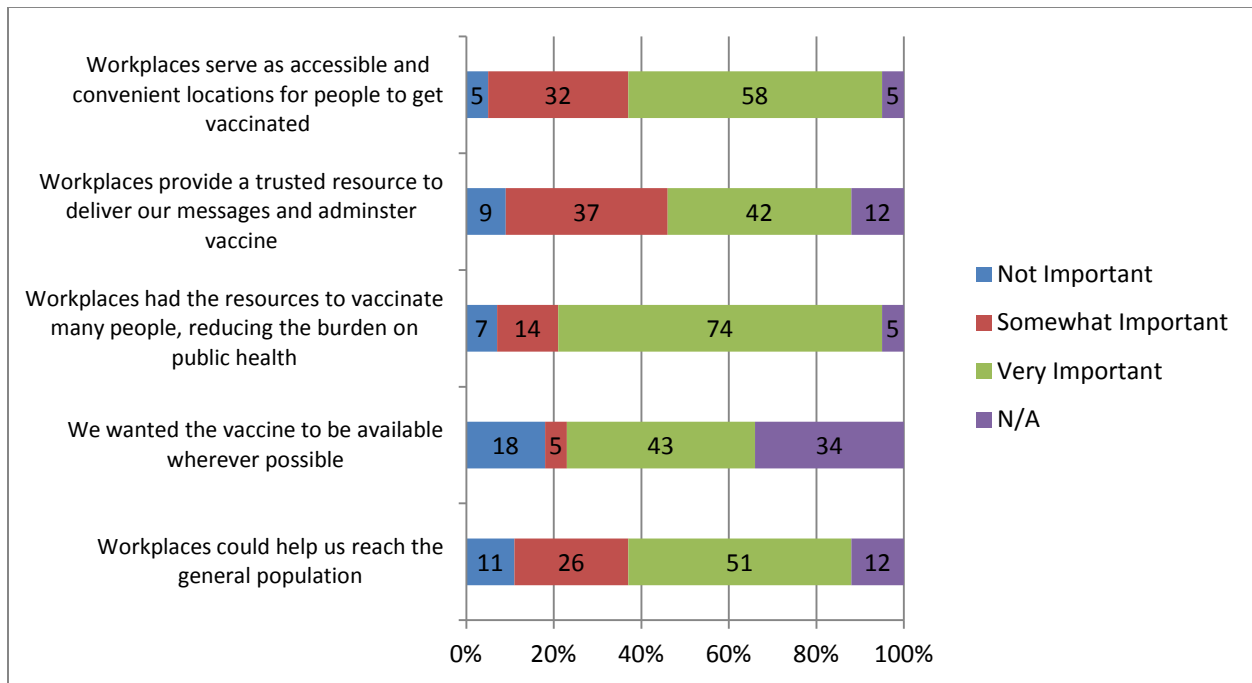


Figure 5: Importance of Each Factor in His/Her Agency’s Decision to Partner with Workplaces to Administer the H1N1 Influenza Vaccine

An overwhelming 92 percent of respondents indicated workplaces were required to report doses administered to health departments. Among those responding to the follow-up question: 31 percent indicated they required doses reported via the state/local immunization registry, 29 percent via a specified system, and 23 percent via a nonspecified system (“however workplaces were best able to report”). Only 8 percent did not require workplaces to report doses administered.

Respondents indicated that workplaces were required to report doses administered; were asked to rate how much of a problem, if any, certain factors were in obtaining doses; and administered data from workplaces. The results are highlighted in Figure 6 below. The factors that were identified as larger issues include: additional resources being required for followup to obtain the data, workplaces not reporting in a timely fashion, and incomplete data being collected. Other identified problems were lack of Internet access to report data scanned from system that didn’t work, lack of immunization mandate for the state, and uneven reporting across workplaces.

