

ASTHO H1N1 Policy Barriers Project State Meetings

Summary and Analysis

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Introduction

A novel influenza virus emerged in April 2009 and by June 2009 had created such widespread concern over its potential to cause global illness and death that the World Health Organization (WHO) declared an influenza pandemic. The novel H1N1 pandemic prompted a massive and coordinated response from the U.S. public health system. It provided the first opportunity for the public health system to implement the national response strategy and the states' pandemic influenza operational plans in a real-world setting. While the nation's combined response efforts were commendable, there was also acknowledgment that the policies and plans did not fully anticipate and compensate for the specific events and circumstances which unfolded.

The Centers for Disease Control and Prevention (CDC) funded the Association of State and Territorial Health Officials (ASTHO) and the National Association of County and City Health Officers (NACCHO) to conduct a special project, *"Assessing Policy Barriers to Effective Public Health Response to the H1N1 Influenza Pandemic,"* to systematically identify and assess key policy barriers—both legal and non-legal—encountered during the H1N1 response and offer a course of action to address these barriers. The goal of the project was to advance continued strengthening and overall improvement in the national public health system's collective capabilities to effectively respond to future pandemics and other emerging threats by addressing the barriers encountered during the H1N1 response.

The H1N1 Policy Barriers Project differed from typical after-action reviews (AARs), which look at both areas of success and areas for improvement, by focusing almost exclusively on policy and legal barriers. As such, the project did not actively seek out information about successful elements of the H1N1 response, which were many. To the extent that states' provided information about H1N1 response successes, however, it was captured in the project's various elements.

It is also important to note that the H1N1 Policy Barriers Project was not intended to be a substitute for states' and territories' H1N1 AARs nor was the timing such to capture and consider the states' and territories' AAR findings for possible inclusion in this report. All jurisdictions are in the process of completing full AARs and other evaluations in the aftermath of H1N1.

Project Elements

There were four elements to ASTHO's H1N1 Policy Barriers Project:

- Environmental scan of in-progress reviews, after-action reviews, and other evaluations of H1N1 response activities;
- Survey of state and territorial health officials and key health agency staff;
- H1N1 response reviews conducted in five selected states; and
- H1N1 Policy Barriers Project Advisory Panel to review findings from the first three elements, identify top priorities for action, and make recommendations for mitigating the priority barriers.

Using all of these elements, ASTHO created a composite picture of the barriers identified, their impacts, and states' suggestions for mitigating the barriers' affects with the goal of improving the outcomes of future public health responses. This report is a synthesis of the many observations, comments and professional opinions on policy barriers encountered which have been shared by contributing state and territorial public health officials; it is not being represented as a consensus of the practice community.

ASTHO retained Logan Circle Policy Group LLC to assist with each phase of the project, write reports analyzing each of the project elements, and write a comprehensive final project report for ASTHO that compiled and analyzed the data and recommendations from each phase. This document, *ASTHO H1N1 Barriers Project State Meetings: Summary and Analysis*, is one of the project element reports.

Defining “Policy Barrier”

For the purposes of the project, ASTHO defined a “policy barrier” as a plan, course of action, principle or procedure adopted by a governmental entity which impeded or impaired an agency’s/jurisdiction’s ability to more effectively respond to the H1N1 public health emergency. Barriers described through this project warrant remedial consideration since they will most likely recur in a future emergency. A policy barrier can be of a legal (e.g., a federal or state statute, regulation, or other legal authority) or non-legal (e.g., federal or state administrative order, agency guidance) nature, and of national, regional or intrastate scope. While important, it was not the primary intent of this project to capture issues of concern dealing with the operational, logistical, and administrative elements of the response; such issues were considered to the extent they revealed underlying policy and legal barriers.

To assist respondents in identifying potential policy and legal barriers, ASTHO created a list of policy barrier categories. The list provided was neither exhaustive nor was it intended to lead or narrow respondents’ identification of barriers; it was intended to prompt thought and stimulate recall of important issues that arose during states’ H1N1 response activities. (See Table 1 below for the complete categories list.)

The same list of categories was used in all project activities (scan, survey, meetings, advisory panel) to provide a common framework in which to compile and analyze the large amounts of data gathered about the public health system’s response to H1N1.

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TABLE 1

ASTHO H1N1 Policy Barriers Project Potential Policy Barrier Categories

ICS, Command and Control, and Authority

- H1N1 Response Command
- Emergency Declarations
- School Dismissal/Closure and Community Mitigation Measures
- Quarantine/Isolation/Travel Restrictions
- National Guidance/Standards
- Liability Protections
- PREP Act (General)

Surveillance, Epidemiology, and Laboratory Services

- Laboratory Services
- Epidemiology
- Surveillance Data Collection/Analysis
- Reporting of Estimated Cases, Deaths and Hospitalizations
- Surveillance Guidance/Policies
- Surveillance, Epidemiology, and Laboratory Services (General)

Medical Care and Countermeasures

- Identification/Formulation
- Manufacture
- Stockpiling and Distribution
- Commercial Supply Chain Visibility
- Countermeasure Response and Administration (CRA) System
- Delivery/Administering
- Emergency Use Authorization
- PPE/Infection Control Procedures and/or Requirements (including N95 Respiratory Protection)
- Adverse Events Reporting
- EMTALA and HIPAA
- HAvBED Reporting
- Countermeasures Injury Compensation
- Medical Care and Countermeasures Guidance/Policies
- Medical Care and Countermeasures General

Workforce, Capacity, and Infrastructure

- Flexing Existing Staff
- Surge Capacity (e.g., public health, health care, pharmacy)
- Volunteers
- Workforce Mandates (e.g., vaccination)
- Workforce/ Capacity/Infrastructure (General)

National Vaccination Campaign

- Formulation and Manufacture
- Allocation Approaches
- Stockpiling and Distribution
- Delivery/Administering
- Reporting of doses administered (vaccine and/or antivirals); Tracking for recall of pediatric second dose vaccination
- Liability Protection
- Vaccination Authority (e.g., efforts to expand the pool of vaccinators by including dentists or a broader age range for pharmacist vaccination)
- Inventory Management
- Reimbursement for Services (including CMS Medicaid and CHIP)
- Adverse Events Reporting
- Coverage Determination and Reporting
- Vaccination Guidance/Policies
- Vaccination (General)

Federal/State/Local Coordination

- Categorical Grant/Cooperative Agreement Flexibility
- Common Operating Picture/Platform
- Public Health and Health Care Sector Interaction
- Stakeholder Engagement
- PHER Grants
- Technical Assistance
- Stafford Act Applicability and Provisions
- Coordination (General)

Communication

- Media relations and ad campaign efforts
- Public outreach
- Stakeholders
- Policy Makers
- FOIA Requests and Disposition
- Communication (General)

Other

- Issues not arising under other thematic areas
- Unintended Consequences/Conflicts (areas in which a law/policy to address one issue had unintended consequences/conflicts in another area).

I. Overview of State H1N1 Review Meetings

Five states participated in the H1N1 response reviews: Arizona, Colorado, New York, North Carolina, and Wisconsin. ASTHO invited these states to participate in the project based on their geographic distribution and range of experiences with H1N1. Participating states agreed to hold a review meeting and submit a written report to ASTHO. The states received a small stipend from ASTHO to cover meeting costs.

It is important to note that the ASTHO H1N1 Policy Barriers Project reviews were not intended to be a comprehensive after-action review in which both successes and failures are evaluated. The focus of this project was to identify policy and legal barriers encountered in the H1N1 response with the goal of removing or alleviating them in future public health emergency response activities. As such, participating states were not required to include information about successful elements of the H1N1 response, which were many. To the extent that states' provided information about H1N1 response successes, however, this information has been included. Finally, the states' reports for the ASTHO H1N1 Policy Barriers Project should not be considered to be the states' H1N1 after-action reports required under other federal grants/cooperative agreements. The states will be releasing these separately at a later date.

Meeting Guidance and Parameters

ASTHO provided the states with the following guidance regarding the content and format of their meetings. The guidance was provided to assure sufficient structure to yield a desired level of consistency and uniformity among the participating states, while allowing the states latitude in designing an approach and methodology to meet their individual needs and circumstances. (The full text of the guidance document is included in Appendix 1 of this document.)

Planning and Scheduling Guidance: Several key elements were to be considered:

- Reviews were to be conducted by April 30, 2010.
- Reviews were to be a day-long event or a reasonable portion thereof, in order to fully discuss and deliberate the issues.
- An in-person event was preferred to the extent practicable, but ASTHO recognized that might not have been feasible. As such, teleconferences, videoconferences, and/or webinars were suitable alternatives.
- Reviews could be a free-standing event or part of larger previously planned H1N1 after-action reviews.
- Invited participants were to be of sufficient position to have a working knowledge of and exposure to the policies that were operational during the H1N1 response.
- Invited participants were to represent a broad range of stakeholder interests including local public health and tribal entities; cross-sector agencies such as education, law enforcement, and emergency management; political leadership at a state and local level; health care providers; community and faith-based organizations; and the general public.

Documenting Policy Barriers: Participating states were provided with the list of categories (as seen in Table 1 above) to facilitate the reviews and assist in documenting their findings. ASTHO requested that, for each policy barrier identified, states collect the following information:

- A clear and succinct description/definition of each barrier and the legal and non-legal aspects of the barrier;
- How the barrier impacted/impeded the public health response and its consequences;
- What remedies or “work-arounds” were pursued and an assessment of their effectiveness; and
- Recommendations for corrective action(s) to remove the barrier.

ASTHO did not expect the states to generate comprehensive lists of every federal and state, legal and non-legal barrier they encountered. ASTHO sought the states’ perspectives on what they identified as the three most significant barriers encountered warranting immediate action in each of the following categories:

- ICS, Command and Control, and Authority
- Surveillance , Epidemiology, and Laboratory Services
- Medical Care and Countermeasures
- National Vaccination Campaign
- Workforce, Capacity, and Infrastructure
- Federal/State/Local Coordination
- Communications
- Other

While not a requirement of their project with ASTHO, each participating state was encouraged to also create a more detailed written record of the H1N1 barriers review proceedings for the state’s future reference.

Overview of State Meetings

All of the five invited states agreed to participate in the project. Profiles of each state’s meeting and their reports are provided below. As permitted under the project guidance, each state structured its meetings differently and included the ASTHO review as part of the state’s larger H1N1 response evaluation activities.

State Meeting Profiles¹

Arizona

Meeting Date and Format:	<ul style="list-style-type: none"> • April 21, 2010 • One day meeting
Participating Organization Types:	<ul style="list-style-type: none"> • State Agencies: education, emergency management, health, health care finance • Local Governments: About 15 • Stakeholders: hospitals, medical board, pharmacy board, state hospital/healthcare association • Federal Agencies: Indian Health Service
Participants:	<ul style="list-style-type: none"> • About 60 from across the state

¹ The state meeting profiles were derived from information presented to ASTHO in the state reports. These profiles may or may not fully capture the nature of the state meetings or the types and numbers of participants involved.

Colorado

Meeting Date and Format:	<ul style="list-style-type: none">• April 26, 2010• One day meeting
Participating Organization Types:	<ul style="list-style-type: none">• State Agencies: agriculture, education, health, mental health• Local Governments: About 25• Stakeholders: environmental health, health care systems, hospitals, hospital associations, medical societies, universities• Federal Agencies: n/a
Participants:	<ul style="list-style-type: none">• About 100 from across the state

New York

Meeting Date and Format:	<ul style="list-style-type: none">• April 26, 2010• One day meeting focusing on state-local response
Participating Organization Types:	<ul style="list-style-type: none">• State Agencies: Health• Local Governments: 58 local health commissioners and key staff• Stakeholders: hospital associations, tribal nations• Federal Agencies: n/a
Participants:	<ul style="list-style-type: none">• About 75

North Carolina

Meeting Date and Format:	<ul style="list-style-type: none">• April 27, 2010• One day panel discussion meeting
Participating Organization Types:	<ul style="list-style-type: none">• State Agencies: emergency management, Governor's office, health, state laboratory• Local Governments: About 6• Stakeholders: hospital association, medical society, universities• Federal Agencies: n/a
Participants:	<ul style="list-style-type: none">• About 30

Wisconsin

Meeting Date and Format:	<ul style="list-style-type: none">• Wisconsin had already completed its after-action review meetings before becoming involved with the ASTHO project• Instead, the state conducted a series of key informant interviews and focus groups between March 22 and April 16, 2010• The state also referenced previously conducted state H1N1 surveys, after-action reviews and debriefings
Participating Organization Types:	<ul style="list-style-type: none">• State Agencies: agriculture and consumer protection, commerce, education, elderly, emergency management, law enforcement, legal, legislative, mental health, military affairs, transportation• Local Governments: local health departments, boards of health, law enforcement• Stakeholders: K-12 education, clinicians, hospital association, infection control, long-term care providers, tribal nations, universities

Number of Participants:	<ul style="list-style-type: none"> Federal Agencies: law enforcement
	Key informants/focus groups: 35 categories of stakeholders identified ²
	Surveys: Over 300 responses across three internal/external health agency surveys

State Reports

All of the states provided ASTHO with a written report that identified barriers and recommendations. Two of the states prioritized the barriers within each of the eight identified categories; three of the states did not prioritize their barriers. Some states identified more than three issues per category; some states provided less than three.

For the purposes of this document, *ASTHO H1N1 Policy Barriers Project State Meetings: Summary and Analysis*, the state reports have been assigned a randomly chosen identifying letter (e.g., State “A”, State “B”, etc.) and any identifying information has been redacted from the contents. This was done to preserve candor of their responses and protect any sensitive information, while allowing full use of the insights and recommendations generated by the states. The summaries of each state report are contained in Section IV, “*Summaries of State Meeting Reports.*”

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² The actual number of interviewees/participants may be more or less.

II. Summary of State Meeting Issues/Recommendations

Section II summarizes the barriers, successes and recommendations from all of the five states' reports. Some important points should be noted when reviewing this section: First, the information compiled in Section II does not necessarily represent ASTHO's views or the final views of the participating states' about their H1N1 experiences. Next, this document does not contain a comprehensive listing of all the barriers encountered by the five participating states. The states were requested to limit their information to their top three priority issues in each of the eight categories identified by ASTHO. Some of the states provided more than three per category, some provided less. Any information provided by the states in their reports has been summarized in this section. Finally, the below summary provides a composite view of the issues and recommendations raised collectively in the five state reports; it does not address all aspects of an issue as it may have been encountered by all states and territories.

ICS, Command and Control, and Authority

ICS, Command and Control, and Authority Generally

Overall the state meetings reflected the central role that the federal government played in providing the states with recommendations for responding to the H1N1 outbreak. Some states viewed the federal recommendations as tools for the states to follow; others saw them as aids to be used by states in developing their own recommendations/guidance pursuant to state conditions, policies and authorities. One report viewed the role of federal guidance as: "Federal guidance and regulatory directives should be evidence- or scientific-based, unless federal recommendations are relaxed to allow state and local government the latitude to determine alternative planning."

One state acknowledged that "[p]re-existing legislation related to emergency powers for the state health director and liability protection for providers and businesses assisting with a disaster were utilized and allowed for efficient and effective use of resources" during the H1N1 response. States also acknowledged the leadership and direction established by their Governor's offices, as well as state H1N1 task forces in some states, all of which aided in the command and control process.

Use of ICS/Unified Command Structure

The states' reports demonstrate that some type of incident management structure was used, even if it was not a full Incident Command System (ICS) or a unified command structure. A state that created an H1N1 task force noted that "coordination between state and local authorities, the decision to use a state emergency management team to facilitate distribution of medicine and supplies, and competent staff were resources that worked well during the event." Another state noted that "CDC and the state health agency did not implement a formal ICS structure in response to the H1N1 event, although many local health departments in the state did."

Some states acknowledged that local governments may or may not have used some type of incident management structure. One state noted that there was "[e]xcellent cooperation and collaboration between the local unified command and local mental health management agencies, local education agencies, local emergency management agencies, emergency medical services, hospitals, community partners, and the state's public health coordinating center;" the local unified command "facilitated a synchronized communication and response during the event." Conversely, another state noted that "failure to establish a uniform command structure at the local level early in the incident resulted in agencies operating outside a command structure which lead to conflicting actions and messages to other stakeholders."

State reports recommended that more comprehensive policies be developed for all state and local agencies regarding ICS training and implementation. A state specifically noted the “need to implement an established ICS for events that cross internal and external agencies (crossing county lines), staffing policies on the number of hours/shifts command staff can safely work during crisis before mandatory replacement is authorized, and initiating more ICS practice and exercises.” One state advocated for better use of internet-based systems to support emergency operations center (EOC) activities, especially to link state agencies with local agencies. At the federal level, one state observed that “CDC needs to use ICS and make formal ICS positions and Incident Action Plans (IAPs) available to states for review.”

Emergency Declarations

The state reports generally noted ongoing questions about the process and implication of state and federal emergency declarations. Clarification was specifically needed on the differences between Stafford and non-Stafford Act declarations and the implementation and response related to each. One state believed that “given the H1N1 incident was a declared public health emergency, the event should have been given the same status as other emergencies (i.e. a Stafford Act declaration).” That state suggested that the “federal government should develop clear guidelines for the federal use of emergency declarations to include Stafford Act and non-Stafford Act declarations, and educate state and local agencies on the authorities of these declarations.”

Federal emergency declarations created questions among healthcare stakeholders and the public that required involvement by state-level staffs. One state observed that a presidential emergency declaration prior to a state declaration resulted in a need for clarification of the declaration process for local public health agencies and healthcare partners. It was also noted that questions about how federal and state emergency declarations translated into practice were fielded by state and local health agency staffs. One state suggested that the federal government should “provide states with notifications regarding a pending presidential declaration to assist in incident action planning.”

States also noted related difficulties in understanding and communicating liability protections under state and federal laws. Specifically noted were a lack of implementing procedures for liability protections for public health and medical practitioners, members of other professions, and volunteers, for laws such as the federal Public Readiness and Emergency Preparedness Act (PREP Act).

Some states operated under a state emergency declaration, while others did not. Given the less virulent nature of the H1N1 virus, the outbreak did not qualify as a “significant” public health emergency under one state’s emergency authorities statute; therefore, a state emergency could not be declared. Despite this, the state’s “health agency informed healthcare partners of the existing state licensing flexibilities in absence of a state emergency declaration.”

The absence of a state emergency declaration in another state meant that emergency command structures led by the state’s emergency management agency were not activated; this permitted the state health agency to remain the lead agency on the outbreak response. The experiences of this state were noted in its report: “Disaster declarations posed several state/local issues that made it apparent that public health emergencies should be classified differently; there needs to be a formal response that does not trigger the full disaster declaration, but addresses public health-specific issues.” That state recommended “current state policies should be changed” to “enable the state to activate its EOC and free up additional state/local resources without the Governor declaring an official state of emergency.”

School Closure

School closure issues were identified in all of the state reports. A few states observed that the H1N1 outbreak helped to form or solidify local health agency and school district relationships from which more productive partnerships are developing. It was noted that state health agencies also played a role in

coordinating with local public health and education agencies, including in the development of state-specific recommendations for school closure.

Some states noted that schools worked closely with local health departments through daily communications regarding recommendations to close or remain open. Another state observed that “local health departments built upon relationships already developed with schools through earlier identification of POD [point of dispensing] sites or regular meetings, and by providing timely, accurate information about 2009 H1N1.” Finally, a state noted that “over the summer [2009], many local public health departments were able to work with their school districts and colleges to implement policies and procedures for capturing [influenza-like illness] ILI-related illness and surveillance data; however, unfortunately, not all school districts throughout the state were cooperative.” Finally, a state reported that “school surveillance activities will be continued in the state due to the success of H1N1 ILI school-based surveillance.”

Despite positive outcomes for public health-school agency relationships, the state reports evidenced a number of barriers related to school closure issues. CDC’s school closure guidance during the first phase of H1N1 was viewed as being inconsistent. The state reports exhibited a range of views on the amount of state/local flexibility that should accompany federal school closure guidance—some wanted more leeway, while others wanted clearer federal standards. One state specifically noted that it was “difficult to identify control and authority, especially with regards to schools and school resources; there was a lack of cohesive standards set forth by the CDC (policies were too localized and disparate, school dismissal guidance was confusing) causing inconsistent local practice.” Alternately, another state reported that “recommendations by the federal government to close schools were inconsistent with the severity and magnitude of the pandemic.” That state “decided not to follow the federal recommendations to broadly close schools due to secondary effects (economic, social, and political impacts).” At the local level, one state noted there was confusion regarding school closure guidance; some schools believed they needed local health department approval to maintain state aid.

Regarding isolation policies, local health departments reported receiving criticism from parents who were unable to exclude their children from school for seven days after illness onset because the parents did not have a sufficient sick leave balance to remain home with children.

State reports contained a number of recommendations regarding school closure issues. Most fundamentally, it was recommended that state health and state education agencies communicate and coordinate more effectively in all phases of an outbreak (policy development and implementation). Policies should be developed that “strengthen and promote more widely the health agency message to “keep your child home if sick” and infection control measures for parents.” It was also suggested that health agencies work to “recruit educator support of parental choices to keep child home, without requiring physician notes or other justification.” Another state recommended that: “CDC school dismissal policies should address both preemptive and reactive dismissals (disease control measure versus operational/management issues) with better clarification and communication, as well as a clear understanding of the standards and trigger points for required control measures for school/university closures.”

In acknowledgement of the range of services provided in the school setting, one state recommended that federal, state and local governments should work cooperatively to develop “consistent school closure policy and the continuation of services delivered through school administrations such as reduced cost meals and other social services.”

Community Mitigation Generally

One state report identified the need for guidance on restricting hospital visitors during the H1N1 outbreak. Hospital visitor restrictions varied from hospital to hospital. Hospitals wanted policies to be consistent and have recommendations from the state since restrictions were hard to enforce without state guidance. That state suggested “hospital visitor restrictions need to be more clearly communicated to the public as early as possible” and “should be consistent statewide during an outbreak.”

Another state report discussed the need for state and local health agencies to take the lead in demonstrating adherence to community mitigation practices during the H1N1 event. It was suggested that state and local travel policies should restrict state and local employee travel during emergency events.

Surveillance, Epidemiology, and Laboratory Services

Surveillance Data Collection and Analysis

The states identified several issues related to data collection and analysis. Areas of success identified included ongoing communication activities. One state remarked on its “state epidemiology program that provided weekly webinars, communications with hospital epidemiologists, and guidance on sample submissions in a timely manner.” States noted the value of existing surveillance systems to the response, which systems were enumerated by one state: “The use of existing state surveillance systems, as well as the easy transitions from one system to another assisted with successful disease surveillance; the CDC’s Influenza-Like Illness Network (ILI NET), the state epidemiologic tracking and collecting system, hospital-based epidemiologists, state public health laboratory, and the state medical assets tracking system were among the top surveillance systems identified to be valuable during the event.”

Successes and improvements were noted in school-based surveillance activities. One state noted that “improvements were made to a new school absentee surveillance reporting systems and additional training/outreach to local health departments/schools, leading to a 240% increase in school participation rates.” The state further noted that “local health departments worked to share school closures/absentee rates throughout counties no matter which surveillance system was used.”

Ongoing barriers to data collection and analysis were noted in a number of the state reports. Most frequently, the “lack of consistent data for comparing H1N1 outbreak across jurisdictions” was identified by states. States also wanted better ways to track and report county-level outbreak data. One state suggested that “CDC should provide case counts for each state using the same case definition and testing criteria.” CDC should also “develop a sampling plan for larger cities and/or sentinel sites to do additional surveillance and reporting.” In support of better data collection, it was also suggested that “CDC should clearly define the case message for the electronic health record.” One report noted that “patient, laboratory, and hospital databases across the nation should report the same data in a compatible way, preferably by using Health Level Seven electronic data exchange.”

In a state trying to track school absentee data, it was noted that a school-based surveillance system was “not widely used by local health departments because it was seen as a burden on school nurses and there was a perception that too many reporting systems existed.”

Reporting Cases

The participating states identified ongoing challenges with reporting cases, hospitalizations and deaths from H1N1. At a basic level, states reported “inconsistency with reporting H1N1 cases and confusion regarding which surveillance systems provided appropriate data.” Another report acknowledged that “it was difficult to gauge trends when there was not a consistent national policy for reporting incidence of illness.” Recommendations included that “more research is needed to produce national standards (case definition and which other elements should be reported) for syndromic surveillance.” It was noted that the

federal and state governments “need a policy to determine and communicate when a novel disease is no longer novel.” Additionally, a “national policy should be established using National Electronic Disease Surveillance System (NEDSS) to report incidence and national notifiable diseases information.” And, for whatever standards are developed, it was urged that “funding is needed for states to implement those standards with laboratory capability.”