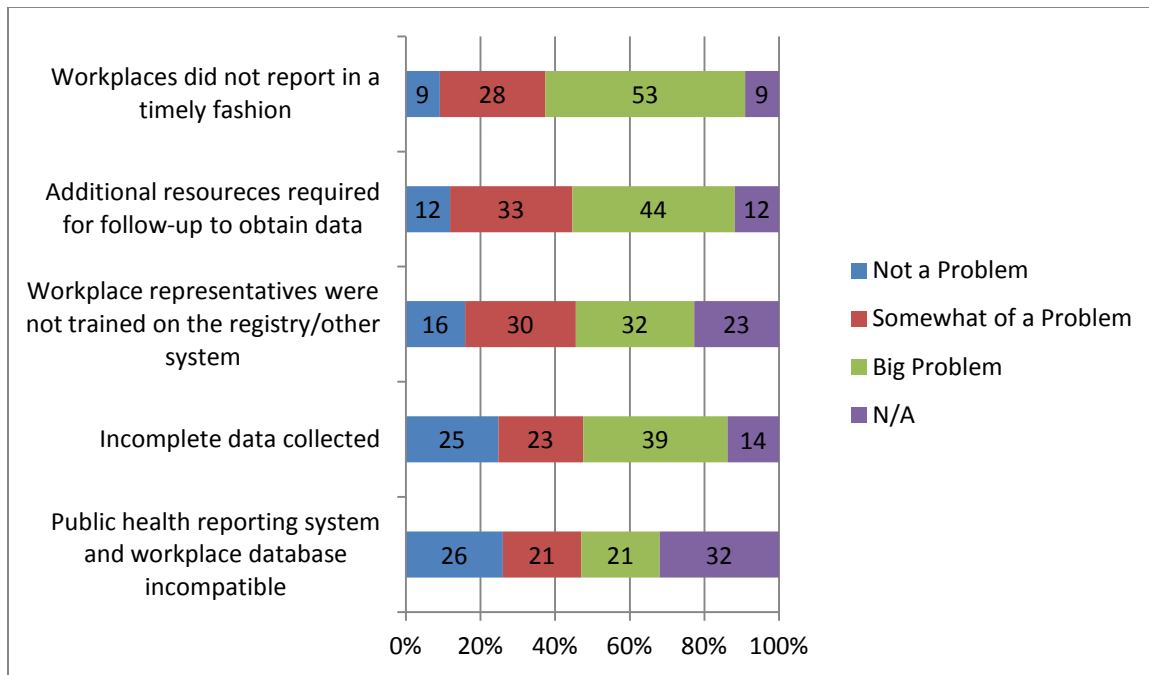


Figure 6: Factors that were a Problem, if any, in Obtaining Doses Administered Data from Workplaces

The respondents that indicated reporting doses administered was required were also asked how helpful a number of factors were in facilitating data reporting to the health department. The results are illustrated in Figure 7. The factors most often identified as helpful were having workplaces trained on the data points needed and the immunization registry (70 percent very or somewhat helpful) and having an agreed-upon minimum data set (50 percent very or somewhat helpful).

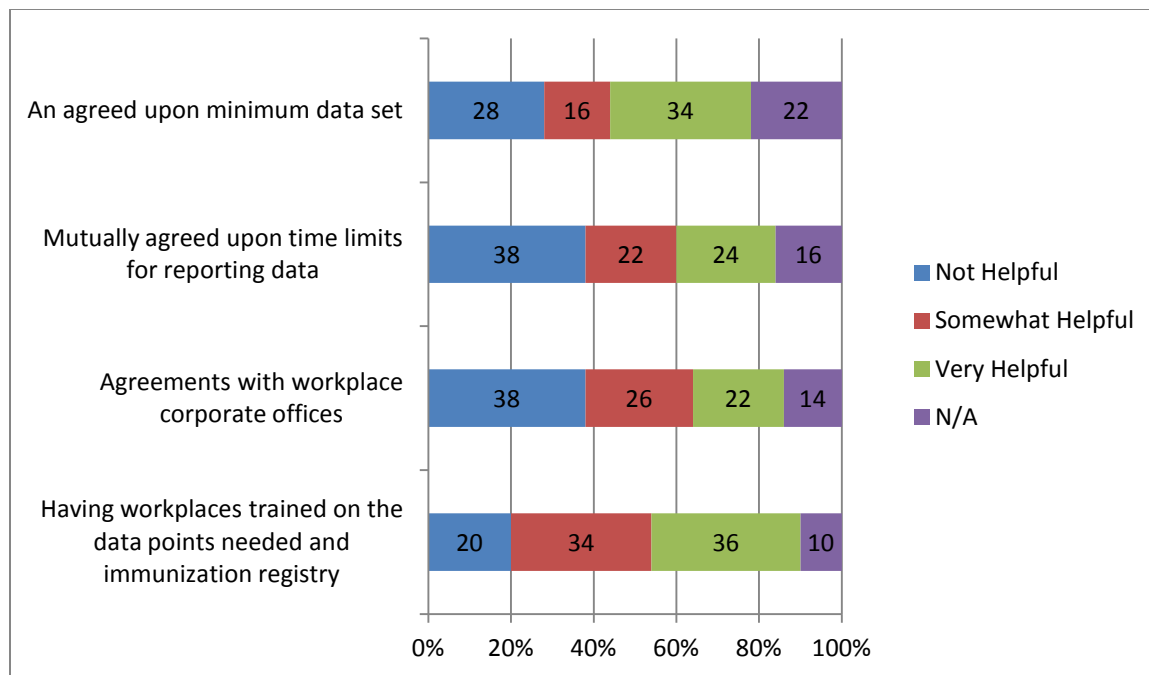


Figure 7: How Helpful Each Factor Was in Facilitating Data Reporting to the Health Department during a Pandemic

Respondents were also asked to rate barriers to workplace involvement in providing H1N1 vaccinations (Figure 8). The barriers most frequently cited were insufficient training on the reporting system, reporting issues, and not having a relationship in place already (59 percent, 52 percent and 49 percent reporting these to be a big barrier or somewhat of a barrier, respectively).

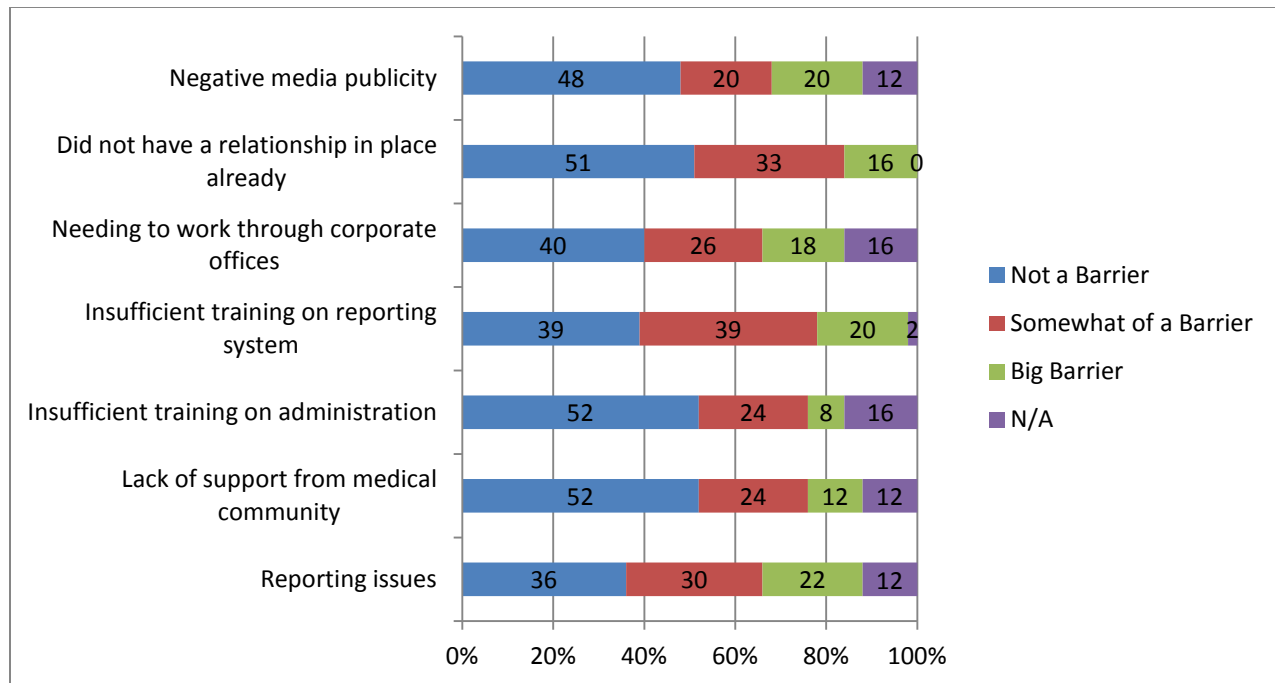


Figure 8: How Much of a Barrier Each Factor Was to Workplace Involvement in Providing H1N1 Influenza Vaccinations

Respondents who actively partnered with workplaces during the H1N1 response were also asked if they believed workplaces would be able to adhere to prioritization recommendations for vaccine administration (i.e., ACIP recommended target groups for limited vaccine) both prior to H1N1 and after H1N1. Prior to H1N1, 49 percent of respondents believed workplaces would be able to adhere to prioritization recommendations, and after H1N1, 55 percent believed workplaces would be able to adhere to prioritization recommendations (Figure 9).