Tracking illnesses in educational settings proved to be a challenge. As a state noted, “not all school districts throughout the state were cooperative with local public health departments’ efforts to implement policies/procedures for capturing influenza-like (IL)-related illness and surveillance data; there was no mandate at the federal or state level to implement key public health practices within the school system.” To address these challenges, one state recommended that efforts “continue to develop ongoing relationships at the state and federal level between public health and educational institutions.” Specifically, “CDC, U.S Department of Health and Human Services (HHS) and U.S. Department of Education should be communicating on how to better partner for routine and emergency disease surveillance.” It was also advised that “federal agencies should better support their state/local counterparts in these efforts; U.S. Department of Education should loosen grant restrictions that interfere with collaboration with public health and that hinder reporting requirements.”

State also identified the ongoing tensions between sharing outbreak data with preserving individual privacy. One state noted unfortunate “public demand for information identifying the individual cases infected and the subsequent attempts of assigning blame to a particular group for bringing H1N1 into the community.” It was suggested that there be “further national discussion...concerning uniform criteria and standards in disclosure and privacy of case information provided by health departments to the public.” One state proposed that the “federal government should clarify regulations regarding patient privacy and provide education for PIO’s [public information officers] and media staff” about privacy/disclosure requirements.

Laboratory Capacity

States frequently identified challenges with maintaining laboratory capacity during the H1N1 outbreak, although staff were extremely committed to keeping laboratory functions running. One state highlighted that its “state public health laboratory was successful in implementing a team approach to receive, process, test, and report on H1N1 samples in a timely and efficient manner and provide the local health departments with regional surveillance reports.” Another state noted that its “state public health laboratory utilized additional staff resources to handle laboratory surge.”

As a result of maintaining laboratory capacity, one state admitted that “early exhaustion of state laboratory staff and the lack of surge capacity resulted in the core staff working extended shifts during the event.” Another contributing factor to strained laboratory capacity was the “lack of electronic laboratory test reporting capabilities which contributed to delays reporting and analyzing epidemiological data.” That state urged that the “federal government should fund and expand electronic reporting capabilities nationally.”

Stresses on laboratory capacity were exacerbated by testing policies and inappropriate demands for testing. A state identified several issues in this regard: “changing policies on testing, unanticipated public demand for testing, and communication to clinicians about when testing is appropriate.” Another state report discussed a related problem: “Patients who were denied confirmatory testing because they did not meeting testing criteria would return to [hospital emergency rooms] multiple times demanding to be tested, often because their employer required that they have a doctor’s note verifying illness before they could be granted leave from work and/or to return to work.”

To address some of the capacity issues, one state suggested that states/federal governments should “work with private organizations to change corporate culture; employees should be encouraged to stay home when they are sick and human resource policies should not require documentation from a physician confirming H1N1 or other widespread illnesses.” It was also suggested that policy makers should explore providing “federal support for low-income families to stay home when kids are sick.”

Medical Care and Countermeasures

Medical Care and Countermeasures Guidance

States identified ongoing concerns over delays in guidance at the federal and state levels. It was specifically noted that “clinical guidance from CDC was delayed at the federal level and guidance was delayed at the state level when executive approval was required from more than one agency.” It was also noted that conflicting guidance for the use of antiviral prophylaxis and short expiration dates on antivirals left staff and the public confused.

States reported that “once approved, federal and state clinical and countermeasures guidance was distributed widely via the state portals to health care providers and the state health agency website.” Additionally, “as federal and state clinical and countermeasures guidance evolved, the state health agency began highlighting just the changes in lengthy documents, so that providers could quickly assimilate the new information.”

Supply Chain, Stockpiles and Distribution

Participants in the state meetings identified a few areas of success and a number of challenges related to supply chain, stockpiles and distribution of countermeasures. One report stated that “the [Strategic National Stockpile] SNS/state stockpile was used efficiently and local SNS receipt and distribution were well executed.” Another state noted that the “direct delivery of vaccine to providers and pharmacies allowed efficiencies in transportation and workload during the event.”

States encountered several problems with the timing and contents of SNS assets received. One state identified the untimely federal response to the state’s request to pre-deploy SNS assets; the delay resulted in missing the outbreak’s peak in that state and the assets were no longer needed. Another state commented that it received “distribution of some SNS materiel without a state request that resulted in the delivery of excess assets that did not match state needs.” A state also commented that “agencies received non-urgent SNS materials after business hours creating stress and inflated costs.”

Participating states acknowledge the need for additional guidance or clarification of policies in several key areas related to countermeasures management. One state noted “questions regarding the use of federally funded National Guard staff to assist in the transportation and security of vaccine or other federal assets during a declared national emergency.” Another state commented that there was “no process for local health departments to use SNS for under- and uninsured individuals, which resulted in the state health agency waiting too long to push out antivirals to pharmacies/health centers serving these populations.” Finally, “policies pertaining to interstate transportation of SNS pharmaceuticals are very unclear, especially for states to share with neighboring states.” To address this issue, one state offered that “although this barrier involves state laws, a federal policy that allows for SNS assets, including pharmaceuticals, to be transported across state borders would be very helpful in the coordination and implementation of response efforts.” The state continued that “this policy should provide clear guidance on pharmaceuticals and medical devices, and could be part of the emergency declaration from the president.”

States also voiced interest in ways to better manage the SNS assets they received. One state expressed concerns about preserving “funding for management, transportation and storage of distributed SNS assets,

especially if PHER [Public Health Emergency Response] funds cannot be spent past July 2010.” To address this challenge, that state advised that “the CDC policy for distribution of SNS assets to states should be more metered, thereby allowing more time for additional epidemiological analysis to better characterize what types of SNS assets are necessary.” Also noted was the limitation that the federal “Shelf Life Extension Program (SLEP) is only available for federally-owned pharmaceuticals; state assets are not eligible for the SLEP, which posed a problem in antiviral distribution.”

Administering Countermeasures

States identified some challenges in administering/dispensing countermeasures, although these resulted in some positive gains at the state and local levels. Administering countermeasures to under- and uninsured persons was a challenge in many states. Several states acknowledged that community health centers (CHC) cannot legally work outside their scope of practice due to legal and insurance constraints, which limited their ability to offer support to hospitals/clinics experiencing patient surge. One state dealt with the issue of getting countermeasures to under- and uninsured persons by providing “private and chain pharmacies, and some FQHCs [federally qualified health centers] with a cache of antivirals for under- and uninsured individuals; individuals were taken at their word if they stated they had no insurance.” The state acknowledged that “new relationships and partnerships were established with pharmacies statewide” due to the H1N1 outbreak. Another state urged that the “policy regarding CHCs needs to be changed to allow for a more coordinated response, increasing community surge capacity.”

N95s/PPE

All states identified problems arising from conflicting federal (and some state) N95 respirator guidance; the debate over the need for N95 versus surgical masks for H1N1; and the resulting N95 supply shortage and fit-testing issues arising from the federal guidance. One state report noted that the “ambiguity regarding federal guidance versus regulatory directives on the use of N95 masks created healthcare institution risk of potential regulatory consequences.” Another state suggested that “federal research needs to focus on providing an alternative to current N95 models.”

States identified a number of strategies to address N95-associated issues. One state health agency “published recommendations to use N95 masks for healthcare workers when performing aerosol-generating procedures.” In another state, “the state health agency worked with the state occupational health agency to declare an N95 shortage, thereby allowing the flexibility to prioritize the use of N95 masks.” To address concerns that the federal stockpile did not contain the N95 brands that hospitals had fit-tested its employees for, one state “had hospitals’ preferred N95 brands stockpiled in the state cache based on a prior survey of hospital preferences.” That state also had “state health agency staff work closely with over 750 nursing homes throughout the state to develop respiratory protection plans for staff.”

States offered a range of recommendations for addressing the challenges associated with N95 and PPE. Foremost, states needed clarification about the relationship between CDC and Occupational Safety and Health Administration (OSHA) and which agency has oversight authority over occupational issues. States need “clarification whether OSHA will penalize hospitals and institutions that follow their states’ worker protection recommendations if they conflict with NIOSH [National Institute for Occupational Safety and Health] or other federal guidance for worker safety.” Reports also encouraged state health agencies to collaborate and coordinate with state occupational health agencies to better define the roles of each and the policy and regulatory effects of agencies’ policies.

To address N95 supply issues, one state suggested that the federal government should “survey...the states to determine the preferred brands of assets used by hospitals and stockpile these in the SNS.” Additionally, “FDA-approved respirators should be purchased without an expiration date, so [these] wouldn’t need an EUA [emergency use authorization].”

Medical Equipment Tracking

States identified the challenge of dealing with perceived competing federal and state requests for information regarding medical equipment. Specifically, “HHS requests for information regarding HAvBED directly to the hospitals conflicted with information requests from the state.” States expressed concerns that “HHS asked facilities in the states to collect significant information, which burdened the hospitals, and made decisions on the data that bypassed states.” One state dealt with the situation by requesting “hospitals to respond to both the HHS situational awareness report and the HAvBED requests.” Another state recommended that “states should be allowed to monitor bed capacity and other resource issues on their own and provide federal partners with updates on a weekly basis.” A second state urged the “federal government [to] develop policies that clarify roles of the multiple response agencies and their responsibilities for data collection and support functions.”

Emergency Use Authorizations

Some of the state reports noted issues related to emergency use authorizations (EUAs). A state found that “EUA policies were complex and confusing to the public and medical community.” The “need for clinician education around EUA to clarify when and how it applies” was identified. A state suggested that “there should be additional clinician education at a federal level as well as a policy to better communicate the intent and uses of EUAs.”

National Vaccination Campaign

Vaccination Generally

The state reports clearly acknowledged the tremendous efforts of the federal government regarding H1N1 vaccine: “In less than a year, the federal government developed and delivered a vaccine for a novel influenza virus.” One report asserted that the public health and health care systems’ “vaccination efforts averted a third wave of H1N1.”

One state discussed the positive relationships that emerged during the H1N1 response: “State and local levels demonstrated excellent teamwork; new cooperative partnerships were established using local health departments as coordinating centers for local health care providers, and supportive partnerships with local Chambers of Commerce assisted in the execution of a successful vaccine operation.”

Vaccine Formulations

States identified barriers associated with the variety of vaccine formulations available/required for different populations and the challenges of matching the correct formulations for target populations with initially scarce supplies. The “lack of a federal policy/standard for vaccine manufacturers on the formulation by specific age range presented a barrier” for some states. Another report plainly noted that there are “too many options for vaccine and rules tied to vaccine type (age, thimerosal-free, FluMist); this resulted in limited vaccination of priority target populations when insufficient quantities of a particular type were received.” Varying amounts of formulations, presentations and amounts of vaccine shipped to hospitals caused logistical issues and confusion among providers. One state offered that “limited vaccine formulation should dictate target group allocation.” Another state suggested that “there should only be three types of vaccine available: FluMist, thimerosal-free for pregnant women, and one formulation for age six months and older.”

In one state with a statutory prohibition against the use of thimerosal-containing vaccine, “the limited amount of thimerosal-free vaccine available in the beginning made it challenging to vaccinate high-risk populations due to state law requiring thimerosal-free vaccine [for] children and pregnant women.” Even when the state health director waived the thimerosal-free requirement based on a public health emergency, physicians and target populations were reluctant to use thimerosal-containing H1N1 vaccine.

Vaccine Availability and Allocation

All participating states reported challenges associated with the slow initial availability of H1N1 vaccine and mechanisms for allocating the vaccine. The states did credit the federal government for permitting state and local health officials to oversee and determine H1N1 vaccine allocation and distribution needs within their jurisdictions.

States found that CDC allocation predictions were frequently inaccurate and overestimated available supply. The overly optimistic projections for vaccine availability complicated vaccine clinic planning and public information efforts. States noted that delays and frequent revisions in vaccine allocation undermined local mass vaccination efforts and caused vaccination clinics to be cancelled. When vaccine was available, public demand had waned resulting in “surplus vaccines and loss of credibility for state/local public health.”

All of the reporting states urged federal officials to ensure that vaccine projections are more accurate and realistic to try to minimize raising public expectations and the potential for problems arising from delays, such as the need to cancel vaccination clinics and the loss of public interest in vaccination. One state suggested that the “federal government demand better estimates from vaccine manufacturers” about amounts and timing of vaccine availability. That state continued “vaccine manufacturers need to be held accountable for their estimated vaccine production.” States urged that the “federal government and vaccine producers to implement new/non-egg based vaccine production technology.”

Some viewed the “allocation system to states as too complicated and priority group rankings were confusing.” Some providers received unwanted vaccine leading to confusion and waste. One state also noted problems with the “CDC minimum vaccine shipment of 100 doses, which required the state health agency to turn many providers away that otherwise would have been able to provide vaccine in their smaller practices.”

Vaccine Prioritization and Guidance

One state felt that there were “pre-established, clearly defined priority policies for vaccination delivery and ordering.” Another noted that “opening up vaccination in November to all community members markedly increased vaccination rates in the state.”

Overall, however, states noted several challenges with vaccine prioritization. States believed that the federal policy to target limited vaccines ultimately impacted the uptake of the vaccine. One state pointedly noted that “vaccination guidance regarding triaging limited vaccine within target groups was vague or non-existent; vaccination guidance implementation and groups targeted differed from county to county.” The local variability of vaccine prioritization was evident in one state’s report: “Variations in population between urban and rural counties meant that many rural counties were able to vaccinate everyone who fell into a priority group quickly and move to vaccinating the general public sooner than the more populated counties; this lead to confusion among residents in different counties.”

States offered federal and state-level recommendations addressing vaccine prioritization and guidance issues. At the federal level, one state suggested that “CDC should be more specific in defining priority groups so state/local health departments can more easily justify the transition to vaccinating the general public.” States identified the need for guidance beyond ACIP [Advisory Committee on Immunization Practices] guidelines when vaccine is in short supply. At the state level, it was suggested that state health agencies should “continue to support local health department decisions’ on how to best meet the needs of their populations, ensuring that the highest risk are vaccinated and that vaccine is provided to as many people as possible.”

Vaccine Distribution and Supplies

The state reports primarily highlighted strategies states used to overcome the primary barrier identified with vaccine distribution—slow initial supply of vaccine. To address distribution issues, one state noted that “the state health agency distributed vaccine to both providers and local health departments, with local health departments taking on the role of redistributors, allowed for sharing mechanisms between providers within a county.” State health agencies also “provided local health departments with spreadsheets to inform them as to which providers in their jurisdiction were getting vaccine.”

One state reported that “in addition to working with local public health departments, the state health agency coordinated distribution of the vaccine by working directly with the Indian Health Service and tribal communities.” Although Tribal Nations usually receive health and vaccination services from IHS, the H1N1 vaccine distribution was different. To meet the needs of tribes within one state’s boundaries, the state health agency allocated a percentage of its vaccine allotment to the Tribal Nations. To address this issue in the future, a state suggested that federal agencies “review plans, policies and procedures for providing direct public health resources to Tribal Nations,” and “follow the established federal protocol for vaccine allocation and distribution to Tribal Nations.”

Once vaccine supplies became more plentiful, one state commented that the “national vaccine manufacturing and distribution process was seen as effective.” Another state noted, however, that “the supplies sent in each shipment of vaccine did not always correspond to the type of vaccine shipped along with it; the types of supplies changed from shipment to shipment.” To address this problem, that state recommended “CDC should give states and locals the option to order supplies separate from the vaccine.”

Administering Vaccine

Reporting states noted a number of successes and effective mitigation strategies related to administering the H1N1 vaccine. Overall, the states felt that at the state and local level, public health agencies successfully provided H1N1 immunizations to a large number of people in a short amount of time. To facilitate vaccine administration, one state required that “all healthcare providers who administered H1N1 vaccine...to pre-register; pre-registration was available online and accounted for the majority of enrollees.”

One state supplemented its ability to vaccinate by: “Recruiting additional community providers to facilitate vaccine administration, expanding pharmacists’ role in vaccinating patients ages 14+, as well as including paramedics to assist local health departments with vaccine administration”—all of which “were critical components in the success of the vaccination efforts.” Another state noted using “Vaccines for Children [VFC] providers, school-based vaccination clinics, and direct shipment of vaccines to providers to facilitate vaccination efforts.”

States expressed ongoing questions and concerns about their authority to expand the pool of eligible vaccinators during an emergency. One state addressed the issue by “establishing practice standards and protocols to allow paramedics assisting local health departments administer vaccine.” Questions also remain at the local level about “who can be given the authority to vaccinate (e.g., Emergency Medical Technicians (EMTs)) and concerns over workers compensation and liability issues for volunteers.” Another state pre-drafted executive orders that would have delegated authority for vaccination to healthcare practitioners, such as EMS [emergency medical services] providers, that do not have this responsibility under their normal scope of practice. Although the state did not declare a state emergency and did not implement any of the draft executive orders, the “state health agency and local public health agencies agreed that vaccinator-staffing shortages could be addressed on a case-by-case basis,” but “at no time during the outbreak were additional vaccinators requested.”

The reporting states offered several recommendations addressing the need to expand the pool of vaccinators during a public health emergency. One state noted that the states “should develop policies for practice standards of non-traditional vaccinators and dispensing practitioners for use during an emergency,” as well as “develop policy standards for local agencies regarding policies that allow emergency certifications or expansion of practice for professionals and liability protection.”

One state reported challenges with vaccinating federal defense personnel. The state noted that: “U.S. Department of Defense [DOD] sites did not receive vaccine in time to vaccinate their personnel prior to or during the peak of the outbreak. Local health departments could vaccinate dependents of active duty personnel, but not active duty personnel themselves—including those that were pregnant or had other high-risk conditions.” That state recommended “DOD needs to provide vaccine to all military personnel as promised in a timely fashion or enable state/local health departments to vaccinate military personnel with financial and operational support from DOD.”

States also identified ongoing issues with payment and reimbursement for H1N1 administration fees. One state noted that “reimbursement for administration of vaccine and the use of PHER funds, self-pay methods and third-party insurance was inconsistently applied throughout the state.” To address this, that state suggested the “federal government should develop and communicate clear policies regarding the use of federal grant funds that can be used for operations and the intersection of the uses and other reimbursement programs (such as Medicare and Medicaid).” Another state requested that the federal government “provide recommendations surrounding cost-reimbursement issues prior to vaccine distribution to enable state/local health departments to plan accordingly.” It was further suggested that the federal government “provide states with total, unrestricted funding amounts prior to vaccine distribution to allow public health agencies to anticipate immunization administration fees.”

Vaccine Tracking/Recall/Adverse Events

One state noted that “reporting through Vaccine Adverse Event Reporting System (VAERS) and the state immunization registry were beneficial systems utilized during the incident.”

States noted public perception problems arising from recalled vaccine. Specifically, the “CDC recall of vaccine during the outbreak due to degrading vaccine and expiration date concerns caused confusion and panic among the public and could have lead to refusal to be vaccinated.” Another state acknowledged that “manufacturers provided information directly to providers on recalled and expired vaccines, which was helpful in the vaccination process.”

Outreach to Minority, Special and Vulnerable Populations

Participating states noted ongoing challenges with conducting outreach to minority, special and vulnerable populations. One report admitted that “outreach to the African-American populations was not effective, causing poor uptake in the community.” A state reiterated that states should “develop communications policies that ensure outreach to communities using strategies that are culturally competent and address barriers to access during an emergency.” More importantly, “these policies should reflect input from these populations.” States also advised states to “generate guidelines about undocumented workers.”

Workforce, Capacity, and Infrastructure

Flexing Existing Staff

All state health agencies were challenged during the H1N1 response to flex existing staff to address outbreak activities while still maintaining other public health programs. States participating in the meetings all acknowledged successes and set backs in accomplishing the task. One state health agency felt that the “existing health agency staff was flexible, well organized, dedicated and efficient during the

event.” It was noted that “in addition to performing routine tasks, medical and public health staff carried additional duties.” To address laboratory staff capacity issues, one state noted that “additional cross-trained staff were utilized to process the H1N1 specimens and perform administrative duties.” At times, “laboratory staff were obtained from temporary workforce agencies and local health departments.”

Reporting states identified several challenges to flexing existing state health agency staff. One noted that “restrictions on H1N1 funds resulted in difficulty flexing staff to fill needs directly or backfill for staff diverted to the response.” Another commented that the “current public health infrastructure was already stretched to the limit due to budget cuts, attrition of staff, inability to replace staff, and ongoing responsibilities that did not stop in the middle of a pandemic flu event.”

One report noted barriers in flexing local health department staff: “Reassigning an expanded staff to the response led to a challenge in continuing routine operations due to unclear guidance and planning at the local level.” Another local barrier identified related to “PHER encumbrances and budget policies and procedures at the local health department level which resulted in unused funds.”

Public Health Surge Capacity

All states acknowledged the important role of Public Health Emergency Response (PHER) grants in providing state and local surge capacity. One state noted that “PHER funding allowed an increase in local health departments’ surge capacity by allowing and facilitating the hiring of temporary employees during the event.”

Public health surge capacity was achieved in a variety of ways. At the state level, “state public health laboratory work spaces, changes in work schedules and functional teams facilitated capability to meet an increased demand for testing, mailing of kits, and test result reporting.” At the local level, one state reported that “insufficient staff was available for vaccination during the event and retired public health veterans at the local health department level offered expert assistance during the surge.” Other localities made due with their existing capacity: “Many public health agencies across the state conducted response efforts with minimal personnel and shortages of credentialed staff.”

Despite supplemented public health surge capacity, states still noted capacity challenges. Timing restrictions on PHER funds were seen as limiting their usefulness for enhancing laboratory capacity throughout the outbreak: “Funding restrictions provided an additional barrier to mounting surge capacity to process H1N1 specimens at the state public health laboratory due to restrictions on workforce costs in PHER.” Another state acknowledged that “extended and intense response by staff members left many exhausted as program staff were not prepared for the change in work schedule.” One state report simply summed it up as, “the magnitude of the H1N1 pandemic overwhelmed a public health system that was already at capacity.”

To enhance surge capacity, one state suggested that states “should develop policies related to emergency expansion of practice during an incident thereby allowing for the development of surge capacity.” One state noted that “human resource policies need to be further developed and improved in order to track and compensate for time spent on response.” It was suggested that “policies be developed to provide clear direction on flexing hours, overtime and shift flexibility (how long staff are eligible to work), compensation, and sick-leave for all employees,” as well as “on compensation, tracking personnel time and workplace needs for state employees.”

Health Care/General Surge Capacity

Similar challenges were noted with the surge capacity in the health care system. Maintaining hospital staffing during the peak of the H1N1 outbreak was a challenge in some states. One state reported that “surge capacity for hospitals continues to be an issue, as hospitals do not want to divert their staff to off-

site facilities; staffing continues to be the biggest barrier to alternate care facility planning.” States further noted that “hospital personnel believe that credentialing continues to be an issue as well as Joint Commission issues surrounding EMTALA laws and the restricted roles of staff during an emergency.”

One state reported several factors that enhanced its health care and overall surge capacity: “When accessible, the use of school nursing staff, translators for non-English speaking patients and existing contracts and services with private vendors (i.e. trucking companies for distribution), as well as the individual training and agency cross-training conducted prior to the event proved advantageous during the incident in achieving a high level of collective preparedness.”

Volunteers

States acknowledged that volunteers were an important component in mounting response activities for H1N1, but that using volunteers was not appropriate in all circumstances. One report highlighted that “volunteers saved counties tens of thousands of dollars, and remained committed and engaged in PODs throughout the vaccination campaign.” Another state noted that “response efforts from volunteer nurses at the local level and, at the state level, from state universities, were a large part of existing, collaborative partnership efforts.” One participating state recognized the use of volunteers at the local level was effective, “however, state and local public health agencies found that they could not use volunteer staff as effectively for fulfilling key public health roles; individuals with an intricate knowledge of the state’s public health system should have filled these roles internally.”

States offered several recommendations about the use of volunteers. One suggested that states/locals “engage volunteers in additional preparedness training and exercises.” States advised local healthcare coalitions to “look at using retired medical personnel as well as medical and nursing students for surge staffing.” However, it was advised that states/locals “need to re-evaluate roles for volunteers and contractors during an emergency event, clearly defining those roles for public health staff vs. volunteers and ensuring the proper staffing is available for emergency response needs.” Another state offered that “the use of volunteers needs to be restricted to non-critical public health roles.”