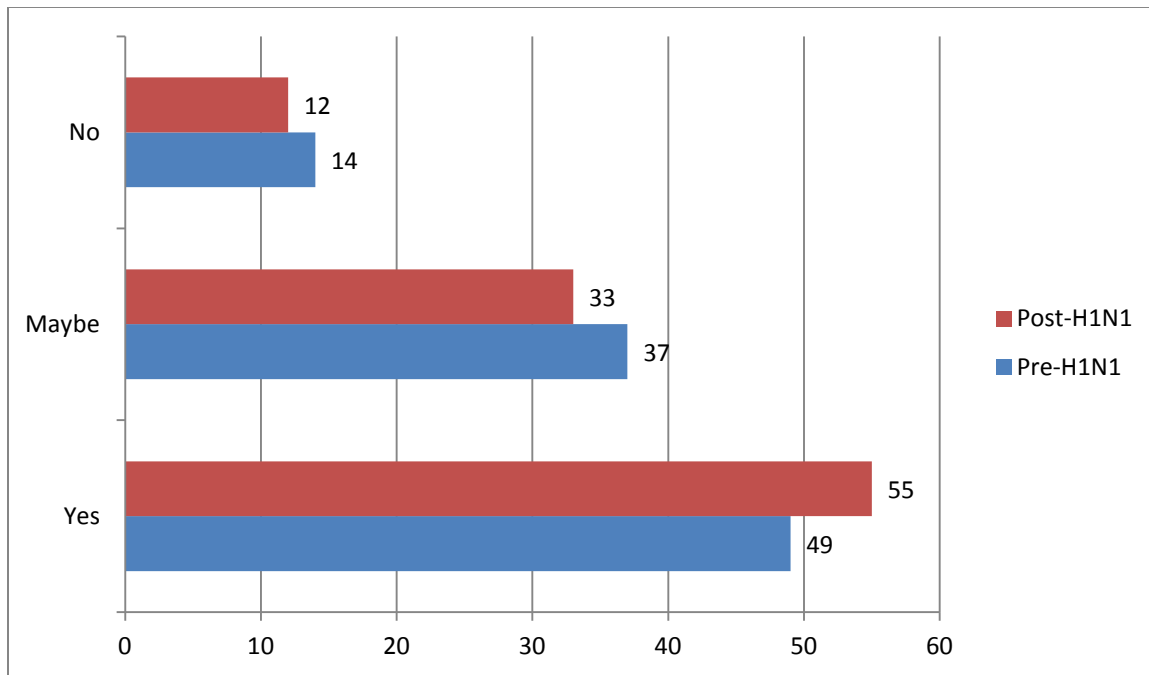


Figure 9: Respondents Believe that Workplaces Would Be Able to Adhere to Prioritization Recommendations for Vaccine Administration Prior and After H1N1 (%)

For those who thought workplaces would not or might be able to adhere to prioritization recommendations for vaccine administration *prior* to H1N1, respondents answered as follows: Though they believed some workplaces would recognize the importance of vaccinating target groups, they also believed others would vaccinate whoever came in. Some were fearful the vaccinators would cave into pressure from their patients and vaccinate those not initially in the target groups. Some believed workplaces refused to follow priority groups; workplaces are the same as other providers, once the vaccine is in their hands it is out of health department control; and workplaces are subjected to their own internal pressures and priorities.

For those who thought workplaces would not or might be able to adhere to prioritization recommendations for vaccine administration *after* the H1N1 response, written-in responses included: corporate guidelines contradicted reporting and billing procedures and this won't change in the future; while hospitals and clinics did a great job with vaccinating priority populations, other sites (corporations) shouldn't receive vaccine until priority populations have been vaccinated; corporations or businesses may not understand the needs of a priority group in the sense of public health; it depends on the situation; most worksites lack health expertise; often no controls regarding who receives vaccine; some offices obviously did not stick to the protocol but most did though many didn't receive any until it was available to all; they are probably more likely to adhere to prioritization recommendations, but we cannot be 100 percent sure; and workplaces are interested in keeping all their employees healthy and have no motivation to target certain groups.