A state reported that some facilities were reluctant to use volunteers from the state’s Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) database because those volunteers only undergo a state criminal background check. The state acknowledged that state volunteer databases need a higher level of background checks that includes national data, not just state and local information. The state recommended that HHS “conduct federal background checks for all ESAR-VHP volunteers; states can not afford to conduct these background checks using current funds.”

Workforce Mandates

State reports also addressed the issue of mandating H1N1 vaccination for certain types of workers. In one state, it was health care workers who expressed concerns “that there were limited numbers of personnel in their facilities that chose to be vaccinated against H1N1.” Hospital partners in that state considered “whether mandating vaccination in this situation would work, as other vaccines (MMR) are mandated in order to work in a healthcare setting.” One state observed that “directives to vaccinate healthcare workers should come out from the federal level and not from the state, local or facility level.” Another state went further, recommending that “during future pandemics, the federal government should mandate that influenza vaccination be required of all healthcare practitioners.”

Another state noted challenges with vaccinating state employees. Specifically, the “lack of a vaccination policy for laboratory workers and the late provision of vaccination opportunities for state employees were barriers.”

Federal/State/Local Coordination

Intergovernmental Coordination

Coordination among federal, state, and local agencies was a central issue for all of the participating states. Successes were noted at all levels. One report suggested that “constant internal communication channels of federal, state and local agencies seemed to improve the efficiency and effectiveness of the H1N1 response.” Another noted that “although setbacks at all levels of government occurred, public health agencies diligently succeeded with administering H1N1 vaccine to the public.” States reported using webinars, websites, and weekly telecasts using state telecommunications agency resources to assure that common operating goals were being met. Another state reported that “to mitigate conflicting information from various federal and state agencies, the state utilized a cross-agency unified command structure to determine all policy issues.”

There were several challenges identified in coordinating activities across governments. At the state and local level, it was acknowledged in the reports that “better coordination of state and local policies (priority groups, N-95, vaccine distribution, case definitions) was needed to assure consistency between federal, state and local sectors in areas of emergency management, public health and education.” A state believed that “regular communication and coordination with public information officers at the city/county levels were deficient.”

Reporting states noted issues associated with the federal government’s coordination efforts. Some states believed that federal agencies’ communication and coordination practices conflicted with state and local response efforts. More significantly, one report asserted that “information from federal agencies hindered state and local response efforts to provide timely information, and state, tribal, and local government, as well as non-profit agencies received conflicting messages from the DHS, USDA, FDA, ED, and OSHA.” States suggested that there should be improved “multi-agency coordination at the federal level prior to releasing federal guidance and regulatory directives” to avoid some of the problems with conflicting guidances issued during the H1N1 response. One state noted that, ideally, “information dissemination from federal agencies must comprehensively be approved by all federal parties.”

Reporting states identified federal, state, and local-level recommendations to improve intergovernmental coordination. At the state level, states should “identify policy barriers that inhibit agencies and organizations from working together [and d]evelop policies that enable these interactions.” At the federal level, the “federal government should develop policies that clarify roles and interdependency of the multiple federal response agencies and their responsibilities.”

PHER Grant and Federal Funding Generally

Reporting states acknowledged the import role that PHER grant funds play in mounting state and local response activities to H1N1 and the funding was seen as “extremely helpful.” States noted that PHER funding supported important capabilities, including hiring of temporary staff to help with vaccination and laboratory functions and hiring of additional regional health department staffs.” States further acknowledged the prior federal investments in state/local public health and pandemic influenza preparedness: “Public health officials agreed previous funding resulting from avian influenza established a foundation for a national response, requiring states and local governments to identify pandemic planning as a priority.”

While states believed that the total federal funding amount distributed to the states was sufficient, there were several challenges identified in applying for, managing and complying with federal policies for PHER funds. Using the CDC cooperative agreement as a mechanism to provide emergency response funding was viewed as “onerous and delayed resource allocation,” according to a participant. Overall,

states reported that state and local pandemic response and planning efforts were hindered by phased allocation, timing and lack of clarity of the PHER funding guidelines. Federal grant-related policies often changed or conflicted and did not take into account state policies and procedures.

Reporting states asserted that federal funding policies that led to a one-year, time-limited categorization of funding made proper stewardship of the funding difficult. Additionally, “separate ASPR [HHS Assistant Secretary for Preparedness and Response] and CDC funding streams made it difficult and often impractical to integrate public health and hospital preparedness programs at the state and local levels.”

States offered a number of recommendations regarding PHER and federal funding. One state offered the following suggestions: “greater flexibility with federal funding should be allowed; allow unspent monies to be carried forward”; and “ensure federal funding for ongoing state and local pandemic flu preparedness.” Another state addressed the structure and limitations on federal funds: “Provide funding in one lump-sum with general restrictions during the first disbursement phase. Distinguish between response grants and planning grants. Review and/or remove the accounting restrictions attached to cooperative agreement awards. Avoid categorical limitations for which response funding can be used (e.g. epidemiology, laboratory services and workforce limitations).” A third state offered: “Public health emergency preparedness funding should include, in addition to preparedness and response, funding for recovery. Integration of ASPR and CDC funding streams would likely result in better coordination on many levels.”

Coordination with Stakeholders

Reporting states identified a number of successful collaborative efforts with stakeholders. One state rated overall “public health and health care sector interaction, as well as health department interaction with local health care providers, hospitals, and EMS collaboration as “extraordinary.” Another state observed that it established strong working relationships with tribal nations, state and local agencies, and health care providers during the H1N1 response.

State and local health agencies engaged with stakeholders to address a variety of issues. A state reported that its “state medical/ethical societies and the judiciary committee from the state’s legislature, along with other key stakeholders, convened a task force for the utilization of scarce critical care resources during the pandemic which proved advantageous.” The state also reported collaborative efforts on laboratory issues: “Within the state’s laboratory forum, stakeholder engagement and lab response to members’ questions provided valuable feedback via impromptu conference calls, as well as the FAQ’s that were published.” Another report identified “communication vehicles, such as regular conference calls with federal officials (the Department of Homeland Security [DHS], Federal Emergency Management Agency [FEMA], CDC, etc.) for PIO’s as well as technical assistance calls from the Association for Public Health Laboratories (APHL), which proved critical for specific technical issues.”

One state noted challenges in working with community colleges, colleges/universities, private schools and day care centers. It was noted that “these institutions acted independently and the information they made available to their respective student populations sometimes caused confusion.”

Pandemic Planning

Some states acknowledged that the *HHS Pandemic Influenza Plan* does not reflect the 2009 World Health Organization (WHO) pandemic phases. They voiced the need for states to know if HHS will adopt the new WHO phases, which would thereby require states to update their pandemic operating plans.

Communication

Messaging Coordination

Coordination of messaging and other communications was an important issue for all reporting states. One report characterized communications as a “strength during the nationwide response; however, some communication issues occurred.”

At the state and local level, one reporting state noted that the “lack of a clear communication plan, and the failure to establish a joint information center (JIC), were seen as challenges for communications from the state to local health departments and the public.” That state also identified that “state internet-based systems to support EOC activities, hotlines and telephone systems were barriers to a more effective state response.” One state noted that it was difficult for local health care providers and local health departments to keep up with recommendations and the volume of communications issued at the federal, state and local level.

At the federal level, several states commented on the amount of communications coming from the federal government: “CDC communication during the first phase of H1N1 was overwhelming, including information sent via HAN [Health Alert Network]; federal communications were at times repetitive and not clearly marked as updates.” Another state asserted that “the federal agencies conducted too many conference calls on topics related to H1N1; information provided was inconsistent and audiences were pre-selected so people were getting different information.” Finally, a state report noted that “inconsistent case report data between the state and CDC created confusion among public health agencies; disparity in reporting data impacted state/local public health officials by requiring local governments to clarify the conflicting data. To alleviate this, that state suggested that “when reporting [case] data at the federal level, provide a disclaimer stating state and local data may be more accurate.” Additionally, the federal government should “insure that state and local public health officials are notified of case fatalities before reports are made at the national level.”

One state used a strategy to overcome perceived communication issues: “The coordination of information was massively improved from spring to fall, in large part because of a state health Google Group implemented at the state level. This was developed to ensure that healthcare workers only received H1N1 updates once a day rather than each time a federal HAN was issued (multiple times a day during the spring response).” Another state recommend that state health agencies should “consolidate federal guidance for state and local partners during future large-scale events to ensure state and local partners are not overwhelmed by federal communications and to ensure that state and local communications are also being received.”

Ad Campaigns

States acknowledged that their ad campaigns to address various H1N1 issues were affected by the delay in vaccine availability and the timing of federal campaign efforts. Reports confirmed that the timing of federal and state vaccination campaigns were out of synch with vaccine supplies. One state noted that there were no triggers identified as to when it was appropriate and/or necessary to launch campaigns. State and local marketing efforts “created a demand for a vaccine that was not available at the time and once adequate supplies became available, the demand had diminished.” A state suggested that federal agencies should “establish public information campaigns early in the response utilizing a unified consistent message,” and “ensure that messaging for vaccine demand and excess vaccine supply are prepared ahead of time.” Finally, another state suggested that CDC grants should be allowed “to be spent on media campaigns, as smaller counties could not afford PSAs [public services announcements] and local politicians pushed back on placing this in local budgets.”

States also commented on the content of ad campaigns. One state recognized that “media campaigns did not address the vaccine safety/efficacy issue, which deterred many people from getting vaccinated.” That state recommended that “CDC, HHS, and other federal ad campaigns should make it a policy to address the safety and efficacy of the vaccine, and also include prevention strategies in their messaging.” Another state highlighted its “robust media marketing campaign that focused on vaccine promotion and proper hygiene to prevent influenza spread.” However, that state also acknowledged that “the delayed arrival of vaccine required state and local governments to adjust marketing strategies mid-course.”

Media Relations

Reporting states noted ongoing concerns over the use of inconsistent, incorrect and untimely information used by the media during the H1N1 outbreak. It was noted by one state that “local media often monitors and uses information directly from the CDC website without using state/local information.” That state urged “state agencies to be more proactive in summarizing federal information and including state-specific information relevant to the current situation.” Additionally, “CDC should include a statement in all press releases that individuals and the media go to their state and/or local health department to receive specific regional/local public health information.”

To address media relations challenges, the reporting states offered additional recommendations for all levels of government. At the local level, “governments need to enhance partnerships with local media and communications outlets.” Regarding the content of messages, there “needs to be a more consistent means of communication vetted with the public and public health partners (event naming and information, reliable information on local media messages over local cable access and local government channel).” At the state level, states should “establish improved plans for communications with the public including incorporating feedback from the public regarding what works.”

Reporting states noted a few successful elements associated with media relations. Participants “discussed and credited successful communication efforts during the H1N1 event with and/or between media outlets and state and local agencies.” One state reported that “state and local public health officials acknowledged the federal government for coordinating public health information with the national media during the initial phases of the outbreak.”

Public Outreach

Reporting states identified a number of successful approaches for conducting public outreach during the H1N1 outbreak, including state/local websites to control messages and provide information; activation of state/local call centers and hotlines; sharing of weekly disease reports on the state health agencies’ public websites; bimonthly calls with representatives of professional provider organizations; ongoing press briefings with governors and state health directors; presentations at healthcare forums, community meetings and school activities; and the use of reverse-911 for communicating school-based messages. Another state commented on its use of social media sites, including Twitter and Facebook, to distribute messages to the public. However, it was suggested that states “develop guidance for use of social media so that stakeholders are not trying to learn how to best use it “on the fly”.”

Communication with Stakeholders

Despite successful public outreach strategies, reporting states also acknowledged specific challenges in communicating with different stakeholder groups. A state was concerned that “information and educational materials provided to direct care providers and front-line medical office staff were not timely or were not provided at all.” As a result, “providers and their staff were not always able to provide accurate information about priority groups or vaccination types to patients, thereby causing confusion and frustration within communities.” Another state noted that “many medical providers did not receive proper communications around the appropriate use of antivirals.”

One state noted several recommendations for states to consider for improving their communications with stakeholders: “Develop and identify contact lists for individual providers. Target providers that treat high-risk populations. Distill state guidance and changes to one page of bullet points that are sent with entire guidance document. Prepare FAQs for office staff who answer the phones. Establish relationships with pharmaceutical representatives to use them as an avenue for providing information to physicians and physician office staff.”

States also acknowledged that “special challenges were encountered for in incorporating vaccine information in communications targeting at-risk populations.”

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III. Compilation of State Meeting Issues/Recommendations

Section III is a compilation of all of the barriers and recommendations identified in the five state reports organized according to the eight categories identified by ASTHO (See Table 1 in the *Introduction* for the category list.). Each of the category subsections includes the following elements: Summary of Successful H1N1 Response Elements; Summary of Issues/Barriers; and Text of Issues/Barriers/Recommendations. The information presented is generally reproduced and quoted verbatim from the state reports, but minor edits have been made for clarity. Any identifying information has been removed from the contents to preserve the candor of the states' responses and protect sensitive information, while allowing full use of the insights and recommendations generated.

Overview of State Meeting Issues/Barriers

- The five states participating in the ASTHO H1N1 Policy Barriers Project identified a total of 110 issues/barriers
- The identified issues/barriers are distributed into the following categories

Category	Number of Category Responses	Percent of All Responses
ICS, Command and Control, and Authority	15	14%
Surveillance, Epidemiology, and Laboratory Services	10	9%
Medical Care and Countermeasures	22	20%
National Vaccination Campaign	22	20%
Workforce, Capacity, and Infrastructure	14	13%
Federal/State/Local Coordination	10	9%
Communication	16	15%
Other Issues	1	1%
Totals:	110	101%³

- The states were requested to limit their information to their top three priority issues in each of the eight categories identified by ASTHO. Some of the states provided more than three per category, some provided less. Any information provided by the states in their reports has been compiled in this section.

³ Total may not add to 100% due to rounding.

III.A ICS, Command and Control, and Authority

Please see the introduction to Section III on page 28 for general information about the data contained in this subsection.

Selected Successful Elements/Mitigation Strategies

ICS, Command and Control, and Authority Generally

- “The federal government provided states with recommendations for responding to the H1N1 pandemic; these recommendations were developed as tools for the state to follow.”
- “Although the state recognizes the federal government’s efforts in this regard, states had to develop guidance and policies specific to state conditions and authorities.”
- “Pre-existing legislation related to emergency powers for the state health director and liability protection for providers and businesses assisting with a disaster were utilized and allowed for efficient and effective use of resources.”
- “The leadership and direction established by the Governor’s Office, as well as the development of a state H1N1 task force were successful in the command and control process.”

Use of ICS/Unified Command Structure

- “Excellent cooperation and collaboration between the local unified command and local mental health management agencies, local education agencies, local emergency management agencies, emergency medical services, hospitals, community partners, and the state’s public health coordinating center facilitated synchronized communication and response during the event.”
- “Coordination between state and local authorities, decision to use a state emergency management team to facilitate distribution of medicine and supplies and competent staff were resources that worked well during the event.”

Emergency Declarations

- “Emergency declarations were critical in this process and PREP Act guidance from U.S. Department of Health and Human Services was readily available, as well as timely and understandable.”

Waivers

- “The state health agency informed healthcare partners of the existing state licensing flexibilities in absence of a state emergency declaration.”

School Closure

- “State and local public health departments coordinated with the state health agency to develop state-specific recommendations for school closure.”
- “Schools worked closely with local health departments through daily communications regarding recommendations to close or remain open.”
- “Local health departments built upon relationships already developed with schools through earlier identification of POD sites or regular meetings, and by providing timely, accurate information about 2009 H1N1.”
- “Over the summer, many local public health departments were able to work with their school districts and colleges to implement policies and procedures for capturing ILI-related illness and surveillance data; unfortunately, not all school districts throughout the state were cooperative.”

- “School surveillance activities will be continued in the state due to the success of H1N1 ILI school-based surveillance.”

Community Mitigation Generally

- “The issuance of Quarantine and Isolation orders, as well as communication from state leadership was also key contributions in the early phases of the event.”

Summary of Issues/Barriers

ICS, Command and Control, and Authority Generally

- Federal guidance and regulatory directives should be evidence- or scientific-based, unless federal recommendations are relaxed to allow state and local government the latitude to determine alternative planning.
- Concerns over conflicting N95 guidance.

Use of ICS/Unified Command Structure

- Failure to establish a uniform command structure at the local level early in the incident resulted in agencies operating outside a command structure which lead to conflicting actions and messages to other stakeholders.
- CDC and the state health agency did not implement a formal ICS structure in response to the H1N1 event, although many local health departments in the state did.

Emergency Declarations

- Clarification is needed on the differences between Stafford and non-Stafford Act declarations and the implementation and response related to each.
- A presidential emergency declaration prior to a state declaration resulted in a need for clarification of the declaration process for public health agencies and healthcare partners.
- Questions about how federal and state emergency declarations translated into practice.
- Disaster declarations posed several state/local issues that made it apparent that public health emergencies should be classified differently; there needs to be a formal response that does not trigger the full disaster declaration, but addresses public health-specific issues.

PREP Act and Liability/Compensation Generally

- Difficulties in understanding/communicating of liability protections under state and federal laws.
- Lack of understanding/implementing procedures for liability protections for public health and medical practitioners, members of other professions, and volunteers, for laws such as the PREP Act.

School Closure

- CDC guidance during the first phase of H1N1 was inconsistent, especially in regards to school closure.
- Difficult to identify control and authority, especially with regards to schools and school resources; there was a lack of cohesive standards set forth by the CDC (policies were too localized and disparate, school dismissal guidance was confusing) causing inconsistent local practice.
- Recommendations by the federal government to close schools were inconsistent with the severity and magnitude of the pandemic; state decided not to follow the federal recommendations to broadly close schools due to secondary effects (economic, social, and political impacts).

- Confusion existed regarding school closure guidance; schools believed they needed local health department approval to maintain state aid.

Community Mitigation Generally

- State travel policies should restrict state employee travel during emergency events.
- Hospital visitor restrictions varied from hospital to hospital; hospitals wanted policies to be consistent and have recommendations from the state since restrictions were hard to enforce without state guidance.

Text of Issues/Barriers/Recommendations

Issue & Discussion:	<i>Emergency Declarations</i> <ul style="list-style-type: none"> • “Several issues related to the authority triggered by various federal declarations of emergency and whether parallel state emergency declarations were required.” • “General lack of understanding by public health/private health care re: how emergency declarations translate to changes in practice.” • “Lack of willingness to suspend rules (which the Governor’s declaration called for), slowed response and wasted human resources.” • “If this had been a more severe pandemic, lack of administrative nimbleness could have been catastrophic.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<i>None identified in report</i>
Priority Assigned:	<i>None assigned in report</i>
<hr/>	
Issue & Discussion:	<i>Liability Protections</i> <ul style="list-style-type: none"> • “There were difficulties in understanding/communication of liability protections under state and federal laws, coupled with changes in state laws.” • “Workers were hesitant because protections were not communicated at all levels.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Implementation practices for emergency laws, rules, and acts should be communicated to states from federal partners in weekly conference calls.” • “Federal partners should outline in writing the impact federal laws/rules will have on states.”
Priority Assigned:	<i>None assigned in report</i>
<hr/>	
Issue & Discussion:	<i>PREP Act</i> <ul style="list-style-type: none"> • “General lack of understanding and implementation procedures for liability protections for public health and medical practitioners, members of other professions, and volunteers, for laws such as the PREP Act.” • “Confusion around the protection of professionals/volunteers working outside the scope of PREP Act coverage and with “crisis”/“altered” standards of care.”

Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Implementation practices for emergency laws, rules, and acts should be communicated to states from federal partners in weekly conference calls.” • “Calls between federal partners and state’s legal counsel should occur on a regular basis.” • “Calls should be followed by written question/ answer documents to clarify answers to questions and to avoid unnecessary repetition of messages.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Other; PPE – N95 Guidance; state HR policies; Emergency Declarations</i> <ul style="list-style-type: none"> • “Participants identified N95 as an area of ICS, Command/Control and Authorization that did not work well during the event.” • “Policies on travel restrictions (specifically air travel) for state employees during emergency events were strongly recommended setting an example for others.” • “Clarification is needed on the differences between Stafford and non-Stafford Act declarations and the implementation and response related to each.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Federal government should re-evaluate policies regarding PPE guidance and provide flexibility for integration of evolving science.” • “State should develop human resource policies that protect the workforce and allow for setting an example to others regarding health policy programs.” • “Local governments should develop human resource policies that protect the workforce and allow for setting an example to others regarding health policy programs.” • “Federal government should develop clear guidelines for the federal use of emergency declarations to include Stafford Act and non-Stafford Act declarations. Educate state and local agencies on the authorities of these declarations.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>School Closings/Dismissals</i> <ul style="list-style-type: none"> • “It was difficult to identify control and authority, especially with regards to schools and school resources.” • “Confusion with regards to public school closings and dismissals was apparent.” • “Information was inconsistent on a national level.” • “Locally, unilateral decisions were being made to close schools without consulting local health directors.” • “There was a lack of cohesive standards set forth by the CDC (policies were too localized and disparate, school dismissal guidance was confusing) causing inconsistent local practice.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Primary areas for improvement included better clarification/communication about

school dismissal.”

- “CDC school dismissal should address both preemptive and reactive dismissals (disease control measure versus operational/management issues) with better clarification and communication, as well as a clear understanding of the standards and trigger points for required control measures for [STATE] school/university closures.”
- “Federal government should conduct forum for the development of consistent school closure policy and the continuation of services delivered through school administrations such as reduced cost meals and other social services.”
- “State should develop and implement consistent policy standards for local school closure policies and the continuation of services delivered through school administrations such as reduced cost meals and other social services.”
- “Local governments should develop and implement policies for local school closures and the continuation of services delivered through school administrations such as reduced cost meals and other social services.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

Challenges Between State and Local Response

- “Failure to establish a uniform command structure at the local level early in the incident resulted in agencies operating outside a command structure which lead to conflicting actions and messages to other stakeholders.”

Mitigation Strategies:

None identified in report

Recommendations Suggested:

- “State should develop comprehensive policies for all state agencies for training and implementation of ICS.”
- “Local governments should develop comprehensive policies for all local agencies for training and implementation of ICS.”
- “Need a better delineated Emergency Declaration and role of the [STATE EMERGENCY MANAGEMENT AGENCY].”
- “Establish comprehensive ICS policies.”
- “Need more focus on the roll-out of [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES] at the local level.”
- “Need to implement an established ICS for events that cross internal and external agencies (crossing county lines), staffing policies on the number of hours/shifts command staff can safely work during crisis before mandatory replacement is authorized, and initiating more ICS practice and exercises.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

School Closure Guidance

- “CDC guidance during the first phase of H1N1 was inconsistent, especially in regards to school closure.”

Mitigation Strategies:

None identified in state report

Recommendations Suggested:

- “CDC should provide consistent guidance and version control.”