Regardless of whether their public health agency partnered with workplaces during the H1N1 influenza response, all survey respondents were asked about future partnerships with workplaces. Of the 81

respondents who answered, 69 percent indicated they would actively partner with workplaces in the future based on their H1N1 experiences, 22 percent indicated they might partner with workplaces, and 9 percent indicated they would not. Figure 10 below depicts in what capacities those who plan to partner with workplaces in the future plan to do so. Most respondents indicated they would partner on emergency planning as well as seasonal flu vaccination campaigns. Other responses included all-hazards training, flu clinics during workplaces hours at businesses, and tobacco policies and obesity issues.

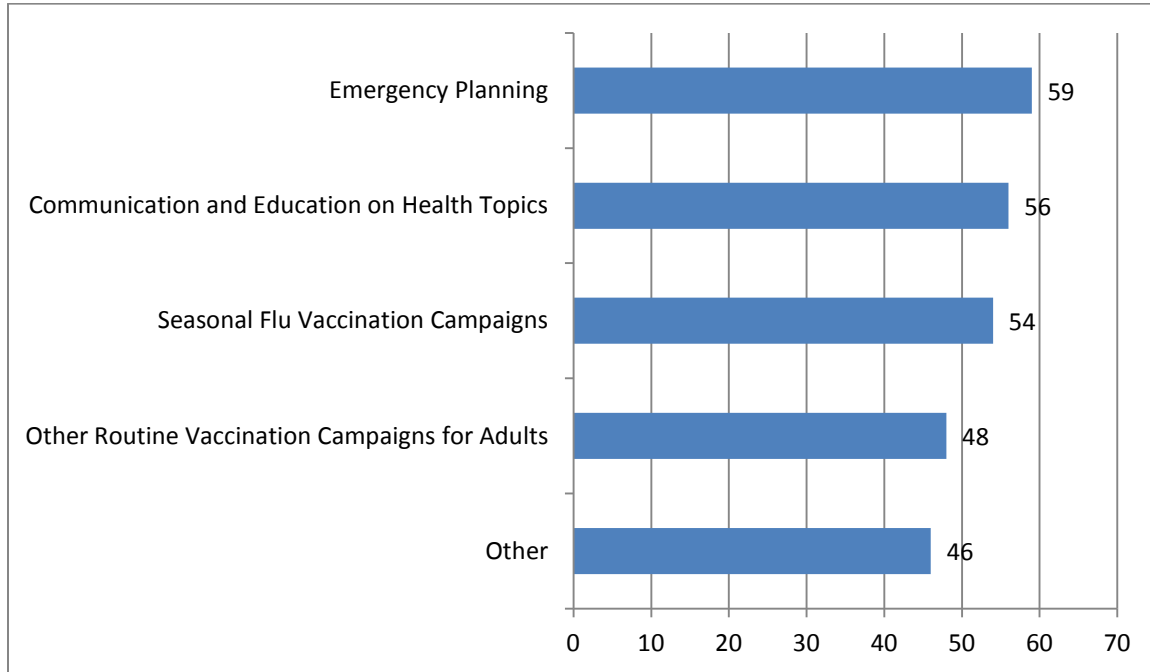


Figure 10: The Ways in which Respondents Indicated their Health Agencies Plan to Partner with Workplaces in the Future

For the 9 percent who do not plan to actively partner with workplaces in the future, three respondents indicated their health department did not have the staffing resources to maintain the partnership, while 14 did not see an added benefit. There were five other responses, which included lack of funding, involvement with seasonal flu vaccine being limited, involved in distribution but not administration of vaccine, and helping workplaces order their own vaccine and administer it themselves without health department involvement.