Priority Assigned: *None assigned in state report*

Issue & Discussion:	<i>Hospital Visitor Restrictions</i> <ul style="list-style-type: none"> • “Hospital visitor restrictions varied from hospital to hospital.” • “Hospitals wanted policies to be consistent and have recommendations from the state; restrictions were hard to enforce without state guidance.” • “Child welfare issues were also an issue at some hospitals as some parents left their children unattended in waiting rooms if they were not allowed to visit patients.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Hospital visitor restrictions need to be more clearly communicated to the public as early as possible to ensure that children are left at home.” • “Hospital visitor restrictions should be consistent statewide; guidelines should be provided by [STATE HEALTH AGENCY] during future outbreaks.”
Priority Assigned:	<i>None assigned in state report</i>
Issue & Discussion:	<i>ICS</i> <ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] did not implement a formal ICS structure in response to the H1N1 event, although many LHDs in [THE STATE] did.” • “Many LHDs in [THE STATE] have been using ICS to conduct seasonal flu activities for years to meet state/federal requirements.” • “CDC did not seem to be formally using ICS to respond to H1N1.” • “Each [STATE HEALTH AGENCY] program was compartmentalized based on how the CDC was organized.” • “LHDs use ICS now, not only because it is federally mandated, but also because the system works. ICS is not a training issue, but a culture issue; it must be used for daily response, not just during large-scale outbreaks.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] needs to implement ICS in a more formal way.” • “CDC needs to use ICS and make formal ICS positions and Incident Action Plans (IAPs) available to states for review.”
Priority Assigned:	<i>None assigned in state report</i>
Issue & Discussion:	<i>Emergency Declarations; ICS; Command and Control</i> <ul style="list-style-type: none"> • “Disaster declarations posed several state/local issues that made it apparent that public health emergencies should be classified differently.” • “Public health emergencies tend to emerge slowly and require a longer period of response. This is why it can be difficult to determine when to declare an emergency, establish ICS, etc.” • “There needs to be a formal response that does not trigger the full disaster declaration, but addresses public health-specific issues.” • “Since the [STATE EMERGENCY MANGAEMENT AGENCY] cannot stand up the state EOC until the Governor declares a state emergency, [THE STATE] needs a better process for activating the state EOC without an emergency declaration.” • “Several counties received pressure from their partners to declare a local disaster to

	<p>free up additional resources.”</p> <ul style="list-style-type: none"> “As the case mortality rate was not unlike that of seasonal influenza, state and local health departments did not see the need to formally declare a state/local disaster.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> “[STATE] needs to implement more flexible disaster declarations to account for public health response.” “Change current policies to enable the [STATE EMERGENCY MANAGEMENT AGENCY] to activate the state EOC and free up additional state/local resources without the Governor declaring an official state of emergency.” “The federal government needs to clarify the implications of alternative types of federal emergency declarations.”
Priority Assigned:	<i>None assigned in state report</i>
Issue & Discussion:	<p>Emergency Declaration</p> <ul style="list-style-type: none"> “A presidential declaration prior to a state declaration resulted in a need for clarification of the declaration process for public health agencies and healthcare partners.”
Mitigation Strategies:	<ul style="list-style-type: none"> “[STATE HEALTH AGENCY] informed healthcare partners of the existing state licensing flexibilities in absence of a state declaration.”
Recommendations Suggested:	<ul style="list-style-type: none"> “Provide states with notifications regarding a pending Presidential Declaration to assist in incident action planning.”
Priority Assigned:	3.1
Issue & Discussion:	<p>School Closure</p> <ul style="list-style-type: none"> “Recommendations by the federal government to close schools were inconsistent with the severity and magnitude of the pandemic.” “[STATE] decided not to follow the federal recommendations to broadly close schools due to secondary effects (economic, social, and political impacts).”
Mitigation Strategies:	<ul style="list-style-type: none"> “State and local public health departments coordinated with the [STATE EDUCATION AGENCY] to develop state-specific recommendations for school closure.”
Recommendations Suggested:	<ul style="list-style-type: none"> “Federal guidance should contain verbiage that states can develop alternate recommendations based on local conditions and authorities.” “Conduct additional federal multi-agency meetings prior to developing guidance.” “Continue to accept feedback from states regarding policy decisions.”
Priority Assigned:	3.2
Issue & Discussion:	<p>School Closure & Community Mitigation</p> <ul style="list-style-type: none"> “Confusion existed regarding the school closure guidance; schools believed they needed local health department approval to maintain state aid.” “Concern/confusion among parents about the high absenteeism rate in the schools; schools not excusing students whose parents chose to keep them home due to perceived risk of illness, risking truancy.”

Mitigation Strategies:	<ul style="list-style-type: none"> • “School closures resulted in children congregating at other sites, defeating the rationale for closure.” • “Schools worked closely with local health departments (LHDs) regarding recommendations to close or remain open through daily communications (<i>EFFECTIVE</i>).” • “LHDs built upon relationships already developed with schools through earlier identification of POD sites or regular meetings, and by providing timely, accurate information about 2009 H1N1 (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Improve communication between [STATE HEALTH AGENCY] and [STATE EDUCATION AGENCY]. (<i>STATE</i>)” • “Strengthen/promote more widely the [STATE HEALTH AGENCY] message to “keep your child home if sick” and infection control measures for parents. (<i>STATE</i>)” • “Recruit educator support of parental choices to keep child home, without requiring physician notes or other justification. (<i>STATE</i>)” • “Coordinate/provide guidance from [STATE HEALTH AGENCY]/[STATE EDUCATION AGENCY] in a more timely manner. (<i>STATE</i>)” • “Work to provide consistent messages/communication between school districts within each county (<i>STATE</i>).”
Priority Assigned:	1

III.B Surveillance, Epidemiology, and Laboratory Services

Please see the introduction to Section III on page 28 for general information about the data contained in this subsection.

Selected Successful Elements/Mitigation Strategies

Surveillance Data Collection and Analysis

- “Improvements were made to school absentee surveillance reporting systems and additional training/outreach to local health departments/schools, leading to a 240% increase in school participation rates.”
- “Local health departments worked to share school closures/absentee rates throughout counties no matter which surveillance system was used.”
- “The state’s epidemiology program provided weekly webinars, communications with hospital epidemiologists, and guidance on sample submissions in a timely manner.”
- “The use of existing state surveillance systems, as well as the easy transitions from one system to another assisted with successful disease surveillance; the CDC’s Influenza-Like Illness Network (ILI NET), the state epidemiologic tracking and collecting system, hospital-based epidemiologists, state public health laboratory, and the state medical assets tracking system were among the top surveillance systems participants identified to be valuable during the event.”

Laboratory Capacity

- “The state public health laboratory was successful in implementing a team approach to receive, process, test and report for H1N1 samples in a timely and efficient manner and provided the local health departments with regional surveillance reports.”
- “The state public health laboratory utilized additional staff resources to handle laboratory surge.”

Summary of Issues/Barriers

Surveillance, Epidemiology, and Laboratory Services Generally

- Patients who were denied confirmatory testing because they did not meeting testing criteria would return to the ED multiple times demanding to be tested, often because their employer required that they have a doctor’s note verifying illness before they could be granted leave from work and/or to return to work.

Surveillance Data Collection and Analysis

- Lack of consistent data for comparing H1N1 outbreak across jurisdictions; need better ways to track and report county-level outbreak data.
- New electronic school surveillance reporting system initiated to track school absenteeism was not widely used by local health departments because it was seen as a burden on school nurses; perception that too many reporting systems existed.

Reporting Cases

- Inconsistency with reporting H1N1 cases and confusion regarding which surveillance systems provided appropriate data.

- Difficult to gauge trends when there was not a consistent national policy for reporting incidence of illness.
- Public demand for information identifying the individual cases infected and the subsequent attempts of assigning blame to a particular group for bringing H1N1 into the community.
- Not all school districts throughout the state were cooperative with local public health departments' efforts to implement policies/procedures for capturing ILI-related illness and surveillance data; there is no mandate at the federal or state level to implement key public health practices within the school system.

Laboratory Capacity

- Early exhaustion of state laboratory staff and the lack of surge capacity resulted in the core staff working extended shifts during the event.
- Lack of electronic lab test reporting capabilities contributed to delays reporting and analyzing epidemiological data.
- Changing policies on testing, unanticipated public demand for testing and communication to clinicians about when testing is appropriate.

Text of Issues/Barriers/Recommendations

Issue & Discussion:

Surveillance Data Collection/Analysis

- “Data from CDC did not allow for a coordinated mechanism for timely comparisons between large cities. Aggregate cumulative case counts were not an accurate measure of incidence because states stopped testing at different times/used different testing criteria. Aggregate data was confusing and changed perception of the pandemic’s severity.”
- “According to the Clinical Laboratory Improvement Amendments (CLIA), it is not mandatory that patient addresses be included with all laboratory test requests. Labs may never receive this important information and often need to follow up on each case to obtain address information. Public health and reference labs must know the exact location of each case for community mitigation purposes—aggregate state-level case counts are not helpful in this regard.”
- “Public Health Information Network (PHIN) recommends that labs must accept electronic requests and deliver reports as part of PHIN certification.”

Mitigation Strategies:

None identified in report

Recommendations Suggested:

- “CDC should: (1) provide case counts for each state using the same case definition and testing criteria; and (2) develop a sampling plan for larger cities and/or sentinel sites to do additional surveillance and reporting.”
- “CLIA should be modified to mandate that patient addresses be included with all lab test requests.”
- “CDC should clearly define the case message for the electronic health record.”
- “Patient, lab, and hospital databases across the nation should report the same data in a compatible way, preferably by using Health Level Seven electronic data exchange.”

Priority Assigned:

None assigned in report

Issue & Discussion:	<i>Surveillance Guidance/Policies</i> <ul style="list-style-type: none"> • “It was difficult to gauge trends when there was not a consistent national policy for reporting incidence of illness.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “A national policy should be established using National Electronic Disease Surveillance System (NEDSS) to report incidence information/national notifiable diseases.” • “Need a policy to determine/communicate when a novel disease is no longer novel.” • “More research is needed to produce national standards (case definition and which other elements should be reported) for syndromic surveillance.” • “Funding is needed for states to implement those standards with laboratory capability.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Surveillance and Case Reporting</i> <ul style="list-style-type: none"> • “Inconsistency with reporting H1N1 cases and confusion regarding which surveillance systems provided appropriate data were discussed.” • “The requirement early in the pandemic to report individual cases of H1N1 was burdensome to LHDs who had to adapt methods while they completed other response tasks.” • “CDC required uploading spreadsheets for surveillance rather than using National Electronic Disease Surveillance Systems (NEDSS), which caused an increased workload at the state level.” • “Inconsistent case definitions were believed to have led to an undercounting of cases, and the changing federal and subsequent state requirement of what numbers to track (hospital vs. infected).” • “Participants suggested that identifying what data should be collected, who should collect it and how many tests will be done should be driven by pre-established criteria and decisions made by the state public health leadership instead of by individual doctors and hospitals.” • “Efforts are needed to increase the efficiency and usability of surveillance systems including hospital service utilization, school absenteeism systems and electronic death certificates to determine a real-time severity index to influence and inform policy.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “It is recommended that a standardized way of reporting cases that can be easily understandable and track-able throughout the event be developed and implemented, as well as earlier availability of mortality rates.” • “It was recommended the [STATE] develop an electronic death certificate system.” • “Participants also desired: clear [STATE HEALTH AGENCY] guidance for local health departments on trigger points for response to surveillance data and supplementary information on surveillance systems in a quick, easy to use format.” • “Federal government should develop policies that clarify roles of the multiple response agencies and their responsibilities for data collection and support functions.” • “Federal government should develop policy standards for data collection: what is to be

collected, who collects it and who can use it. This data includes human health, school absenteeism and hospital capacity information.”

- “State should develop standards for local policy development regarding data collection.”
- “State should develop state level policies for data collection: what is to be collected, who collects it and who can use it.”
- “State should develop standard policies for actionable triggers identified through the use of these surveillance systems.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

Confirmatory Testing; Privacy Concerns

- “The demand for the public to obtain identifying information about the individual cases infected and the subsequent attempts of assigning blame to a particular group for bringing H1N1 into the community, as well as the changing policies on testing, unanticipated public demand for testing and communication to clinicians about when testing is appropriate were difficulties experienced at the local level.”
- “State and local public health agencies experienced a high demand from providers for specimen collection/transport by the [STATE PUBLIC HEALTH LABORATORY].”

Mitigation Strategies:

None identified in report

Recommendations Suggested:

- “Further national discussion is needed concerning uniform criteria and standards in disclosure and privacy of case information provided by health departments to the public.”
- “Federal government should clarify regulations regarding patient privacy and provide education for PIO’s and media staff.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

Lab Capacity

- “Early exhaustion of state laboratory staff and the lack of surge capacity resulted in the core staff working extended shifts during the event.”

Mitigation Strategies:

None identified in report

Recommendations Suggested:

- “Primary areas for improvement for surveillance, epidemiology and lab services included developing emergency staffing policies with surge capacity.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

Data Collection

- “In summer 2009, local public health departments (LHDs) were able to work with their school districts and colleges to implement policies/procedures for capturing influenza-like illness (ILI)-related illness and surveillance data.”
- “Unfortunately, not all school districts throughout the state were cooperative.”
- “There is no mandate at the federal or state level to implement key public health practices within the school system.”
- “Data on ILI absences was valuable in predicting the status of the current H1N1 outbreak within the community.”

	<ul style="list-style-type: none"> • “Schools and colleges need to be full partners with public health not only to assist in decisions surrounding school closures but also for setting up mass vaccination clinics within the community.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “School surveillance activities will be continued in [STATE] due to the success of H1N1 ILI school-based surveillance.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Continue to develop ongoing relationships at the state and federal level between public health and educational institutions. CDC, HHS and U.S. Department of Education should be communicating on how to better partner for routine and emergency disease surveillance.” • “Federal agencies should also better support their state/local counterparts in these efforts; U.S. Department of Education should loosen grant restrictions that interfere with collaboration with public health and that hinder reporting requirements.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	<i>H1N1 Confirmatory Testing; Employer Requirements</i> <ul style="list-style-type: none"> • “Hospital partners reported that it was not difficult to manage in-patient H1N1 cases, but it was difficult to manage patients in the emergency department (ED).” • “Many patients wanted to be tested for H1N1, even when they did not meet the testing criteria.” • “Patients who were denied confirmatory testing would often return to the ED multiple times demanding to be tested, often because their employer required that they have a doctor’s note verifying illness before they could be granted leave from work and/or to return to work.” • “Employees should not need confirmation of a widespread illness in order to receive permission from the workplace to stay home due to illness or the illness of a family member.” • “Schools saw an increase in the number of sick kids returning to school after one or two days due to parents who were unable or unwilling to take time off of work to care for their sick children.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Work with private organizations to change corporate culture; employees should be encouraged to stay home when they are sick and HR policies should not require documentation from a physician confirming H1N1 or other widespread illnesses.” • “Provide federal support for low-income families to stay home when kids are sick.” • “State/locals should continue to communicate with the business community and share public health guidance/recommendations.” • “Department of Education, in partnership with state/local public health, should work more closely with the private sector to provide information on school closures and other school issues that potentially impact parents/private sector employees.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	<i>Case Reporting; ELR</i> <ul style="list-style-type: none"> • “The lack of electronic test reporting capabilities contributed to delays reporting and analyzing epidemiological data.” • “The process of reporting data manually by laboratory staff is exhaustive and time
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consuming. This issue led to delays in reporting real-time results and characterization of the H1N1 pandemic.”

- Mitigation Strategies:**
- “The [STATE PUBLIC HEALTH LABORATORY] utilized additional staff resources to handle laboratory surge.”
- Recommendations Suggested:**
- “The federal government should fund and expand electronic reporting capabilities nationally.”
- Priority Assigned:** 7.1

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- Issue & Discussion:**
- Surveillance Data Collection/Analysis**
- “An electronic [SCHOOL SURVILLANCE REPORTING SYSTEM] was initiated to track school absenteeism; a number of LHDs did not utilize the system as it was perceived as being a significant burden on school nurses, who were short-staffed.”
 - “A lag in reporting occurred when all schools were not utilizing the system, and there was a perception that too many reporting systems existed.”
- Mitigation Strategies:**
- “The [SCHOOL SURVILLANCE REPORTING SYSTEM] was streamlined/ improved; additional training/outreach to LHDs/schools. Average participation rates increased 240%, from [250 TO OVER 850 SCHOOLS] (*EFFECTIVE*).”
 - “LHDs worked to share school closures/absentee rates throughout the county no matter which system was used (*EFFECTIVE*).”
- Recommendations Suggested:**
- “Use existing surveillance system, rather than a new one, especially during an event (*STATE*).”
 - “Develop policies for access, data entry, integration of existing systems (*STATE*).”
 - “Continue to use [SCHOOL SURVILLANCE REPORTING SYSTEM] for all communicable disease surveillance; strengthen partnership between LHDs and schools to improve system (*STATE*).”
- Priority Assigned:** 1
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III.C Medical Care and Countermeasures

Please see the introduction to Section III on page 28 for general information about the data contained in this subsection.

Selected Successful Elements/Mitigation Strategies

Medical Care and Countermeasures Generally

- “The manufacture and delivery of the vaccine were well executed.”
- “New relationships/partnerships were established with pharmacies statewide.”

Medical Care and Countermeasures Guidance

- “Once approved, federal and state clinical and countermeasures guidance was distributed widely via the state portals to health care providers and the state health agency website.”
- “As federal and state clinical and countermeasures guidance evolved, the state health agency began highlighting just the changes in lengthy documents, so that providers could quickly assimilate the new information.”

Supply Chain, Stockpiles and Distribution

- “The SNS/state stockpile was used efficiently and local SNS receipt and distribution were well executed.”
- “The state developed and implemented a strategy for distributing the available SNS assets to the local jurisdictions.”
- “The direct delivery of vaccine to providers and pharmacies allowed efficiencies in transportation and workload during the event.”

Administering Countermeasures

- “Establishing practice standards and protocols to allow paramedics assisting local health departments administer vaccine were helpful.”
- “Private and chain pharmacies, and some FQHCs were provided with a cache of antivirals for under- and uninsured individuals; individuals were taken at their word if they stated they had no insurance.”

N95s/PPE

- “The state health agency published recommendations to use N95 masks for healthcare workers when performing aerosol-generating procedures.”
- “The state health agency worked with the state occupational health agency to declare an N95 shortage, thereby allowing the flexibility to prioritize the use of N95 masks.”
- “State had hospitals’ preferred N95 brands stockpiled in state cache due to prior surveying of hospitals.”
- “State health agency staff worked closely with over 750 nursing homes throughout the state to develop respiratory protection plans for staff.”

Medical Equipment Tracking

- “The state health agency requested hospitals to respond to both the HHS situational awareness report and the HAvBED requests.”

Alternate Care Sites

- “The functional use of temporary triage shelters in hospitals was also identified as a benefit.”

Waivers/EMTALA

- “The waiver process for temporary expansion of hospital bed space was effectively distributed by state health services regulatory agency.”

Summary of Issues/Barriers

Medical Care and Countermeasures Generally

- Regarding isolation policies, local health departments reported receiving criticism from parents who were unable to exclude their children from school for seven days after illness onset because they did not have a sufficient sick leave balance.

Medical Care and Countermeasures Guidance

- Conflicting guidance for the use of antiviral prophylaxis and short expiration dates on antivirals left staff and the public confused.
- Clinical guidance from CDC was delayed at the federal level. Guidance was also delayed at the state level when executive approval was required from more than one agency and overall time for review/approval.

Supply Chain, Stockpiles and Distribution

- Untimely federal response to state’s request to pre-deploy SNS assets missed the outbreak’s peak and assets were no longer needed.
- Distribution of some SNS materiel without a state request resulted in the delivery of excess assets that did not match state needs.
- Agencies received non-urgent SNS materials after business hours creating stress and inflated costs.
- Questions regarding the use of federally funded National Guard staff to assist in the transportation and security of vaccine or other federal assets during a declared national emergency.
- No process for local health departments to use SNS for under- and uninsured individuals; state health agency waited too long to push out antivirals to pharmacies/health centers serving these populations.
- Policies pertaining to interstate transportation of SNS pharmaceuticals are very unclear, especially for states to share with neighboring states.
- Concerns about funding for management, transportation and storage of distributed SNS assets, especially if PHER funds cannot be spent past July 2010.
- Shelf Life Extension Program (SLEP) is only available for federally-owned pharmaceuticals; state assets are not eligible for the SLEP, which posed a problem in antiviral distribution.

Administering Countermeasures

- Community Health Centers (CHC) cannot legally work outside their scope of practice due to legal and insurance constraints, which limited their ability to offer support to hospitals/clinics experiencing patient surge.

N95s/PPE

- Concerns and confusion over conflicting N95 federal and/or state guidance.
- Ambiguity regarding federal guidance versus regulatory directives on the use of N95 masks created healthcare institution risk of potential regulatory consequences.

- N95s supplied by the federal government were not a brand used by hospitals in the state; required new fit tests.

Emergency Use Authorizations

- EUA policies were complex and confusing to the public and medical community.
- Need for clinician education around EUA to clarify when and how it applies.

Medical Equipment Tracking

- HHS requests for information regarding HAVBED directly to the hospitals conflicted with information requests from the state.
- HAVBED reporting an issue when the HHS asked states to collect significant information, which burdened the hospitals, and made decisions on the data that bypassed states.

Text of Issues/Barriers/Recommendations

Issue & Discussion:	<i>Stockpiling and Distribution</i> <ul style="list-style-type: none"> • “When CDC asked states if they would like a shipment of SNS assets early in the pandemic, [STATE] felt compelled to request these assets.” • “The SNS assets became a burden when the PHER funds did not carryover and the state had to provide funding for management, transportation, and storage.” • “It is not feasible for states to complete a multi-year workplan in one budget year.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “The CDC policy for distribution of SNS assets to states should be more metered, thereby allowing more time for additional epidemiological analysis to better characterize what types of SNS assets are necessary.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<i>Delivery/Administering</i> <ul style="list-style-type: none"> • “Policies pertaining to interstate transportation of pharmaceuticals are very unclear.” • “If SNS pharmaceuticals arrive in one state, transporting them to another state is not allowed and presents a significant policy barrier.” • “[STATE X] requested pharmaceuticals from [STATE Y] and the distributor refused to ship them across the border.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Although this barrier involves state laws, a federal policy that allows for SNS assets, including pharmaceuticals, to be transported across state borders would be very helpful in the coordination and implementation of response efforts.” • “This policy should provide clear guidance on pharmaceuticals and medical devices, and could be part of the emergency declaration from the president.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<i>Emergency Use Authorization</i> <ul style="list-style-type: none"> • “There is a need for clinician education around EUA to clarify when and how it

	<p>applies.”</p> <ul style="list-style-type: none"> • “Clinicians do not understand that using an EUA can allow for use of approved/unapproved drugs when necessary.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “There should be additional clinician education at a federal level as well as a policy to better communicate the intent and uses of EUAs.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p><i>ICP/PPE Guidance</i></p> <ul style="list-style-type: none"> • “There was much confusion between [STATE] and bordering states re: CDC and OSHA guidelines.” • “Messaging/guidance re: PPE was inconsistent because H1N1 infection control guidelines varied by state.” • “Resolving these issues was very time-consuming.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “The relationship between CDC and OSHA and who has oversight authority over occupational issues, needs to be clarified for state health departments.” • “Federal policies need to be clear to allow border states to work together at all levels, including infection control procedures and requirements.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p><i>HAvBED Reporting</i></p> <ul style="list-style-type: none"> • “HAvBED reporting became an issue when the Office of the Assistant Secretary for Preparedness and Response (ASPR) (1) asked states to collect significant information, which burdened the hospitals (2) made decisions on the data that bypassed states.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “States should be allowed to monitor bed capacity and other resource issues on their own and provide federal partners with updates on a weekly basis.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p><i>Medical Care and Countermeasures, Guidance/Policies</i></p> <ul style="list-style-type: none"> • “The Shelf Life Extension Program (SLEP) is only available for federally-owned pharmaceuticals; state assets are not eligible for the SLEP, which posed a problem in antiviral distribution.” • “Despite having an EUA in place, and thus not requiring re-labeling of bottles for expired antivirals, clinicians were reluctant to distribute expired bottles of medication to their patients.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “The FDA should acquire square bottle labelers to make the SLEP more useable in emergency situations.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<p><i>Medical Care and Countermeasures, General</i></p> <ul style="list-style-type: none"> • “Community Health Centers (CHC) cannot legally work outside their scope of practice (assigned zip codes and populations) due to legal and insurance constraints. They are limited in their ability to offer support to hospitals /clinics experiencing patient surge.” • “Another issue involves critical access hospitals (CAH) requesting waiver of 42 CFR 485.620, which requires a 25-bed limit and average patient stays less than 96 hours [a CMS condition of participation]. Although the waiver process introduced by the CMS was appreciated, only six CAHs nationally took advantage of this. CMS did process the waiver requests rapidly and did allow for the waivers to be retroactive, yet there is a “donut hole” created by this waiver process. If a CAH applied for a bed waiver and admitted patients to its facility under the anticipation that the waiver would be approved and retroactive, but the waiver is denied, it is not clear whether that hospital is now out of compliance. It is also not clear what penalties the hospital might face or whether it would need to discharge patients in order to reach its bed limit and be in compliance.” • “CAHs in [STATE] applied for a waiver and were denied by CMS. [STATE] hospitals tried to prepare surge capabilities and CMS would not grant a blanket waiver. Instead, waivers were only granted on a hospital-by-hospital basis, which gave no consideration to the overall hospital system needed for surge. It is also concerning that hospitals are required to experience surge beyond their capacity before a waiver can be granted.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “This policy regarding CHCs needs to be changed to allow for a more coordinated response, increasing community surge capacity.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<p><i>SNS Distribution/Delivery</i></p> <ul style="list-style-type: none"> • “Issues regarding the SNS delivery to the state and the state’s subsequent delivery to the [LOCAL RECEIVING SITES] have been well-documented in other reviews.” • “Agencies received non-urgent SNS materials after business hours creating stress and inflated costs.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “More accurate information regarding SNS delivery and disposal is recommended.” • “The policy should be that SNS materials are delivered during business hours unless an emergent need is identified.” • “Allow dispensing of SNS products from non-traditional service providers during an event.” • “Develop policies and guidance on SNS disposal.” • “Need more direct guidance on use of SNS assets and guidance on priority groups for antivirals during shortage.” • “Clarify [LOCAL RECEIVING SITE] protocols.” • “Federal government should develop and implement policies regarding the use of SNS resources once delivered. These policies may need to be revised or specialized for each incident.”