Lastly, respondents were asked to describe the top three needs for improving partnerships with businesses in both an *everyday capacity* to administer vaccines, such as the seasonal influenza vaccine or to provide health education messages. One of the top needs for improving partnerships with businesses was funding or resources, with over 20 respondents indicating the importance of funding. The written responses ranged from administrative support for businesses, costs for the vaccine, incentives for partners, funding resources at the provider/workplace level, and sustainable public health funding to allow health department staff to establish and build partnerships. Communication was another top need identified by 16 respondents. Responses included improving communication lines with

businesses, communicating via websites, and timely and efficient communication strategies. Other top responses included:

- Staff (13 responses), including both health department and business staff.
- Educating businesses on the value of the partnership and how to administer and store vaccine (11 responses).
- Reporting (from easier reporting into databases by businesses and improving registries, to encouraging businesses to report weekly) (10 responses).

Less frequently cited top needs included availability of adequate vaccine supply (seven responses), ability of providers to recoup an administrative fee (two responses), identifying workplaces to partner with (six responses), buy-in and interest from private businesses and corporations (six responses), developing a strong partnership (five responses), and time available to employees (two responses).

Top needs for improving partnerships with businesses in a future *pandemic or other emergency capacity* were similar. The top identified need was communication and education, including better ways to communicate other than through email or fax, messaging to employees and families, better education of local physicians, quicker and better publicity campaigns and establishing communication lines that are accessible 24 hours a day, 7 days a week. Nineteen respondents indicated communication and education were among their top three needs in a future pandemic or other emergency situation. Funding and staffing were also top needs in an emergency, receiving 11 and 12 responses respectively. Emergency planning was identified as a top need by 12 respondents; these responses included having written plans in place, engaging in prepandemic communications and planning in addition to emergency planning, having an active local emergency planning committee with participation from local business representatives, developing standard operating procedures for health departments and businesses, and conducting table top exercises. Other identified needs included improving the vaccination registry and reporting (6 responses), time (2 responses), adequate vaccine availability (3 responses), improved discussion to ensure prioritization of target groups is adhered to (4 responses), corporate buy-in and consistency (4 responses), interest from businesses (2 responses), improved and on-going partnerships (11 responses), and identifying businesses to partner with (2 responses).

### **Limitations**

There are several weaknesses to this evaluation. First, although the original intent was to distribute a survey to both public health and workplace representatives, fielding the survey to workplaces in a manner that would maintain their anonymity was not feasible. Therefore, the goal of this evaluation was reworked to focus only on the public health perspective. However, it is clearly recognized that the perspective of businesses and workplaces is absent from this evaluation and could be very useful in providing additional insights, perspectives and recommendations to improve future partnerships. Second, the survey response rate was low, which may affect the representativeness of the findings. Third, it is likely that at some health departments more than one individual completed the survey. This means some health departments may be over represented in the results while others may only be represented once. Further, because respondents were not asked to identify the state in which they work, it is not possible to confirm consistent responses within states if there were multiple respondents from that state. Lastly, because of the small number of respondents from state health departments, comparing survey results from state and local health department representatives was not informative.

## Conclusions

Most surveyed health departments have partnered with businesses at one point or another prior to the H1N1 response, though the collaboration is more likely to occur at the local health department level than the state health department level. These partnerships vary greatly depending on the health department and the staffing and resources available, with a range of activities, from holding a single vaccination clinic to participating in a coalition that meets regularly to plan for emergencies and wellness activities over the span of years. Partnerships most often involve health education and messaging and pandemic or emergency planning activities.

The limited supply and availability of the H1N1 vaccine early on during the vaccination campaign hampered public health efforts to collaborate with businesses, and the general population became less interested in the vaccine by the time it became readily available. However, public health agencies were interested in partnering with workplaces to provide another accessible and convenient type of location for people to be vaccinated, reaching a population that is generally healthy and often less likely to seek out the *seasonal* and pandemic influenza vaccine.

Overall, workplaces provide another important location to vaccinate people. Establishing and building relationships early on and prior to an emergency event is important; maintaining those relationships is crucial to a strong partnership. This can be difficult, especially given the range of business sizes, interest and belief in the importance of public health services and the role workplaces could play in this regard, and resources needed and available to both public health and workplaces to successfully execute workforce vaccination initiatives. Additional funding and resources would be beneficial to improve these partnerships, as would more staff to devote to nurturing these relationships and ensure consistent and open communication.

The H1N1 vaccination campaign was an impressive undertaking. Workplaces represent yet another venue by which priority populations, such as pregnant women and persons aged 25-64 with health issues, and the general public can be reached with vaccination opportunities.