- “State should develop policies regarding shipment of SNS resources to [LOCAL RECEIVING SITES] that are appropriate to the level of urgency of need.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

PPE-N95 Guidance

- “OSHA and CDC required higher levels of PPE for H1N1 than seasonal influenza throughout the course of the pandemic.”
- “Professional organizations such as IDSA, SHEA and APIC issued science-based statements challenging the OSHA and CDC requirements.”
- “Despite informal communications from CDC that there would be changes in N95 recommendations, this never occurred.”
- “These conflicting positions lead to a great deal of confusion.”

Mitigation Strategies:

None identified in report

Recommendations Suggested:

- “Improve communication between OSHA, [STATE OCCUPATIONAL HEALTH AGENCY], NIOSH & labor unions.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

Medical Supplies/HAvBED; EUA; Sick Leave Policies

- “HHS began requesting HAvBED data directly from hospitals bypassing the state. There was a lack of efficient HAvBED reporting at the county level.”
- “EUA policies were complex and confusing to the public and medical community.”
- “With respect to isolation policies, LHDs reported receiving criticism from parents who were unable to exclude their children from school for seven days after illness onset because they did not have a sufficient sick leave balance.”

Mitigation Strategies:

None identified in report

Recommendations Suggested:

- “Federal government should develop policies that clarify roles of the multiple response agencies and their responsibilities for data collection and support functions.”
- “Federal government should develop policies regarding the EUA’s that are clear and user friendly.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

Antiviral and Vaccine Issues

- “Conflicting guidance for the use of antiviral prophylaxis left staff and the public confused.”
- “Short expiration dates of the antivirals posed difficulties.”
- “Leaky syringes/needles and inventory control were also common early challenges.”

Mitigation Strategies:

None identified in report

Recommendations Suggested:

- “Participants desired a clear policy on the roles of pharmacists (when/what they can be used for) during an incident.”
- “State should develop policies for practice standards of non-traditional vaccinators/dispensing practitioners for use during an emergency.”

- “State should improve interagency cooperation especially with the non-traditional responder community to develop policies real-time during an incident. This non-traditional responder community includes agencies that have a regulatory function.”
- “Develop easy triage algorithms that can be used to inform public what to do if they get sick.”
- “Translate more materials into Spanish.”
- “Improve communications with trusted leaders in the African American population.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

SNS Stockpile Distribution

- “During a national event (such as a pandemic) that requires the distribution of SNS material, the [STATE HOMELAND SECURITY OFFICE] would like to know if federal resources can be used to pay for the transportation and security of vaccine or other federal assets.”

Mitigation Strategies:

None identified in state report

Recommendations Suggested:

- “Use [STATE] National Guard staff, paid for by federal funds, to increase surge capacity for law enforcement during large national events requiring the distribution of SNS assets.”

Priority Assigned: *None assigned in state report*

Issue & Discussion:

PPE - N95

- “A lack of consistent federal guidance on the use of PPE caused a great deal of confusion for state and local personnel.”
- “Federal guidance on the use of N95s was not provided soon enough and varying federal agencies (NIOSH and OSHA) provided conflicting information.”
- “[STATE] disagreed with OSHA on the use of N95s and fit-testing for hospital personnel.”
- “CDC continued to send varying models and types of N95s. It was not possible to fit-test all staff on a new respirator model during the middle of an outbreak because of the time involved, staffing requirements, and depleting federal supplies while doing the tests.”
- “Federal recommendations on who needs to wear the N95s should be released earlier and the risks of not wearing an N95 in a hospital setting need to be more clearly defined.”
- “Many healthcare workers did not understand why surgical masks were acceptable for seasonal influenza, but not for H1N1.”
- “Hospitals started following guidance provided by their own infection control departments instead of referring to inconsistent federal guidance.”

Mitigation Strategies:

None identified in state report

Recommendations Suggested:

- “CDC needs to inform states about the types of respirators that are stockpiled to ensure that personnel are fit-tested on the models that may be sent during a large-scale disease outbreak.”
- “States need clarification whether OSHA will penalize hospitals/institutions that follow their states’ worker protection recommendations if they conflict with NIOSH or other

federal guidance for worker safety.”

- “PPE recommendations should come from state health departments based on federal guidance.”
- “Federal research needs to focus on providing an alternative to current N95 models; need to be easier to wear for longer periods of time. N95s with exhalation valves may be a better resource for now.”
- “Various healthcare providers, including EMS, should enhance their current PPE stockpiles, including N95s.”
- “Clarify the relationship between NIOSH recommendations and OSHA requirements, and the interaction between federal guidance and state regulations.”
- “Clarify guidance for worker safety practices if official recommendations cannot be met (e.g., if the supply of N95s is inadequate).”

Priority Assigned: *None assigned in state report*

Issue & Discussion:

SNS Planning and Distribution

- “[STATE HEALTH AGENCY] developed the state’s SNS request without local input as a proactive attempt at getting access to its state allotment of PPE and antivirals before the fall H1N1 outbreak.”
- “HHS requires that all state requests for SNS resources be reviewed by the HHS director.”
- “During an emergency event, timely response is of the utmost importance and cannot be achieved with this type of top-down policy.”
- “[STATE HEALTH AGENCY] did not receive an answer to its initial request for SNS assets until two months after the peak of H1N1 ended in [STATE], by which time it no longer needed additional resources.”

Mitigation Strategies:

None identified in state report

Recommendations Suggested:

- “[STATE HEALTH AGENCY] should develop a local advisory group that can be called upon during an emergency to obtain input from LHDs and to assist in communicating state response efforts to local counterparts.”
- “HHS should change their policy for approving state requests for SNS assets during an emergency event.”

Priority Assigned: *None assigned in state report*

Issue & Discussion:

PPE Guidance; N95 Respirators

- “Ambiguity regarding federal guidance versus regulatory directives on the use of N95 masks created healthcare institution risk of potential regulatory consequences.”
- “CDC recommended the use of N95 masks for healthcare workers when caring for patients with pandemic influenza; OSHA disseminated a federal regulatory directive to follow the CDC recommendations for stricter use of PPE.”
- “[STATE HEALTH AGENCY] released its infection control guidance for healthcare workers which recommended the use of N95 masks only when performing aerosol-generating procedures, thereby countering the CDC recommendations.”
- “Although the [STATE HEALTH AGENCY] recommendations were less restrictive, hospital and healthcare institutions were at risk of regulatory consequences if they did

	not adhere to the OSHA directive.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] published recommendations to use N95 masks for healthcare workers when performing aerosol-generating procedures.” • “[STATE HEALTH AGENCY] worked with the [STATE OCCUPATIONAL HEALTH AGENCY] to declare an N95 shortage, thereby allowing the flexibility to prioritize the use of N95 masks.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Coordinate jointly with all federal agencies, including OSHA, on the use of PPE for healthcare workers.”
Priority Assigned:	6.1

Issue & Discussion:	SNS Stockpiles <ul style="list-style-type: none"> • “The distribution of SNS materiel without a state request resulted in the delivery of excess assets.” • “Some SNS assets received at the state level were not matched with state needs and resulted in excess resources.” • “The public health need would have been better served if they had queried the states prior to SNS distribution.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “[STATE] developed and implemented a strategy for distributing the available assets to the local jurisdictions.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Distribute assets based on needs through formal state requests following the established Division of Strategic National Stockpile (DSNS) protocol.”
Priority Assigned:	6.2

Issue & Discussion:	Medical Supplies; HAvBED <ul style="list-style-type: none"> • “Requests for information by the federal government directly to the hospitals conflicted with information requests from the state.” • “Throughout the H1N1 response, [STATE HEALTH AGENCY] consistently gathered available bed numbers and situational assessment data from hospitals.” • “The federal government at various times directly requested ventilator status from these same hospitals.” • “Unfamiliar with the new federal request process, hospitals followed state protocols by only reporting situational awareness to [STATE HEALTH AGENCY]; this reporting discrepancy caused the federal government to assume hospital resources and infrastructure were inadequate.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] requested hospitals to respond to both the HHS situational awareness report and the HAvBED requests.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “The federal government should follow established protocol for coordinating directly with states for hospital information.”
Priority Assigned:	6.3

Issue & Discussion:	N95 Respirators <ul style="list-style-type: none"> • “N-95s supplied by the federal government were not a brand used by hospitals in [STATE]; required new fit tests.” • “Respiratory protection programs in long-term care facilities, particularly those that
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	included N95 fit testing, were not in place or able to be used.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “Hospitals did not want to accept the federally-supplied N95s due to fit test issues.” • “Unclear why N95s were needed for influenza.” • “Nursing homes were ill-equipped to take on N95 fit testing and airborne precautions in the midst of a pandemic event.” • “[STATE] surveyed the hospitals two years ago to identify the brand they purchased. When SNS assets deployed, [X]% were placed in the [STATE CACHE], and [SAME X]% of state assets—the preferred brand—were distributed (<i>EFFECTIVE</i>).” • “[STATE HEALTH AGENCY] staff worked closely with all nursing homes [OVER 750]) throughout the state to develop respiratory protection plans (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Federal survey should be conducted of the states to determine the preferred brands of assets used by hospitals; stockpile these in the SNS (<i>FEDERAL</i>).” • “FDA-approved respirators should be purchased without an expiration date, so wouldn’t need an EUA (<i>FEDERAL</i>).” • “Respiratory protection programs within facilities need to be reviewed; modifications made to improve programs, specifically in the context of nursing homes (<i>STATE</i>).” • “Review N95 guidance for practicality without compromising safety (<i>STATE</i>).”
Priority Assigned:	1

Issue & Discussion:	Guidance/Policies <ul style="list-style-type: none"> • “Clinical guidance from CDC was delayed at the Federal level; also at the state level when executive approval was required from more than one agency and overall time for review/approval.” • “Approval processes slowed release of important information to clinicians, resulting in dependence on CDC guidance over state guidance.” • “Recreating documents from CDC, [STATE HEALTH AGENCY], and provider professional organizations created confusion / further delays in distributing guidance to providers.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “Once approved, guidance was distributed widely via the [STATE HEALTH CARE PROVIDER PORTAL], and posted on the [STATE HEALTH AGENCY] website (<i>EFFECTIVE</i>).” • “As guidance evolved, [STATE HEALTH AGENCY] began highlighting just the changes in lengthy documents, so that providers could quickly assimilate the new information (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Federal clinical guidance should be developed/disseminated more rapidly (<i>FEDERAL</i>).” • “State approval processes need to be streamlined to expedite information release to clinicians as quickly as possible (<i>STATE</i>).”
Priority Assigned:	2

Issue & Discussion:	Stockpiling and Distribution of Antivirals <ul style="list-style-type: none"> • “No process for LHDs to use the stockpile for under- and uninsured individuals.” • “[STATE HEALTH AGENCY] waited too long to push out antivirals to pharmacies
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	for these populations.”
	<ul style="list-style-type: none"> • “At-risk populations who used CHC/FQHCs did not receive antivirals in a timely manner.” • “CHC/FQHCs frustrated with their inability to access medication for their patients quickly and easily.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “New relationships/partnerships were established with pharmacies statewide (<i>EFFECTIVE</i>).” • “Private and chain pharmacies, and some FQHCs were provided with a cache of antivirals for under- and uninsured individuals. Individuals were taken at their word if they stated they had no insurance (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Deploy antivirals as appropriate to pharmacies and health centers much earlier in an event; develop protocols/policies for community members to access the medication (<i>STATE</i>).” • “Maintain/strengthen relationships with private and chain pharmacies (<i>STATE</i>).”
Priority Assigned:	3

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III.D National Vaccination Campaign

Please see the introduction to Section III on page 28 for general information about the data contained in this subsection.

Selected Successful Elements/Mitigation Strategies

Vaccination Generally

- “Vaccination efforts averted a third wave of H1N1.”
- “State and local levels demonstrated excellent teamwork; new cooperative partnerships were established, using local health departments as coordinating centers for local health care providers, and supportive partnerships with local Chambers of Commerce assisted in the execution of a successful vaccine operation.”
- “Additional successes included the value of the PREP Act in the dissemination of information, making health care workers a target group, and a high vaccination uptake reported in the Latino population.”

Vaccine Identification and Formulations

- “In less than a year, the federal government developed and delivered a vaccine for a novel influenza virus.”

Vaccine Availability and Allocation

- “Vaccines were available fairly rapidly (via weekly allocations).”
- “The state credits the federal government for permitting state and local health officials to oversee and determine H1N1 vaccine allocation and distribution needs.”

Vaccine Prioritization and Guidance

- “There were pre-established, clearly defined priority policies for vaccination delivery and ordering.”
- “Opening up vaccination in November to all community members markedly increased vaccination rates in the state.”

Vaccine Distribution and Supplies

- “The national vaccine manufacturing and distribution process was seen as effective.”
- “The quality of the federal vaccine supplies were adequate.”
- “The state health agency distributed vaccine to both providers and local health departments, with local health departments taking on the role of redistributors, allowed for sharing mechanisms between providers within a county.”
- “The state health agency provided local health departments with spreadsheets to inform them as to which providers in their jurisdiction were getting vaccine.”
- “In addition to working with local public health departments, the state health agency coordinated distribution of the vaccine by working directly with the Indian Health Service and tribal communities; the state health agency allocated a percentage of the state’s vaccine allotment to the Tribal Nations.”

Administering Vaccine

- “At the state and local level, public health agencies successfully provided H1N1 immunizations to a large number of people.”

- “Recruiting additional community providers to facilitate vaccine administration, expanding pharmacists’ role in vaccinating patients ages 14+, as well as including paramedics to assist local health departments with vaccine administration were critical components in the success of the vaccination efforts.”
- “Using Vaccines for Children [VFC] providers, school-based vaccination clinics, and direct shipment of vaccines to providers also facilitated vaccination efforts.”
- “All healthcare providers who administered H1N1 vaccine were required to pre-register; pre-registration was available online and accounted for the majority of enrollees.”
- “The state drafted several draft executive orders to be implemented during a declared emergency, which orders expand public health authority to improve response. A few of these draft executive orders delegate authority for vaccination to healthcare practitioners, such as EMS providers, that do not have this responsibility under their normal scope of practice. The state did not declare a state emergency and did not implement any of the draft executive orders. The state health agency and local public health agencies agreed that vaccinator-staffing shortages could be addressed on a case-by-case basis. At no time during the outbreak were additional vaccinators requested.”

Vaccine Tracking/Recall/Adverse Events

- “Reporting through Vaccine Adverse Event Reporting System (VAERS) and the state immunization registry were cited as beneficial systems utilized during the incident.”
- “Manufacturers provided information directly to providers on recalled and expired vaccines which were helpful in the vaccination process.”

Summary of Issues/Barriers

Vaccination Generally

- The three-phased federal funding approach affected vaccination response and planning at various levels.

Vaccine Identification and Formulations

- Lack of a federal policy/standard for vaccine manufacturers on the formulation by specific age range presented a barrier.
- Too many options for vaccine and rules tied to vaccine type (age, thimerosal-free, FluMist) resulted in limited vaccination of priority target populations when insufficient quantities of a particular type were received.
- Different formulations of vaccine made allocation and administration decisions difficult and created the potential for errors; communication around Live Attenuated Influenza Vaccine (LAIV) gave the public a distorted view on FluMist and inhibited the demand for this vaccine formulation.
- Limited amount of thimerosal-free vaccine available in the beginning made it challenging to vaccinate high-risk populations due to state law requiring thimerosal-free vaccine children and pregnant women.
- Varying amounts of formulations, presentations and amounts of vaccine shipped to hospitals caused logistical issues and confusion among providers.

Vaccine Availability and Allocation

- CDC allocation predictions were frequently inaccurate and overestimated available supply.
- Overly optimistic projections for vaccine availability complicated vaccine clinic planning and public information efforts.

- Delays and constant revisions in vaccine allocation undermined local mass vaccination efforts caused vaccination clinics to be cancelled; when vaccine was available, public demand had waned resulting in surplus vaccines and loss of credibility for state/local public health.
- Allocation system to states was too complicated and priority group rankings were confusing; providers received unwanted vaccine leading to confusion and waste.
- CDC minimum vaccine shipment of 100 doses required the state health agency to turn many providers away that otherwise would have been able to provide vaccine in their smaller practices.

Vaccine Prioritization and Guidance

- Federal policy to target limited vaccines ultimately impacted the uptake of the vaccine.
- Vaccination guidance regarding triaging limited vaccine within target groups was vague or non-existent; vaccination guidance implementation and groups targeted differed from county to county.
- Need guidance beyond ACIP guidelines when vaccine is in short supply.
- Variations in population between urban/rural counties meant that many rural counties were able to vaccinate everyone who fell into a priority group quickly and move to vaccinating the general public sooner than the more populated counties; lead to confusion among residents in different counties.

Vaccine Distribution and Supplies

- The supplies sent in each shipment of vaccine did not always correspond to the type of vaccine shipped along with it; the types of supplies changed from shipment to shipment.

Administering Vaccine

- Questions remain at the local level about who can be given the authority to vaccinate (e.g., EMTs) and concerns over workers compensation and liability issues for volunteers.
- U.S. Department of Defense sites did not receive vaccine in time to vaccinate their personnel prior to or during the peak of the outbreak; local health departments could vaccinate dependents of active duty personnel, but not active duty personnel themselves—including those that were pregnant or had other high-risk conditions.

Payment/Reimbursement Issues

- Reimbursement for administration of vaccine and the use of PHER funds, self-pay methods and third-party insurance was inconsistently applied throughout the state.
- Policies regarding cost-reimbursement issues with CMS needed clarification.

Vaccine Tracking/Recall/Adverse Events

- CDC delayed requesting from states the specific variables to be collected for antiviral courses administered.
- CDC recall of vaccine during the outbreak due to degrading vaccine and expiration date concerns caused confusion and panic among the public and could have lead to refusal to be vaccinated.

Outreach to Minority, Special and Vulnerable Populations

- Outreach to the African-American populations was not effective causing poor uptake in the community.
- Established vaccine allocation and distribution protocols between the federal government and Tribal Nations using the Indian Health Service were not followed.

Text of Issues/Barriers/Recommendations

Issue & Discussion:	<p>Reporting Doses Administered, Antiviral</p> <ul style="list-style-type: none"> “CDC was delayed in requesting from states the specific variables to be collected for antiviral courses administered.” “Initially, no information was required; later requests for age and then information on pregnancy and underlying health condition status were made.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> “CDC should develop, standardize, and communicate consistent reporting policies for antiviral doses administered to states to ensure that those policies are in place before a public health emergency.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p>Inventory Management</p> <ul style="list-style-type: none"> “Given current vaccine manufacturing technologies, the federal government could have expected initial shortages in supply and delays in vaccine distribution.” “When vaccine is in short supply, states may need direction beyond the Advisory Committee on Immunization Practices (ACIP) guidelines, as well as ethical standards for alternate standards of care.” “Lack of a federal policy or standard for vaccine manufacturers on the formulation by specific age range presented a barrier. Each manufacturer having a distinct formulation for a specific age range caused vaccine administration errors.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> “The national communication policy should have reflected this reality and should not have over-promised and under-delivered. The federal government should consider investing in new technologies to ensure a quicker turn around time between vaccination seasons. This may help to restore trust and credibility in federal, state, and local public health.” “The role(s) of public health in vaccination efforts needs to be defined and the efficacy of using school-based clinics, local health department clinics, hospitals and clinics, and other venues should be evaluated, with recommendations communicated to states.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p>Payment/Reimbursement</p> <ul style="list-style-type: none"> “Reimbursement for administration of vaccine and the use of PHER funds, self-pay methods and third-party insurance was inconsistently applied throughout the state.” “It was reported that some individuals traveled to other health departments to receive “free vaccines” while others were charged by private providers for administration fees for the H1N1 vaccine; this created a perception that there was inequality to access.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> “Federal government should develop and communicate clear policies regarding the use of federal grant funds that can be used for operations and the intersection of the uses and other reimbursement programs (such as Medicare and Medicaid).”

Priority Assigned: *None assigned in report*

Issue & Discussion:	Availability and Allocation; Authority to Administer <ul style="list-style-type: none">• “CDC allocation predictions were frequently inaccurate and overestimated available supply.”• “An allocation formula was implemented that addressed provider types however the unpredictable fluctuations in supply added to the allocation complexity. This further resulted in the inability to predict what vaccine and how much would be received by providers and thereby complicated planning clinics.”• “Vaccine delivery information to health care providers and the public was misleading. The White House and CDC raised expectations on early availability and quantity of the vaccine that was not met.”• “Federal policy to target limited vaccines ultimately impacted the uptake of the vaccine.”• “CDC recommendations were inconsistent with the WHO guidelines on vaccine dosage (recommend 1 vaccine dose for all populations). This presented some confusion on the appropriate dosage for children under the age of 10, as well as the recommendations for a second dose.”• “State/local level real-time surveillance on vaccine supply/ demand, immunization reporting and transferred vaccines was ineffective.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “Improve electronic reporting systems for vaccines to alert providers of vaccination amounts being shipped in real-time.”• “Increase public awareness and interest on getting vaccinated (develop focus group on why people did not get vaccinated).”• “Expand the role of pharmacists and staff in vaccination.”• “State should develop policies for practice standards of non-traditional vaccinators and dispensing practitioners for use during an emergency.”• “State should develop policy standards for local agencies regarding policies that allow emergency certifications or expansion of practice for professionals and liability protection.”• “Local governments should develop policies that enable professionals who are not [HEALTH AGENCY] staff assist with expanded roles as provided by state policy.”• “Local governments should, in order to provide surge capacity, develop policies such as human resource, just-in-time training and certification.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	Formulation <ul style="list-style-type: none">• “Having many different manufacturers helped with the rapid vaccine supply but resulted in many different formulations. This made allocation and administration decisions difficult and created the potential for errors.”• “Communication around Live Attenuated Influenza Vaccine (LAIV) gave the public a distorted view on FluMist and inhibited the demand for this vaccine formulation.”
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Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Limited vaccine formulation should dictate target group allocation.” • “Federal government should develop and communicate clear policies on the use of vaccine presentations.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Priority Groups; Other Vaccination Priorities; Authority</i> <ul style="list-style-type: none"> • “Vaccination guidance regarding triaging limited vaccine within target groups was vague or non-existent.” • “Confusion with regards to “who” is eligible to receive vaccinations among high risk populations, as well as unreliable assessment of high-risk clients at the provider level were issues that negatively impacted the campaign.” • “Vaccination guidance implementation and groups targeted differed from county to county.” • “This was all complicated by the slow ramp-up of vaccine supply.”
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Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Policy should be developed to include laboratory staff as health care workers.” • “Federal government should develop policies regarding service delivery to undocumented workers while they are in the U.S.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Outreach to Minority Communities</i> <ul style="list-style-type: none"> • “Outreach to the African-American populations was not effective causing poor uptake in the community.”
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Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Improve communications toward minority populations (specifically, African Americans).” • “State should develop communications policies that ensure outreach to communities that are culturally competent and address barriers to access during an emergency. These policies should reflect input from these populations.” • “Generate guidelines about undocumented workers.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Administration; Federal Employees</i> <ul style="list-style-type: none"> • “State/local health departments were told that the U.S. Department of Defense (DOD) would be vaccinating their own personnel; however the DOD did not receive vaccine in time to vaccinate their personnel prior to or during the peak of the outbreak.” • “Local health departments (LHDs) could vaccinate dependents of active duty personnel, but not active duty personnel themselves– including those that were pregnant or had other high-risk conditions.”
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Mitigation Strategies:	<i>None identified in state report</i>
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Recommendations Suggested:

- “DOD needs to provide vaccine to all military personnel as promised in a timely fashion or enable state/local health departments to vaccinate military personnel with financial and operational support from DOD.”

Priority Assigned: *None assigned in state report*

Issue & Discussion: ***Allocation; Minimum Dose-Count Ordering Requirements***

- “All healthcare providers who administered H1N1 vaccine were required to pre-register; pre-registration was available online and accounted for the majority of enrollees.”
- “The CDC minimum vaccine shipment of 100 doses required [STATE HEALTH AGENCY] to turn many providers away that otherwise would have been able to provide vaccine in their smaller practices.”
- “This type of logistical requirement caused problems for states with rural and frontier counties.”

Mitigation Strategies: *None identified in state report*

Recommendations Suggested:

- “In the future, CDC should be more flexible with vaccine shipment allocations.”

Priority Assigned: *None assigned in state report*

Issue & Discussion: ***Availability and Allocation***

- “CDC over-promised and under-delivered vaccine allocations at the beginning of the influenza season; CDC’s continued revisions to vaccine allocations were likewise miscalculated.”
- “The constant revisions in vaccine allocation undermined local mass vaccination efforts, as the amount of vaccine to arrive in the state each week was always unknown. As a result, many mass clinics were cancelled at the last minute.”
- “At the beginning of the outbreak, people who did not fit into one of the limited priority groups were turned away and were unable to receive H1N1 vaccine.”
- “Once vaccine was available in large quantities, the number of cases in [STATE] began to decline and the general public was no longer interested in getting vaccinated.”

Mitigation Strategies: *None identified in state report*

Recommendations Suggested:

- “CDC needs to provide better projections on vaccine availability, demanding better estimates from vaccine manufacturers.”
- “Federal government and vaccine producers need to implement new/non-egg based vaccine production technology.”
- “Vaccine manufacturers need to be held accountable for their estimated vaccine production.”
- “In the future, CDC should under-promise and over-produce, not the other way around.”

Priority Assigned: *None assigned in state report*

Issue & Discussion: ***Priority Groups***

- “Per CDC guidance, [STATE HEALTH AGENCY] mandated that all LHDs enforce

	<p>the priority groups before vaccinating the general population.”</p> <ul style="list-style-type: none"> • “Due to variations in population between urban/rural counties, many rural counties were able to vaccinate everyone who fell into a priority group quickly and move to vaccinating the general public sooner than the more populated counties.” • “Residents in the state who did not fit into a priority group were confused as to why they could be vaccinated in a neighboring county and not their own.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “CDC should be more specific in defining priority groups so state/local health departments can more easily justify the transition to vaccinating the general public.” • “[STATE HEALTH AGENCY] should continue to enhance communications surrounding priority group issues during future events.” • “[STATE HEALTH AGENCY] should continue to support LHDs decisions’ on how to best meet the needs of their populations, ensuring that the highest risk are vaccinated and that vaccine is provided to as many people as possible.”
Priority Assigned:	<i>None assigned in state report</i>
Issue & Discussion:	<p>Vaccine Recall</p> <ul style="list-style-type: none"> • “CDC recalled vaccine during the outbreak due to degrading vaccine, quality, expiration dates, etc.” • “When the public hears the word ‘recall’, they believe something is wrong; that the vaccine is dangerous.” • “The use of the word ‘recall’ can lead to people refusing to be vaccinated due to misinformation.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “CDC should never use the word ‘recall’ in association with vaccine unless there is a clear safety issue.”
Priority Assigned:	<i>None assigned in state report</i>
Issue & Discussion:	<p>Formulation</p> <ul style="list-style-type: none"> • “The varying amounts of formulations, presentations and amounts of vaccine shipped to hospitals caused logistical issues and confusion among providers.” • “FluMist was the first vaccine presentation available for healthcare workers. In the past, healthcare workers were told that if they were vaccinated with FluMist, they could possibly transmit live virus to patients; thus many healthcare workers were not willing to be vaccinated with FluMist during H1N1.” • “Many hospitals sent the FluMist presentation back without vaccinating their healthcare workers.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “CDC needed to provide more specific information on FluMist and other intranasal presentations for healthcare workers.” • “Directives to vaccinate healthcare workers should come out from the federal level and not from the state, local or facility level.”

Priority Assigned: *None assigned in state report*

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| Issue & Discussion: | <i>SNS Supplies</i> <ul style="list-style-type: none">• “The quality of the federal vaccine supplies were adequate, however the type of supplies sent in each shipment did not always correspond to the type of vaccine shipped along with it; the types of supplies changed from shipment to shipment.”• “LHDs tried to make logistical decisions based on the materials received in prior shipments, but were unable to do so because the federal supply shipments contained inconsistent materials.”• “LHDs had to fill missing/inappropriate supplies with their own resources.” |
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Mitigation Strategies:	<i>None identified in state report</i>
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| Recommendations Suggested: | <ul style="list-style-type: none">• “All vaccine kits should contain the same supplies throughout the response. CDC should keep vaccine materials consistent in each shipment.”• “CDC should give states and locals the option to order supplies separate from the vaccine.”• “All tracking numbers on vaccine shipments should be timely and correct.”• “Send more yellow vaccination cards in future shipments.” |
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Priority Assigned: *None assigned in state report*

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| Issue & Discussion: | <i>Authority to Vaccinate</i> <ul style="list-style-type: none">• “[STATE] has drafted several draft executive orders to be implemented during a declared emergency, which orders expand public health authority to improve response.”• “Some of the draft executive orders delegate authority for vaccination to healthcare practitioners, such as EMS providers, that do not have this responsibility under their normal scope of practice.”• “[STATE] did not declare a state emergency and did not implement any of the draft executive orders.”• “[STATE HEALTH AGENCY] and LHDs agreed that vaccinator-staffing shortages could be addressed on a case-by-case basis. At no time during the outbreak were additional vaccinators requested.”• “Questions remain at the local level about who can be given the authority to vaccinate.”• “LHDs are still looking for clear legal guidance from [STATE HEALTH AGENCY] or the Attorney General’s (AG’s) Office on the regulations regarding liability and workman’s compensation for the use of volunteers.”• “Training and workshops addressing state/local legal issues have been provided, but locals want specific guidance signed by the AG or [STATE HEALTH AGENCY]’s legal counsel.”• “During H1N1, different parties read the same regulations regarding the use of EMTs in different ways.” |
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Mitigation Strategies:	<i>None identified in state report</i>
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Recommendations Suggested:	<ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] will continue to provide the existing legal guidelines defining what different classes (EMT-B, EMT-I, etc.) of EMT’s can do under specific circumstances during a declared vs. non-declared disaster.” • “[STATE HEALTH AGENCY] will work with legal counsel to determine if a point of dispensing (POD) can be defined as a medical facility.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	<i>Vaccine Availability</i> <ul style="list-style-type: none"> • “Overoptimistic projections for vaccine availability complicated vaccine clinic planning and public information efforts.” • “The federal government announced H1N1 vaccine quantities prematurely, creating public expectations that abundant amounts of vaccine would be available. Actual vaccine amounts initially available were far less than originally anticipated. The type of vaccine initially available (i.e. nasal spray versus injection) further complicated the matter. This made it very difficult for local health departments to execute vaccination strategies and establish priorities.” • “Participants agree federal H1N1 vaccine projections must be announced when appropriate, even if later in the response to allow states and locals to develop more accurate vaccine allocation and distribution plans.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “Review plans to release vaccination information prior to distribution.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Federal agencies need to ensure that vaccine projections are more accurate and realistic.”
Priority Assigned:	4.1

Issue & Discussion:	<i>Allocation; Distribution</i> <ul style="list-style-type: none"> • “Established vaccine allocation and distribution protocols between the federal government and Tribal Nations were not followed.” • “The federal government has an established protocol for vaccine allocation and distribution to Tribal Nations. During the H1N1 response, the mandate to begin working with state/local health was problematic due to need to register their providers with the central distribution system.” • “Although [THE STATE] has established collaborative relationships with the Tribal Nations, they were asked to circumvent an established process with IHS thereby creating a challenge for state/local public health departments to coordinate vaccination efforts.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “[THE STATE] allocated [A PERCENTAGE] of state’s vaccine allotment to the Tribal Nations. • “In addition to working with local public health departments, [STATE HEALTH AGENCY] coordinated distribution of the vaccine by working directly with IHS and tribal communities.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Review plans, policies and procedures for providing direct public health resources to Tribal Nations.” • “Follow the established federal protocol for vaccine allocation and distribution to Tribal Nations.”
Priority Assigned:	4.2

Issue & Discussion:	<i>Administration; Payment and Reimbursement</i> <ul style="list-style-type: none"> • “Policies regarding cost-reimbursement issues with CMS needed clarification.” • “Reimbursement for services regarding CMS maximum allowable rates was problematic, impacting the number of individuals receiving vaccinations.” • “Guidance regarding third-party billing became unpredictable with policy changes occurring multiple times. [STATE] received vague direction on use of third-party billing options with grant funding.” • “The barrier allowed healthcare providers/community vaccinators to charge the public for H1N1 vaccine; this resulted in the public paying for a “free” vaccine in varying amounts across the state.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “There was no uniform remedy for this issue in [STATE]. Local health departments dealt with reimbursement issues individually.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Provide recommendations surrounding cost-reimbursement issues prior to vaccine distribution to enable state / local health departments to plan accordingly.” • “Provide states with total, unrestricted funding amounts prior to vaccine distribution to allow public health agencies to anticipate immunization administration fees.”
Priority Assigned:	4.3
Issue & Discussion:	<i>Allocation Approaches</i> <ul style="list-style-type: none"> • “Allocation system to states was too complicated; number of allocation variables increased in an attempt to make allocation fair across the state across priority groups.” • “LHDs felt they should have been more involved in making choices regarding provider allocation; LHDs had a better perspective on the providers and populations served. LHDs could have been a broker for vaccine between state and provider. LHDs did not want to reallocate it, but could have provided better information to the state.” • “Priority group rankings were confusing; providers received unwanted vaccine leading to confusion and waste.” • “CDC reported vaccine types/amounts on a daily basis; some days no allocations provided. Lack of regular allocation amounts prevented state planning/scheduling.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “Having distribution to both providers and LHDs with LHDs taking on the role of redistributors allowed for sharing mechanisms between providers within a county (<i>EFFECTIVE</i>).” • “Opening up vaccination in November to all community members markedly increased vaccination rates (<i>EFFECTIVE</i>).” • “Provided LHDs with spreadsheets to inform them as to which providers were getting vaccine (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Allocation amounts should be underestimated but overproduced by the suppliers (<i>FEDERAL</i>).”
Priority Assigned:	1
Issue & Discussion:	<i>Formulation and Manufacture</i> <ul style="list-style-type: none"> • “Insufficient vaccine available early in the campaign.” • “CDC projections of vaccine supply by week were not accurate.” • “Too many options for vaccine and rules tied to vaccine type (age, thimerosal-free,

	<p>FluMist); limited vaccination of priority target populations when insufficient quantities of a particular type were received.”</p> <ul style="list-style-type: none"> • “Variety in vaccines (nasal spray – live attenuated, thimerosal-free, multi-dose with thimerosal, pediatric-specific) lead to public confusion /concerns about whether they were receiving the “right” (safest) vaccine.” • “Because vaccine was late/did not match projections, state planning for vaccine distribution and local planning for mass vaccination clinics could not be done; public/provider trust were compromised.” • “[STATE] routinely had to substitute vaccine from different manufacturers rather than what providers had requested, depending on amount and type of vaccine received. This slowed the process of allocation significantly (<i>INEFFECTIVE</i>).” • “State and LHDs and providers had to do significant education regarding thimerosal and FluMist; could only promote FluMist or vaccine with thimerosal if no other option was being offered (<i>EFFECTIVE but time consuming</i>).”
Mitigation Strategies:	
Recommendations Suggested:	<ul style="list-style-type: none"> • “There should only be three types of vaccine available: FluMist, thimerosal-free for pregnant women, and one formulation for age six months and older. (<i>FEDERAL</i>)”
Priority Assigned:	2
Issue & Discussion:	<p>Vaccination Guidance/Policy</p> <ul style="list-style-type: none"> • “Limited amount of thimerosal-free vaccine available in the beginning made it challenging to vaccinate high-risk populations. Thimerosal-free vaccine required by law in [STATE] for children and pregnant women.” • “The [STATE HEALTH DIRECTOR’S] letter suspending law regarding use of vaccine with thimerosal for pregnant women/children came too late.” • “LHDs faced threats of law suits from the public and resistance from providers.” • “[STATE] law leads people to believe that thimerosal is unsafe; people uncomfortable with the shift of messaging, even in a shortage.” • “Providers saw thimerosal as a liability; were reluctant to give it to pregnant women and children.” • “There is confusion over whether the order will expire on [DATE] and what impact that will have on messaging to providers.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “The [STATE HEALTH DIRECTOR’S] letter suspended the law regarding use of vaccine with thimerosal for pregnant women and children. However, it was perceived as coming too late (<i>INEFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Additional education/outreach to providers needs to occur prior to the [STATE HEALTH DIRECTOR’S] letter coming out suspending an existing law (<i>STATE</i>).” • “OB/GYNs need more education and support in understanding the safety of vaccine with thimerosal (<i>STATE</i>).” • “The law regarding thimerosal should be lifted; should be a priority for the [STATE HEALTH AGENCY] (NOTE: The [STATE HEALTH DIRECTOR’S] suspension of current law extended to [DATE]) (<i>STATE</i>)”
Priority Assigned:	3

III.E Workforce, Capacity, and Infrastructure

Please see the introduction to Section III on page 28 for general information about the data contained in this subsection.

Successful Elements/Mitigation Strategies

Flexing Existing Staff

- “The existing health agency staff was flexible, well organized, dedicated and efficient during the event.”
- “In addition to performing routine tasks, medical and public health staff carried additional duties.”
- “To address laboratory staff capacity issues, additional cross-trained staff were utilized to process the H1N1 specimens and perform administrative duties; at times, staff were obtained from temporary workforce agencies and local health departments.”

Public Health Surge Capacity

- “PHER funding allowed an increase in the local health department’s surge capacity by allowing and facilitating the hiring of temporary employees during the event.”
- “Insufficient staff was available for vaccination during the event and retired public health veterans at the local health department level offered expert assistance during the surge.”
- “State public health laboratory work spaces, changes in work schedules and functional teams facilitated capability to meet an increased demand for testing, mailing of kits, and test result reporting.”
- “Many public health agencies across the state conducted response efforts with minimal personnel and shortages of credentialed staff.”

Health Care/General Surge Capacity

- “When accessible, the use of school nursing staff, translators for non-English speaking patients and existing contracts and services with private vendors (i.e. trucking companies for distribution), as well as the individual training and agency cross-training conducted prior to the event proved advantageous during the incident in achieving a high level of collective preparedness.”

Volunteers

- “Response efforts from volunteer nurses at the local level and, at the state level, from state universities, were a large part of existing, collaborative partnership efforts.”
- “In general, the use of volunteers at the local level was effective; however, state and local public health found that they could not use volunteer staff as effectively for fulfilling key public health roles. Individuals with an intricate knowledge of the state’s public health system should have filled these roles internally.”
- “The state used volunteers to deal with staffing shortages; they saved counties tens of thousands of dollars, and remained committed and engaged in PODs throughout the vaccination campaign.”

Summary of Issues/Barriers

Flexing Existing Staff

- Restrictions on H1N1 funds resulted in difficulty flexing staff to fill needs directly or backfill for staff diverted to the response.
- Reassigning an expanded staff to the response led to a challenge in continuing routine operations due to unclear guidance and planning at the local level. PHER encumbrances and budget policies and procedures at the local health department level resulted in unused funds.
- Current public health infrastructure already stretched to the limit due to budget cuts, attrition of staff, inability to replace staff, and ongoing responsibilities that did not stop in the middle of a pandemic flu event.

Public Health Surge Capacity

- The magnitude of the H1N1 pandemic overwhelmed a public health system that was already at capacity.
- Extended and intense response by staff members left many exhausted as program staff were not prepared for the change in work schedule.
- Funding restrictions provided an additional barrier to mounting surge capacity to process H1N1 specimens at the state public health laboratory due to restrictions on workforce costs in PHER.

Health Care and General Surge Capacity

- Conflicting information on education and outreach efforts to health care providers posed challenges.
- Maintaining public health and hospital staffing during the peak of the H1N1 outbreak was a challenge.
- Surge capacity for hospitals continues to be an issue, as hospitals do not want to divert their staff to off-site facilities; staffing continues to be the biggest barrier to alternate care facility planning.
- Hospital personnel believed that credentialing continues to be an issue as well as Joint Commission issues surrounding EMTALA laws and the restricted roles of staff during an emergency.

Volunteers

- State and local public health agencies found that they could not use volunteer staff as effectively for fulfilling key public health roles.
- Some facilities were reluctant to use volunteers from the state's ESAR-VHP database because those volunteers only undergo a state criminal background check; state volunteer databases need a higher level of background checks providing national data, not just state and local information.

Workforce Mandates

- Lack of a vaccination policy for laboratory workers and the late provision of vaccination opportunities for state employees were barriers; mandatory vaccination policies in selected workplaces resulted in significant challenges.
- Healthcare workers expressed concern that there were limited numbers of personnel in their facilities that chose to be vaccinated against H1N1; hospital partners questioned whether mandating vaccination in this situation would work, as other vaccines (MMR) are mandated in order to work in a healthcare setting.

Text of Issues/Barriers/Recommendations

Issue & Discussion:

Flexing Capacity/Public Health Surge

- “Due to unclear guidance and planning at the local level, reassigning an expanded staff to the response led to a challenge in continuing routine operations. For example, there was a limited nursing staff most of whom were used for vaccinations resulting in the closure of other services.”
- “Furthermore, due to the need for the H1N1 response, “routine” functions of the LHDs were compromised.”
- “Staff with critical skills was not identified prior to the event and it was difficult to make these decisions in the middle of a response.”
- “Restrictions on H1N1 funds resulted in difficulty flexing staff to fill needs directly or backfill for staff diverted to the response.”
- “The extended and intense response by staff members left many exhausted as dedicated staff was not prepared for the change in work schedule. With individual exceptions, the [EPIDEMIOLOGY PROGRAM] and [IMMUNIZATION PROGRAM] within the [STATE HEALTH AGENCY] carried the brunt of the workload for an entire year.”

Mitigation Strategies:

None identified in report

Recommendations Suggested:

- “Other resources within agencies for this capacity need to be recruited through policies developed in advance.”
- “Sustained investments by local, state and federal government to fund public health infrastructure and surge capacity across county lines to meet vaccination program needs, as well as for SNS receiving and distribution is recommended.”
- “Identify staff to assist with vaccination efforts during surge.”
- “Coordination in advance between vaccinators training and leadership cohorts.”
- “Training additional nurses who are prepared for public health roles, training local health departments to outsource flu clinics at non-traditional sites, schools and including more basic staff to keep programs running are strongly recommended.”
- “State should develop policies related to emergency expansion of practice during an incident thereby allowing for the development of surge capacity.”
- “While there have been some improvements, human resource policies need to be further developed and improved in order to track and compensate for time spent on response.”
- “Participants proposed that policies be developed to provide clear direction on flexing hours, overtime and shift flexibility (how long staff are eligible to work), compensation, and sick-leave for all employees.”
- “State should further develop human resource policies regarding compensation, tracking personnel time and workplace needs for state employees.”
- “Participants also identified that local government should consider allowing non-health department staff to receive compensation for extra hours worked for future incidents.”
- “State should further develop standards for human resource policies that can be used by local agencies in the development of their policies.”
- “Local governments should further develop human resource policies regarding compensation, tracking personnel time and workplace needs for local agency

employees.”

- “In addition, more highly trained staff (epidemiologists, laboratory technicians, and budget staff) is required during surges for a sustained period; surge capacity can not be addressed with just in time training.”

Priority Assigned: *None assigned in report*

Issue & Discussion: ***PHER Funds***

- “PHER encumbrances and budget policies and procedures at the local health department level resulted in unused funds.”

Mitigation Strategies: *None identified in report*

- Recommendations Suggested:**
- “Federal government should allow greater flexibility regarding PHER funds both in allowable expenditures and time to expend funds. Provide clarity regarding what is allowable in the grant.”
 - “State should establish and communicate clear guidelines for expenditure of funds to the local agencies.”
 - “Local governments should develop policies to expedite use of targeted funds delivered on short notice.”

Priority Assigned: *None assigned in report*

Issue & Discussion: ***Workforce Vaccination Mandates***

- “Mandatory vaccination policies in selected workplaces resulted in significant challenges.”
- “There was a lack of vaccination policy for laboratory workers and state employee vaccination opportunities were provided late in the vaccination campaign.”
- “Early employee vaccination would have led by example.”

Mitigation Strategies: *None identified in report*

- Recommendations Suggested:**
- “Develop policies on mandatory workforce vaccinations for various categories of workers.”

Priority Assigned: *None assigned in report*

Issue & Discussion: ***Education/Outreach Capacity***

- “Conflicting information on education and outreach efforts posed challenges.”
- “Contradictory information on when nurses and providers should be redirected for education/outreach led to confusion.”
- “It was unclear as to who could staff call-centers, specifically if it was a ‘flu line.’”

Mitigation Strategies: *None identified in report*

Recommendations Suggested: *None identified in report*

Priority Assigned: *None assigned in report*

Issue & Discussion:	<i>Health Care Surge; Workforce Mandates</i> <ul style="list-style-type: none"> “Many healthcare workers expressed concern that there was limited numbers of personnel in their facilities that chose to be vaccinated against H1N1.” “Hospital partners questioned whether mandating vaccination in this situation would work, as other vaccines (MMR) are mandated in order to work in a healthcare setting.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> “During future pandemics, the federal government should mandate that influenza vaccination be required of all healthcare practitioners.”
Priority Assigned:	<i>None assigned in state report</i>
Issue & Discussion:	<i>Public Health Surge; Volunteers</i> <ul style="list-style-type: none"> “Maintaining public health and hospital staffing during the peak of the H1N1 outbreak was a challenge.” “Using volunteers at the local level was generally effective; however, state and local public health found that they could not use volunteer staff as effectively for fulfilling key public health roles.” “Individuals with an intricate knowledge of the [STATE] public health system should have filled these roles internally.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> “The use of volunteers needs to be restricted to non-critical public health roles.”
Priority Assigned:	<i>None assigned in state report</i>
Issue & Discussion:	<i>Health Care Surge</i> <ul style="list-style-type: none"> “Surge capacity for hospitals continues to be an issue, as hospitals do not want to divert their staff to off-site facilities. Staffing continues to be the biggest barrier to alternate care facility planning. The solution may be to surge as much as possible in the hospital where staff capacity already exists in addition to using retired medical personnel and students.” “In rural areas, they are encouraging people to stay at home and creating guidance to this effect.” “Hospital personnel also stated that credentialing continues to be an issue as well as Joint Commission issues surrounding EMTALA laws and the restricted roles of staff during an emergency.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> “Need to re-evaluate roles for volunteers and contractors during an emergency event, clearly defining those roles for public health staff vs. volunteers and ensuring the proper staffing is available for emergency response needs.” “Local healthcare coalitions need to look at using retired medical personnel as well as medical and nursing students for surge staffing.” “All critical players (employees and contractors) need to have VPN [virtual private network] access established in advance. This ensures that business operations continue

in the event that employees can not be in the office, e.g. poor weather conditions, sickness, etc.”

- “Need to resolve the missing reference to “EMTALA” in the President’s Declaration of National Emergency.”

Priority Assigned: *None assigned in state report*

Issue & Discussion:	<i>Volunteer Surge</i> <ul style="list-style-type: none">• “All [VOLUNTEERS ON THE STATE’S ESAR-VHP VOLUNTEER REGISTRATION SYSTEM] must pass a [STATE POLICE] background check before they are allowed in the system, however, the [STATE POLICE] background check is limited to illegal activity conducted in the [STATE].”• “Many partners were not comfortable using [VOLUNTEERS FROM THE STATE’S VOLUNTEER REGISTRATION SYSTEM] as their criminal history outside of the [STATE] is unknown. This has lead to limited use and enrollment in [THE STATE’S VOLUNTEER REGISTRATION SYSTEM].”• “State volunteer databases need a higher level of background checks providing national data, not just state and local information.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “Conduct federal background checks for all ESAR-VHP volunteers. This should be done by HHS – states can not afford to conduct these background checks using current funds.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	<i>Surge Capacity; public health Lab Funding</i> <ul style="list-style-type: none">• “Funding restrictions provided an additional barrier to H1N1 specimens at the [STATE PUBLIC HEALTH LABORATORY].”• “The [STATE PUBLIC HEALTH LABORATORY] received a surge of H1N1 specimens impacting the state’s ability to process lab specimens and confirmed lab results in a timely manner.”• “Specimen processing was also impacted by internal hiring issues and equipment availability; PHER Phase I funding restrictions regarding workforce costs provided an additional barrier to managing laboratory surge.”
Mitigation Strategies:	<ul style="list-style-type: none">• “Additional cross-trained staff were utilized to process the H1N1 specimens and perform administrative duties. At times, staff were obtained from temporary workforce agencies and local health departments.”
Recommendations Suggested:	<ul style="list-style-type: none">• “Provide more flexible funding guidelines to maximize and plan for workforce capacity issues as needed.”
Priority Assigned:	5.1

Issue & Discussion:	<i>Flexing Existing Staff/Volunteers</i> <ul style="list-style-type: none">• “Current public health infrastructure already stretched to the limit due to budget cuts, attrition of staff, inability to replace staff, and ongoing responsibilities that did not stop in the middle of a pandemic flu event.”• “Other workload activities were put on hold to the extent possible, as staff focused on H1N1 response efforts.”
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Mitigation Strategies:	<ul style="list-style-type: none"> • “Despite reduced staffing, the response to H1N1 was outstanding, with staff working many additional hours, holidays and weekends; this is not a long-term solution.” • “The most significant “work around” was the use of volunteers. They saved counties tens of thousands of dollars, and remained committed and engaged in PODs throughout the vaccination campaign (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Increase funding levels and resources for public health infrastructure to sustain required services (<i>FEDERAL</i>).” • “Engage volunteers in additional preparedness training and exercises (<i>STATE</i>).”
Priority Assigned:	1

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III.F Federal/State/Local Coordination

Please see the introduction to Section III on page 28 for general information about the data contained in this subsection.

Selected Successful Elements/Mitigation Strategies

Intergovernmental Coordination

- “Overall, interagency collaboration was successful at all levels.”
- “Constant internal communication channels of federal, state and local agencies seemed to improve the efficiency and effectiveness of the H1N1 response.”
- “Federal, state, and local partners swiftly coordinated H1N1 response efforts.”
- “Although setbacks at all levels of government occurred, public health agencies diligently succeeded with administering H1N1 vaccine to the public.”

Common Operating Picture

- “Webinars, websites and weekly telecasts using the state’s telecommunications agency assured common operating goals.”
- “To mitigate conflicting information from various federal and state agencies, the state utilized a cross-agency unified command structure to determine all policy issues.”

PHER Grant and Federal Funding Generally

- “Under the Public Health and Social Services Emergency Fund, Congress allocated response funding to prepare for and respond to the novel influenza A (H1N1) virus.”
- “As the lead federal coordinating agency for H1N1 response, the U.S. Department of Health Services (HHS) provided funding resources to states.”
- “Access to funding permitted the utilization of additional staff in assisting with the vaccination efforts.”
- “PHER funding also supported temporary laboratory personnel.”
- “The infusion of federal funding was extremely helpful.”
- “The total federal funding amount distributed to the state was sufficient.”
- “Funding obtained through the PHER grant was used to quickly hire additional regional health department staff to assist with response efforts.”
- “Public health officials agreed previous funding resulting from avian influenza established a foundation for a national response, requiring states and local governments to identify pandemic planning as a priority.”

Coordination with Stakeholders

- “Public health and health care sector interaction, as well as health department interaction with local health care providers, hospitals, and EMS collaboration were rated ‘extraordinary’.”
- “The state medical/ethical societies and the state judiciary committee, along with key stakeholders, convened a task force for the utilization of scarce critical care resources during the pandemic which proved advantageous.”

- “Within the state’s laboratory forum, stakeholder engagement and lab response to members’ questions provided valuable feedback via impromptu conference calls, as well as the FAQ’s that were published.”
- “The state has established strong working relationships with tribal nations, state and local agencies, and healthcare providers.”

Technical Assistance

- “Communication vehicles, such as regular conference calls with federal officials (the Department of Homeland Security [DHS], Federal Emergency Management Agency [FEMA], CDC, etc.) for PIO’s as well as technical assistance calls from the Association for Public Health Laboratories (APHL), proved critical for specific technical issues.”

Pandemic Planning

- “The state recognizes the federal government for establishing a priority for pandemic readiness and planning.”

Summary of Issues/Barriers

Intergovernmental Coordination

- Given that the H1N1 incident was a declared public health emergency, the event should have been given the same status as other emergencies (i.e. a Stafford Act declaration).
- Better coordination of state and local policies (priority groups, N-95, vaccine distribution, case definitions) was needed to assure consistency between federal, state and local sectors in areas of emergency management, public health and education.
- Regular communication and coordination with PIOs at the city/county levels were deficient.
- Federal agencies’ communication/coordination practices conflicted with state/local response efforts, information from federal agencies hindered state/local response efforts to provide timely information, and state, tribal, and local government, as well as non-profit agencies, received conflicting messages from the DHS, USDA, FDA, ED, and OSHA.
- Improve multi-agency coordination at the federal level prior to releasing federal guidance and regulatory directives.
- Information dissemination from federal agencies must comprehensively be approved by all federal parties.

PHER Grant and Federal Funding

- Federal grant-related policies often changed/conflicted and did not take into account state policies and procedures.
- Federal funding policies that led to a one-year, time-limited categorization of funding made proper stewardship of the funding difficult; separate ASPR and CDC funding streams make it difficult and often impractical to integrate public health and hospital preparedness programs at the state and local levels.
- Restrictions on the timing and use of PHER funds were barriers to the response.
- State/local pandemic response and planning efforts were hindered by phased allocation, timing and clarity of the Public Health Emergency Response (PHER) funding guidelines.
- Using the CDC Cooperative Agreement as a mechanism to provide emergency response funding was onerous; delayed resource allocation.

Coordination with Stakeholders

- Community colleges, colleges/universities, private schools and day care centers acted independently; the information they made available to their respective student populations sometimes caused confusion.

Pandemic Planning

- *HHS Pandemic Influenza Plan* does not reflect the 2009 World Health Organization (WHO) phases; state needs to know if HHS will adopt the new WHO phases, thereby requiring an update to the state's operational pandemic plan.

Text of Issues/Barriers/Recommendations

Issue & Discussion:	<i>Categorical Grant/Cooperative Agreement Flexibility</i> <ul style="list-style-type: none">• “During the response to H1N1, guidance interpretation from CDC kept changing (moving funds, redirects, and carryovers) and states most often received informal guidance through weekly emails or by filtering through Q&A documents.”• “Grant-related policies often were conflicting and did not take into account state policies and procedures.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “There is a significant need for official, consistent, and formalized guidance as a policy from CDC.”• “CDC grant policies should follow an all-hazards approach to build community capacity through sustainable funding to prepare for, respond to, <i>and</i> recover from emergencies.”• “Disease-specific grants, such as funding directed toward H1N1 efforts only, should be provided as a supplement to sustained preparedness funding.”• “Long-term funding is necessary to achieve a long-term goal.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>PHER Grants</i> <ul style="list-style-type: none">• “The infusion of federal funding was extremely helpful, but policies that led to a one-year, time-limited categorization of funding made proper stewardship of the funding difficult. Formalized guidance was ever-changing, sometimes lacking, and often conflicting. Non-science-based reporting policies, including the PHER Monthly Reports, put states in a difficult position, knowing that their inaccurate estimates of spending would influence future policy and funding decisions.”• “Separate ASPR and CDC funding streams make it difficult and often impractical to integrate public health and hospital preparedness programs at the state and local levels.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “Public health emergency preparedness funding should include, in addition to preparedness and response, funding for recovery.”• “Integration of ASPR and CDC funding streams would likely result in better

coordination on many levels.”

Priority Assigned: *None assigned in report*

Issue & Discussion:	<i>PHER Grants</i> <ul style="list-style-type: none">• “Participants cited that ways to use the grant funds were unclear; an example provided was accepting grant funding versus third party reimbursements for vaccine administration.”• “Spending restrictions and the timing of the arrival of funds were major barriers.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “Flexibility in the PHER grant to fund overall public health infrastructure, as well as the ability to carryover PHER money is desired.”• “More local discretion in spending instead of rigid categorization of funds would have allowed better use of funding; funds came too late to be useful for planning/surveillance but could have been used for other activities.”• “Federal government should allow greater flexibility regarding PHER funds both in allowable expenditures and time to expend funds. Provide clarity regarding what is allowable in the grant.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Interagency Collaboration</i> <ul style="list-style-type: none">• “Given that the H1N1 incident was a declared public health emergency, participants felt the event should have been given same status as other emergencies (i.e. a Stafford Act declaration).”• “Agency collaboration between the White House/CDC/DHS and ASPR did not work in partnership with state protocols (i.e., bypassed states’ request for bed status from hospitals, federal public messages sent out before information was distributed to state and local health departments, etc).”• “Considerable confusion was caused by additional data elements required by ASPR.”• “Consistently inaccurate vaccine projections from the CDC hampered state/local planning on a weekly basis.”• “FEMA documentation was confusing, and engaging key stakeholders was slower than the ideal.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “Better coordination of state and local policies (priority groups, N-95, vaccine distribution, case definitions) to assure consistency between federal, state and local sectors in areas of emergency management, public health and education.”• “More coordination with stakeholders, both governmental and non-governmental, at all levels is strongly recommended.”• “State should identify policy barriers that inhibit agencies and organizations from working together. Develop policies that enable these interactions.”• “Federal government should develop policies that clarify roles and interdependency of the multiple federal response agencies and their responsibilities.”• “Participants felt a federal-level evaluation of the similarities and differences of a

Stafford Act and the Public Health Emergency declaration would benefit the system as a whole and avoid silos for funding and response.”

- “Federal government should evaluate the similarities and differences between a Stafford Act declaration and the Public Health Emergency declaration with an eye toward benefitting the systems as a whole and avoid silos in funding and response.”
- “Further clarification of details for tracking expenses in order to accurately apply for reimbursement in a disaster declaration is needed.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

Local Communication/Coordination

- “At the local level, regular communication and coordination with PIO’s at the city/county levels were deficient.”
- “Private provider offices were not always up to date with changes in process/policy that occurred.”
- “Community colleges, colleges/universities, private schools and day care centers acted independently. The information they made available to their respective student populations sometimes caused confusion.”

Mitigation Strategies:

None identified in report

Recommendations Suggested:

- “Participants advocated for the development of a common operating platform, such as [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES], for communication at all levels, including a user-friendly template providing examples of scenarios.”
- “State should develop a common operating platform ([INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES]) and establish policies regarding its use in an incident.”
- “Clinical and public health lead agencies need to work more closely together at every level.”
- “Universities/colleges, public/private schools, and day care institutions should be provided with event information early on.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

PHER Grants

- “State/local pandemic response and planning efforts were hindered by phased allocation, timing and clarity of the Public Health Emergency Response (PHER) funding guidelines.”
- “Grant limitations ultimately led to issues with capitalizing on the cadence of the vaccine supply and demand and administering the vaccine to the public (i.e., when demand for the vaccine was highest, grant restrictions were allowing limited response capabilities).”
- “Unclear allocation amounts outlined in the three-phased funding approach, combined with vague disbursement timelines, resulted in public health agencies being unable to develop and adjust their plans for vaccine distribution.”
- “State and local public agencies received vague guidelines between two focus areas in Phase I. For example, PHER Phase I, Focus Area 2 limited funding to 25% for epidemiology and laboratory response. The state recognizes if projected amounts of all

PHER funding phases were provided at one time, public health planning efforts could have developed more quickly based on the recommended priority groups and severity of the pandemic.”

Mitigation Strategies:

- “The state distributed funding to local and tribal partners as a cost-reimbursement grant during the response which created unnecessary billing contingencies with private community vaccinators.”
- “Several public health agencies solicited vendors through RFPs to conduct mass immunizations. RFPs called for vendors to provide immunizations and accept limitations to the scope of work by removing costs to patients. Vendors providing mass immunizations agreed to vaccinate all persons, and in return, counties would cover administration fees for insurance billing.”
- “To avoid vaccine distribution delays, public health agencies developed pandemic planning strategies dependent upon disbursement amounts in Phases I and II versus developing a single strategy early in the planning process. HHS apportioned funding using a three-phase approach through a population-based formula. Based upon the funding amounts allocated in Phases I and II, state public health planners anticipated similar amounts in Phase III.”

Recommendations Suggested:

- “Provide funding in one lump-sum with general restrictions during the first disbursement phase.”
- “Create one cooperative agreement award with one phase, similar to a block grant.”
- “Distinguish between response grants and planning grants. Review and/or remove the accounting restrictions attached to cooperative agreement awards.”
- “Avoid categorical limitations for which response funding can be used (e.g. epidemiology, laboratory services and workforce limitations).”

Priority Assigned: 1.1

Issue & Discussion:

Governmental Coordination

- “Federal agencies’ communication and coordination practices conflicted with state and local response efforts. Information from federal agencies hindered state and local response efforts to provide timely information. State, tribal, and local government, as well as non-profit agencies, received conflicting messages from the DHS, USDA, FDA, ED, and OSHA.”
- “During the initial pandemic wave, local public health agencies advised school districts to prepare for school closures due to the unknown severity and magnitude of the virus. Part of this planning process included the HHS guidance that ensures students who participate in the schools’ free- and reduced-price lunch programs continue to be fed during prolonged school closures. As both [STATE HEALTH AGENCY] and the [STATE EDUCATION AGENCY] began to plan for this provision, the USDA stated that food commodities from the National School Lunch Program (NSLP) could not be used in non-congregate meal settings. This misalignment of federal expectations led to a more diluted planning effort in providing meals to these students. In lieu of a solid plan to ensure continued meal service, local school districts were just advised to provide a list of food banks and other food service programs resources to parents and students participating in the NSLP.”

Mitigation Strategies:

- “To mitigate conflicting information from various federal and state agencies, the state utilized a cross-agency unified command structure to determine all policy issues.”
- “Although, a statewide school dismissal order was not issued, a comprehensive remedy for providing food to children was not determined.”

	<ul style="list-style-type: none"> • “The federal government has since provided a work-around to the prohibition on using federal food commodities in non-congregate settings by allowing the Food Stamp Program (titled the “Pandemic Supplemental Nutrition Assistance Program” to be used.).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Ensure federal agencies adhere to national incident management standards and collectively make appropriate policy decisions when guidance crosses into more than one federal agency.”
Priority Assigned:	1.2

Issue & Discussion:	<i>Grant/Cooperative Agreement Flexibility</i> <ul style="list-style-type: none"> • “Using the CDC Cooperative Agreement as a mechanism to provide emergency response funding was onerous; delayed resource allocation.” • “Needing to write four grant submissions in six months was time consuming, inefficient, and taxed limited staff who were already involved in significant response efforts.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “Funding obtained was used to quickly hire additional regional health department staff to assist with response efforts (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Greater flexibility with federal funding should be allowed (<i>FEDERAL</i>).” • “Allow unspent monies to be carried forward (<i>FEDERAL</i>).” • “Ensure federal funding for ongoing state and local pandemic flu preparedness (<i>FEDERAL</i>).”
Priority Assigned:	1

Issue & Discussion:	<i>Messaging about Pandemic Severity</i> <ul style="list-style-type: none"> • “The HHS Pandemic Influenza Plan does not reflect the 2009 World Health Organization (WHO) phases.” • “Since the revision of the WHO phase descriptions in 2009, [STATE HEALTH AGENCY] has inquired about the potential alignment of the <i>HHS Pandemic Influenza Plan</i> with the new WHO phases. State operational pandemic plans need to mirror the <i>HHS Pandemic Influenza Plan</i> for consistency during multi-agency responses.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “[STATE] did not identify or conduct a remedy or work around activity for this issue.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Update the <i>HHS Pandemic Influenza Plan</i> to reflect new WHO phases and changes.” • “Provide guidance to states seeking to revise state operational pandemic influenza plans.”
Priority Assigned:	8.1

III.G Communication

Please see the introduction to Section III on page 28 for general information about the data contained in this subsection.

Selected Successful Elements/Mitigation Strategies

Ad Campaigns

- “The state created a robust media marketing campaign that focused on vaccine promotion and proper hygiene to prevent influenza spread. However, the delayed arrival of vaccine required state and local governments to adjust marketing strategies mid-course.”

Media Relations

- “Participants discussed and credited successful communication efforts during the H1N1 event with and/or between media outlets and state and local agencies.”
- “State and local public health officials acknowledge the federal government for coordinating public health information with the national media during the initial phases of the outbreak.”

Messaging Coordination

- “Communications were strength during the nationwide response; however, some communication issues occurred.”
- “The coordination of information was massively improved from spring to fall, in large part because of a state health Google Group implemented at the state level. This was developed to ensure that healthcare workers only received H1N1 updates once a day rather than each time a federal HAN was issued (multiple times a day during the spring response).”

Public Outreach

- “Early communication of event details provided by the CDC and the state health agency via public media messages, conferences, briefings, interviews, broadcasts, website access and information, outreach messages (specifically about vaccination), laboratory result communication, as well as a high level of state participation (Governor and cabinet secretaries) were among the most successful means of communication during the incident.”
- “The state successfully used a variety of mechanism to communicate about H1N1, including: state/local websites to control messages and provide information; activation of state/local call centers and hotlines; sharing of weekly disease reports on the state health agency’s public website; bimonthly calls with representatives of professional provider organizations; ongoing press briefings with the Governor and state health director; presentations at healthcare forums, community meetings and school activities; and use of reverse 911 for communicating school-based messages.”
- “The state health agency and local health departments used social media sites, including Twitter and Facebook, to distribute messages.”
- “The state health agency public website was designed to include a specific page for H1N1, information on which was updated regularly.”

Summary of Issues/Barriers

Ad Campaigns

- Media campaigns did not address the vaccine safety/efficacy issue; this deterred many people from getting vaccinated.
- Federal communications to the states and the public regarding the timing, amount, and type of vaccine affected state/local planning efforts; state/local marketing efforts created a demand for a vaccine that was not available at the time and once adequate supplies became available, the demand had diminished.
- Timing of vaccination campaign was out of synch with vaccine supply; no triggers were identified as to when it was appropriate/necessary to launch campaigns.

Media Relations

- Concerns over inconsistent, incorrect and untimely information used by the media.
- Local media often monitors/uses information directly from the CDC website without using state/local information; state agencies need to be more proactive in summarizing federal information and including state-specific information relevant to the current situation.

Messaging Coordination

- Internet-based systems to support EOC activities, hotlines and telephone systems were barriers to a more effective state response.
- Lack of a clear communication plan, and the failure to establish a joint information center (JIC), were seen as challenges for communications from the state to local health departments and the public.
- CDC communication during the first phase of H1N1 was overwhelming, including information sent via HAN; federal communications were at times repetitive and not clearly marked as updates.
- It was difficult for local healthcare providers and local health departments to keep up with recommendations and the volume of communications issued at the federal, state and local level.
- Federal agencies conducted too many conference calls on topics related to H1N1; information provided was inconsistent and audiences were pre-selected so people were getting different information.
- Issues surrounding public requests for data and privacy concerns when reporting case information.
- Inconsistent case report data between the state and CDC created confusion among public health agencies; disparity in reporting data impacted state/local public health officials by requiring local governments to clarify the conflicting data.

Communication with Stakeholders

- Many medical providers did not receive proper communications around the appropriate use of antivirals.
- Information/educational materials provided to direct care providers and front-line medical office staff were not timely or did not occur at all; providers and their staff were not always able to provide accurate information about priority groups/vaccination types to patients, causing confusion/frustration within communities.
- Special challenges were encountered for vaccine information and at-risk population-specific communications.

Text of Issues/Barriers/Recommendations

Issue & Discussion:	<p>Media Relations and Ad Campaign Efforts</p> <ul style="list-style-type: none"> • “Media campaigns did not address the vaccine safety/efficacy issue; this deterred many people from getting vaccinated.” • “Portraying the H1N1 vaccine as “new” at the national level, led to misunderstanding by the public.”
Mitigation Strategies:	None identified in report
Recommendations Suggested:	<ul style="list-style-type: none"> • “CDC, HHS, and other federal ad campaigns should make it a policy to address the safety and efficacy of the vaccine, and also include prevention strategies in their messaging.”
Priority Assigned:	None assigned in report
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Issue & Discussion:	<p>Communication</p> <ul style="list-style-type: none"> • “Many medical providers did not receive proper communications around the appropriate use of antivirals.”
Mitigation Strategies:	None identified in report
Recommendations Suggested:	<ul style="list-style-type: none"> • “Federal organizations need to do a better job communicating to medical providers about when and how to use antiviral medications, including a clear statement about inappropriate use of antivirals as a mass prophylactic agent.” • “Coordination/communication among federal partners should be improved. Perhaps a national Joint Information Center could be established during national public health emergencies to improve real-time situational awareness and consistent messaging.”
Priority Assigned:	None assigned in report
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Issue & Discussion:	<p>General Communication Issues</p> <ul style="list-style-type: none"> • “Participants identified the following as methods of communication that had difficulties during the event: 1) [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES], and 2) hotlines and telephone communication.” • “The main issues related to [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES] included: poor access to [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES] during the event, slow web conferences, updated information not always reflected and a lack of connectivity with state and local emergency management.” • “The [STATE PUBLIC HEALTH LABORATORY] hotlines were often unavailable; heavy traffic on phone lines became problematic and the [STATE IMMUNIZATION PROGRAM] was cited as not being as responsive as needed in returning phone calls.”
Mitigation Strategies:	None identified in report
Recommendations Suggested:	<ul style="list-style-type: none"> • “Improve local capability to utilize systems such as [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES].” • “State should enhance [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES] such that it is usable at the state and local level. Develop policies for its use.” • “More robust electronic communication conduit(s) to streamline communications

outside of public health and communicate incident management.”

Priority Assigned: *None assigned in report*

Issue & Discussion:	Messaging Coordination <ul style="list-style-type: none">• “Lack of a clear communication plan, and the failure to establish a joint information center (JIC), were seen as challenges for communications from the system to the public.”• “Participants concurred that there was a lack of communication between some of the local health departments (LHDs) and the local incident management teams until late in the outbreak.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “State should develop policies that allow for activation of a JIC early in the event, even if other parts of the [STATE EMERGENCY RESPONSE] are not activated.”• “State should establish a JIC early in the event.”• “State should establish improved plans for communications with the public including incorporating feedback from the public regarding what works.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	Media and Public Outreach <ul style="list-style-type: none">• “Media communications to the public were a high priority concern among participants.”• “Participants felt that messages released by the media prompted public fear and were often rooted in myth/rumor.”• “Local, state and federal websites occasionally posted contradictory/outdated information related to the event.”• “The inconsistency of identifying/utilizing a universal nomenclature for the event led to confusion (swine flu, H1N1, nH1N1).”• “The severity of the outbreak was often misrepresented due to (1) the lack of detail and (2) irregular/reactive messages (uncertainty of causes and origin, impact reported to public using total number of deaths and not years of age as a severity indicators, public outreach materials distributed late) caused the public to discount/ distrust the vaccination communication strategies/campaign efforts.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “Local governments need to enhance partnerships with local media and communications outlets.”• “State should establish improved plans for communications with the public including incorporating feedback from the public regarding what works.”• “Need more consistent means of communication vetted with the public and public health partners (event naming and information, reliable information on local media messages over local cable access and local government channel).”• “More efficient methods of intra-agency communication between public health partners, Public Information Officer’s (PIO’s) and the public are needed.”• “Need more efficient methods of communication between public health response

partners (keeping certain information separate from public).”

Priority Assigned: *None assigned in report*

Issue & Discussion:	<i>Outreach to Minority, Special, Vulnerable Populations</i> <ul style="list-style-type: none">• “Special challenges were encountered for vaccine information and at-risk population-specific communications.”• “Outreach plans and support for minority populations and “target groups” (African Americans, college students) were not universal among counties during vaccination campaigns.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “Public messages targeting at-risk populations (African Americans) are needed.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Information Sharing vs. Privacy</i> <ul style="list-style-type: none">• “Issues surrounding public requests for data were identified as troublesome when reporting cases (HIPPA violations prohibited disclosure of patient identification at the local level).”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “Well-established communication security for patient confidentiality (conference call/video system) is needed.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Amount and Frequency of CDC Updates</i> <ul style="list-style-type: none">• “CDC communication during the first phase of H1N1 was overwhelming, including information sent via HAN.”• “Much of this information was repetitive, and revisions of past guidance were not clearly labeled. HAN recipients did not know what information was new, what had been revised and what was already sent in prior email communications.”• “Coordination of information was improved from spring to fall, in large part due to a [NAME] Google Group implemented at the state level, which was created to ensure that healthcare workers received H1N1 updates once a day rather than each time a federal HAN was issued (multiple times daily in spring).”• “It was difficult for local healthcare providers and LHDs to keep up with recommendations and the volume of communications issued at the federal, state and local level.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “CDC should summarize their revisions to HAN communications and guidance in bullets, clearly outlining changes made.”• “CDC should post a version number on every guidance document.”• “[STATE HEALTH AGENCY] should continue to consolidate federal guidance for state and local partners during future large-scale events to ensure state and local partners are not overwhelmed by federal communications and to ensure that state and

local communications are also being received.”

Priority Assigned: *None assigned in state report*

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| Issue & Discussion: | <i>Messaging Coordination; Public/Media Outreach</i> <ul style="list-style-type: none">• “Local media often monitors/uses information directly from the CDC website without using state/local information.”• “CDC is looked to as the ultimate authority on large public health issues and critical state/local information can be overlooked or disregarded if CDC’s messages conflict with, or don’t include, key state/local talking points.”• “State agencies need to be more proactive in summarizing federal information and including state-specific information relevant to the current situation.”• “Talking points should be systematically provided to all participating public information officers.”• “The state needs to be looked to as the buffer between interpreting federal guidance and providing consistent messaging to local communities.” |
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Mitigation Strategies: *None identified in state report*

- Recommendations Suggested:**
- “CDC should include a statement in all press releases that individuals / media go to their state and/or LHD to receive specific regional/local public health information.”
 - “[STATE HEALTH AGENCY] should take all CDC information and translate it so that it mirrors state guidance; state and locals need to ensure that communications are consistent.”

Priority Assigned: *None assigned in state report*

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| Issue & Discussion: | <i>Messaging Coordination</i> <ul style="list-style-type: none">• “Federal agencies conducted too many conference calls on topics related to H1N1.”• “The information provided was inconsistent and audiences were pre-selected so people were getting different information.” |
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Mitigation Strategies: *None identified in state report*

- Recommendations Suggested:**
- “Reduce the number of conference calls.”
 - “Ensure that the same information is provided on all calls; make call notes available to everyone by posting these notes on a public website for everyone involved in the response effort to see.”
 - “Keep conference call times and days consistent.”

Priority Assigned: *None assigned in state report*

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| Issue & Discussion: | <i>Public Outreach/Vaccine Availability Messaging</i> <ul style="list-style-type: none">• “Communications to the states and the public regarding the timing, amount, and type of vaccine affected state and local planning efforts.”• “Public health officials encountered issues with vaccine distribution planning efforts due to the premature announcements of vaccine availability for the public.”• “Because of the lack of vaccine supply, state/local marketing efforts created a demand for a vaccine that was not available at the time. Once adequate supplies became |
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available, the demand had diminished.”

Mitigation Strategies:	<ul style="list-style-type: none">• “State and local public health agencies had to adjust/postpone vaccine promotion efforts to avoid creating additional demand for a vaccine that was not yet available to the general population.”• “[STATE] created a robust media marketing campaign that focused on vaccine promotion and proper hygiene to prevent influenza spread. However, the delayed arrival of vaccine required state and local governments to adjust marketing strategies mid-course.”
Recommendations Suggested:	<ul style="list-style-type: none">• “Establish public information campaigns early in the response utilizing a unified consistent message.”• “Ensure that messaging for vaccine demand and excess vaccine supply are prepared ahead of time.”
Priority Assigned:	2.1

Issue & Discussion:	<i>Messaging Coordination; Data Reporting Disparities</i> <ul style="list-style-type: none">• “Inconsistent data between [THE STATE] and CDC created confusion among public health agencies.”• “Several times federal officials relayed data via national media reports re: cases and deaths; unfortunately, the reports were made before the state could notify local public health officials. This created discrepancies between state and local reports.”• “Disparity in reporting data impacted state/local public health officials by requiring local governments to clarify the conflicting data.”
Mitigation Strategies:	<ul style="list-style-type: none">• “Public information staff had to repeatedly explain data discrepancies at the state and local level.”
Recommendations Suggested:	<ul style="list-style-type: none">• “When reporting data at the federal level, provide a disclaimer stating state and local data may be more accurate.”• “Insure that state and local public health officials are notified of case fatalities before reports are made at the national level.”
Priority Assigned:	2.2

Issue & Discussion:	<i>Stakeholders</i> <ul style="list-style-type: none">• “Information/educational materials provided to direct care providers and front-line medical office staff, who were answering the phones and receiving the questions, were not timely or did not occur at all.”• “Providers and their staff were not always able to provide accurate information about priority groups and vaccination types to patients, causing confusion and frustration within communities.”
Mitigation Strategies:	<ul style="list-style-type: none">• “Used of state and county websites to control messages and provide information (<i>EFFECTIVE</i>).”• “Activation of state and local call centers and hotlines (<i>EFFECTIVE</i>).”• “Sharing of weekly disease reports on [STATE HEALTH AGENCY] public website (<i>EFFECTIVE</i>).”

- “Bimonthly calls with representatives of professional provider organizations (*EFFECTIVE*).”
- “Develop / identify contact lists for individual providers (*STATE*).”
- “Target providers who treat high-risk populations (*STATE*).”
- “Distill state guidance/changes to one page of bullet points that are sent with entire guidance document (*STATE*).”
- “Prepare FAQs for office staff who answer the phones (*STATE*).”
- “Establish relationships with pharmaceutical representatives to use them as an avenue for providing information to physicians/physician office staff (*STATE*).”

Priority Assigned: 1

Issue & Discussion:

Media Relations/Ad Campaign Efforts

- “No triggers were identified as to when it was appropriate/necessary to launch campaigns.”
- “Availability of funds and the timing of the need were misaligned.”
- “Local news moving to internet media; more electronic information and efficient ways to reach the public were needed.”
- “Translation services needed for diverse populations.”
- “Media messaging was out of synch with vaccine supply.”

Mitigation Strategies:

- “[STATE HEALTH AGENCY] and LDHs used social media sites, including Twitter and Facebook, to distribute messages. The [STATE HEALTH AGENCY] public website was designed to include a specific page for H1N1, and information updated regularly (*EFFECTIVE*).”

Recommendations Suggested:

- “Allow CDC funds to be spent on media campaigns, as smaller counties could not afford PSAs and local politicians pushed back on placing this in local budgets (*FEDERAL*).”
- “Provide information in languages aside from English and Spanish (*FEDERAL*).”
- “Develop guidance for use of social media so that stakeholders are not trying to learn how to best use it “on the fly.” (*STATE*)”

Priority Assigned: 2

Issue & Discussion:

Public Outreach

- “Needed stronger, earlier, and more visible messages from the state, particularly about the safety, availability of vaccine, and need for medical treatment. [STATE’S] contracting and message clearing process, along with insufficient initial funding, created this delay.”
- “Protracted DHHS decision process re: a national “brand” for their H1N1 campaign also impeded state efforts, as we wanted to ensure consistent messaging.”
- “It was necessary to begin messaging encouraging vaccination well in advance of vaccine availability. This created demand when there was no, or insufficient, supply. However, if we had waited, the predominant vaccine messages would have been those questioning vaccine safety.”

	<ul style="list-style-type: none"> • “Messages focusing on H1N1 symptoms were confusing. Message should have been ‘If you are sick, stay home!’ ” • “Parents were not returning with their children under 10 years of age for second dose of vaccine.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “Ongoing press briefings with the Governor and [STATE HEALTH DIRECTOR] (<i>EFFECTIVE</i>).” • “Presentations at healthcare forums, community meetings and school activities (<i>EFFECTIVE</i>).” • “Use of reverse 911 for communicating school-based messages (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Streamline the clearance process at both the federal and state levels for messages to the public and to stakeholders (<i>FEDERAL and STATE</i>).” • “Allow greater flexibility with CDC funding, so that it can be used for timely messaging to the public (<i>FEDERAL</i>).” • “Develop an outreach plan for the public to increase understanding of vaccine safety and the importance of being vaccinated (<i>FEDERAL</i>).”
Priority Assigned:	3

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IV. Summary of State Meeting Reports

Section IV contains summaries of each of the five state reports. To create these summaries, information was copied verbatim from the underlying state reports and reorganized into a common format to allow for compilation and analysis of the information among the five states, as well as with other elements of the larger ASTHO H1N1 Policy Barriers Project. Each of the following subsections includes the following elements: Summary of Successful H1N1 Response Elements; Summary of Issues/Barriers; and Text of Issues/Barriers/Recommendations.

The state reports have been assigned a randomly chosen identifying letter (e.g., State “A”, State “B”, etc.) and any identifying information has been redacted from the contents. This was done to preserve candor of their responses, while allowing full use of the insights and recommendations generated by the states.

It is again important to note that the ASTHO H1N1 Policy Barriers Project was not intended to be a comprehensive after-action review in which both successes and failures are evaluated. The focus of this project was to identify policy and legal barriers encountered in H1N1 response with the goal of removing or alleviating them in future public health emergency response activities. As such, participating states were not required to include information about successful elements of the H1N1 response, which were many. To the extent that states’ provided information about H1N1 response successes, however, this information has been included. Finally, the states’ reports for the ASTHO H1N1 Policy Barriers Project should not be considered to be these states’ H1N1 after-action reports required under other federal grants/cooperative agreements. The states will be releasing these separately at a later date.

Also notable, this document does not contain a comprehensive listing of all the barriers encountered by the five participating states. The states were requested to limit their information to their top three priority issues in each of the eight categories identified by ASTHO. (See Table 1 in the *Introduction* for the categories list.) Some of the states provided more than three per category, some provided less. Any information provided by the states in their reports has been summarized in this section. Finally, the below summaries list the issues raised in the five state reports; they do not address all aspects of an issue as it may have been encountered by the participating states or by all states and territories.

IV.A Summary of State “A” Report

Please see the introduction to Section IV on page 89 for general information about the data contained in this subsection.

Overview of State “A” Issues/Barriers

- State “A” identified a total of 18 issues/barriers
- State “A” did not prioritize any of its issues/barriers in the report
- The identified issues/barriers are distributed into the following categories

Category	Number of Responses	Percent of State “A” Total Responses
ICS, Command and Control, and Authority	3	17%
Surveillance, Epidemiology, and Laboratory Services	2	11%
Medical Care and Countermeasures	7	39%
National Vaccination Campaign	2	11%
Workforce, Capacity, and Infrastructure	0	0%
Federal/State/Local Coordination	2	11%
Communication	2	11%
Other Issues	0	0%
Totals:	18	100%⁴

Successful Elements of H1N1 Response Identified by State “A”

(Items were taken from the state’s report discussing successful elements and mitigation strategies.)

Federal/State/Local Coordination

- “The infusion of federal funding was extremely helpful.”

No other successful elements were identified in the state’s report.

Summary of State “A” Issues/Barriers

(Items are presented in the same order as presented in the state’s report to ASTHO, although they are not in any priority order.)

ICS, Command and Control, and Authority

- Questions about how federal and state emergency declarations translated into practice;
- Difficulties in understanding/communicating of liability protections under state and federal laws; and

⁴ Total may not add to 100% due to rounding.

- Lack of understanding/implementing procedures for liability protections for public health and medical practitioners, members of other professions, and volunteers, for laws such as the PREP Act.

Surveillance, Epidemiology, and Laboratory Services

- Lack of consistent data for comparing H1N1 outbreak across jurisdictions; need better ways to track and report county-level outbreak data; and
- Difficult to gauge trends when there was not a consistent national policy for reporting incidence of illness.

Medical Care and Countermeasures

- Concerns about funding for management, transportation and storage of distributed SNS assets, especially if PHER funds cannot be spent past July 2010;
- Policies pertaining to interstate transportation of SNS pharmaceuticals are very unclear, especially for states to share with neighboring states;
- Need for clinician education around EUA to clarify when and how it applies;
- Messaging/guidance re: PPE was inconsistent because H1N1 infection control guidelines varied by state;
- HAvBED reporting an issue when the HHS asked states to collect significant information, which burdened the hospitals, and made decisions on the data that bypassed states;
- Shelf Life Extension Program (SLEP) is only available for federally-owned pharmaceuticals; state assets are not eligible for the SLEP, which posed a problem in antiviral distribution; and
- Community Health Centers (CHC) cannot legally work outside their scope of practice due to legal and insurance constraints, which limited their ability to offer support to hospitals/clinics experiencing patient surge.

National Vaccination Campaign

- CDC delayed requesting from states the specific variables to be collected for antiviral courses administered; and
- Need guidance beyond ACIP guidelines when vaccine is in short supply; lack of a federal policy/standard for vaccine manufacturers on the formulation by specific age range presented a barrier.

Workforce, Capacity, and Infrastructure

None identified by State “A”

Federal/State/Local Coordination

- Federal grant-related policies often changed/conflicted and did not take into account state policies and procedures; and
- Federal funding policies that led to a one-year, time-limited categorization of funding made proper stewardship of the funding difficult; separate ASPR and CDC funding streams make it difficult and often impractical to integrate public health and hospital preparedness programs at the state and local levels.

Communication

- Media campaigns did not address the vaccine safety/efficacy issue; this deterred many people from getting vaccinated; and

- Many medical providers did not receive proper communications around the appropriate use of antivirals.

Other Issues

None identified by State “A”

Text of State “A” Issues/Barriers/Recommendations

(Items are presented in the same order as presented in the state’s report to ASTHO, although they are not in any priority order.)

ICS, COMMAND AND CONTROL, AND AUTHORITY

<i>Issue & Discussion:</i>	<i>Emergency Declarations</i> <ul style="list-style-type: none"> • “Several issues related to the authority triggered by various federal declarations of emergency and whether parallel state emergency declarations were required.” • “General lack of understanding by public health/private health care re: how emergency declarations translate to changes in practice.” • “Lack of willingness to suspend rules (which the Governor’s declaration called for), slowed response and wasted human resources.” • “If this had been a more severe pandemic, lack of administrative nimbleness could have been catastrophic.”
<i>Mitigation Strategies:</i>	<i>None identified in report</i>
<i>Recommendations Suggested:</i>	<i>None identified in report</i>
<i>Priority Assigned:</i>	<i>None assigned in report</i>
<i>Issue & Discussion:</i>	<i>Liability Protections</i> <ul style="list-style-type: none"> • “There were difficulties in understanding/communication of liability protections under state and federal laws, coupled with changes in state laws.” • “Workers were hesitant because protections were not communicated at all levels.”
<i>Mitigation Strategies:</i>	<i>None identified in report</i>
<i>Recommendations Suggested:</i>	<ul style="list-style-type: none"> • “Implementation practices for emergency laws, rules, and acts should be communicated to states from federal partners in weekly conference calls.” • “Federal partners should outline in writing the impact federal laws/rules will have on states.”
<i>Priority Assigned:</i>	<i>None assigned in report</i>
<i>Issue & Discussion:</i>	<i>PREP Act and Liability Protections Generally</i> <ul style="list-style-type: none"> • “General lack of understanding and implementation procedures for liability protections for public health and medical practitioners, members of other professions, and volunteers, for laws such as the PREP Act.”

	<ul style="list-style-type: none"> • “Confusion around the protection of professionals/volunteers working outside the scope of PREP Act coverage and with “crisis”/“altered” standards of care.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Implementation practices for emergency laws, rules, and acts should be communicated to states from federal partners in weekly conference calls.” • “Calls between federal partners and state’s legal counsel should occur on a regular basis.” • “Calls should be followed by written question/ answer documents to clarify answers to questions and to avoid unnecessary repetition of messages.”
Priority Assigned:	<i>None assigned in report</i>

SURVEILLANCE , EPIDEMIOLOGY, AND LABORATORY SERVICES

Issue & Discussion:	<p>Surveillance Data Collection/Analysis</p> <ul style="list-style-type: none"> • “Data from CDC did not allow for a coordinated mechanism for timely comparisons between large cities. Aggregate cumulative case counts were not an accurate measure of incidence because states stopped testing at different times/used different testing criteria. Aggregate data was confusing and changed perception of the pandemic’s severity.” • “According to the Clinical Laboratory Improvement Amendments (CLIA), it is not mandatory that patient addresses be included with all laboratory test requests. Labs may never receive this important information and often need to follow up on each case to obtain address information. Public health and reference labs must know the exact location of each case for community mitigation purposes—aggregate state-level case counts are not helpful in this regard.” • “Public Health Information Network (PHIN) recommends that labs must accept electronic requests and deliver reports as part of PHIN certification.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “CDC should: (1) provide case counts for each state using the same case definition and testing criteria; and (2) develop a sampling plan for larger cities and/or sentinel sites to do additional surveillance and reporting.” • “CLIA should be modified to mandate that patient addresses be included with all lab test requests.” • “CDC should clearly define the case message for the electronic health record.” • “Patient, lab, and hospital databases across the nation should report the same data in a compatible way, preferably by using Health Level Seven electronic data exchange.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<p>Surveillance Guidance/Policies</p> <ul style="list-style-type: none"> • “It was difficult to gauge trends when there was not a consistent national policy for reporting incidence of illness.”
Mitigation Strategies:	<i>None identified in report</i>

Recommendations Suggested:	<ul style="list-style-type: none"> • “A national policy should be established using National Electronic Disease Surveillance System (NEDSS) to report incidence information/national notifiable diseases.” • “Need a policy to determine/communicate when a novel disease is no longer novel.” • “More research is needed to produce national standards (case definition and which other elements should be reported) for syndromic surveillance.” • “Funding is needed for states to implement those standards with laboratory capability.”
Priority Assigned:	<i>None assigned in report</i>

MEDICAL CARE AND COUNTERMEASURES

Issue & Discussion:	<i>Stockpiling and Distribution</i> <ul style="list-style-type: none"> • “When CDC asked states if they would like a shipment of SNS assets early in the pandemic, [STATE] felt compelled to request these assets.” • “The SNS assets became a burden when the PHER funds did not carryover and the state had to provide funding for management, transportation, and storage.” • “It is not feasible for states to complete a multi-year workplan in one budget year.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “The CDC policy for distribution of SNS assets to states should be more metered, thereby allowing more time for additional epidemiological analysis to better characterize what types of SNS assets are necessary.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<i>Delivery/Administering</i> <ul style="list-style-type: none"> • “Policies pertaining to interstate transportation of pharmaceuticals are very unclear.” • “If SNS pharmaceuticals arrive in one state, transporting them to another state is not allowed and presents a significant policy barrier.” • “[STATE X] requested pharmaceuticals from [STATE Y] and the distributor refused to ship them across the border.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Although this barrier involves state laws, a federal policy that allows for SNS assets, including pharmaceuticals, to be transported across state borders would be very helpful in the coordination and implementation of response efforts.” • “This policy should provide clear guidance on pharmaceuticals and medical devices, and could be part of the emergency declaration from the president.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<i>Emergency Use Authorization</i> <ul style="list-style-type: none"> • “There is a need for clinician education around EUA to clarify when and how it applies.” • “Clinicians do not understand that using an EUA can allow for use of

	approved/unapproved drugs when necessary.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “There should be additional clinician education at a federal level as well as a policy to better communicate the intent and uses of EUAs.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p>ICP/PPE Guidance</p> <ul style="list-style-type: none"> • “There was much confusion between [STATE] and bordering states re: CDC and OSHA guidelines.” • “Messaging/guidance re: PPE was inconsistent because H1N1 infection control guidelines varied by state.” • “Resolving these issues was very time-consuming.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “The relationship between CDC and OSHA and who has oversight authority over occupational issues, needs to be clarified for state health departments.” • “Federal policies need to be clear to allow border states to work together at all levels, including infection control procedures and requirements.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p>HAvBED Reporting</p> <ul style="list-style-type: none"> • “HAvBED reporting became an issue when the Office of the Assistant Secretary for Preparedness and Response (ASPR) (1) asked states to collect significant information, which burdened the hospitals (2) made decisions on the data that bypassed states.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “States should be allowed to monitor bed capacity and other resource issues on their own and provide federal partners with updates on a weekly basis.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p>Medical Care and Countermeasures, Guidance/Policies</p> <ul style="list-style-type: none"> • “The Shelf Life Extension Program (SLEP) is only available for federally-owned pharmaceuticals; state assets are not eligible for the SLEP, which posed a problem in antiviral distribution.” • “Despite having an EUA in place, and thus not requiring re-labeling of bottles for expired antivirals, clinicians were reluctant to distribute expired bottles of medication to their patients.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “The FDA should acquire square bottle labelers to make the SLEP more useable in emergency situations.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Medical Care and Countermeasures, General</i> <ul style="list-style-type: none"> • “Community Health Centers (CHC) cannot legally work outside their scope of practice (assigned zip codes and populations) due to legal and insurance constraints. They are limited in their ability to offer support to hospitals/clinics experiencing patient surge.” • “Another issue involves critical access hospitals (CAH) requesting waiver of 42 CFR 485.620, which requires a 25-bed limit and average patient stays less than 96 hours [a CMS condition of participation]. Although the waiver process introduced by the CMS was appreciated, only six CAHs nationally took advantage of this. CMS did process the waiver requests rapidly and did allow for the waivers to be retroactive, yet there is a “donut hole” created by this waiver process. If a CAH applied for a bed waiver and admitted patients to its facility under the anticipation that the waiver would be approved and retroactive, but the waiver is denied, it is not clear whether that hospital is now out of compliance. It is also not clear what penalties the hospital might face or whether it would need to discharge patients in order to reach its bed limit and be in compliance.” • “CAHs in [STATE] applied for a waiver and were denied by CMS. [STATE] hospitals tried to prepare surge capabilities and CMS would not grant a blanket waiver. Instead, waivers were only granted on a hospital-by-hospital basis, which gave no consideration to the overall hospital system needed for surge. It is also concerning that hospitals are required to experience surge beyond their capacity before a waiver can be granted.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “This policy regarding CHCs needs to be changed to allow for a more coordinated response, increasing community surge capacity.”
Priority Assigned:	<i>None assigned in report</i>

NATIONAL VACCINATION CAMPAIGN

Issue & Discussion:	<i>Reporting Doses Administered, Antiviral</i> <ul style="list-style-type: none"> • “CDC was delayed in requesting from states the specific variables to be collected for antiviral courses administered.” • “Initially, no information was required; later requests for age and then information on pregnancy and underlying health condition status were made.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “CDC should develop, standardize, and communicate consistent reporting policies for antiviral doses administered to states to ensure that those policies are in place before a public health emergency.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Inventory Management</i> <ul style="list-style-type: none"> • “Given current vaccine manufacturing technologies, the federal government could have expected initial shortages in supply and delays in vaccine distribution.” • “When vaccine is in short supply, states may need direction beyond the Advisory Committee on Immunization Practices (ACIP) guidelines, as well as ethical standards for alternate standards of care.” • “Lack of a federal policy or standard for vaccine manufacturers on the formulation by
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	specific age range presented a barrier. Each manufacturer having a distinct formulation for a specific age range caused vaccine administration errors.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “The national communication policy should have reflected this reality and should not have over-promised and under-delivered. The federal government should consider investing in new technologies to ensure a quicker turn around time between vaccination seasons. This may help to restore trust and credibility in federal, state, and local public health.” • “The role(s) of public health in vaccination efforts needs to be defined and the efficacy of using school-based clinics, local health department clinics, hospitals and clinics, and other venues should be evaluated, with recommendations communicated to states.”
Priority Assigned:	<i>None assigned in report</i>

FEDERAL/STATE/LOCAL COORDINATION

Issue & Discussion:	<i>Categorical Grant/Cooperative Agreement Flexibility</i> <ul style="list-style-type: none"> • “During the response to H1N1, guidance interpretation from CDC kept changing (moving funds, redirects, and carryovers) and states most often received informal guidance through weekly emails or by filtering through Q&A documents.” • “Grant-related policies often were conflicting and did not take into account state policies and procedures.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “There is a significant need for official, consistent, and formalized guidance as a policy from CDC.” • “CDC grant policies should follow an all-hazards approach to build community capacity through sustainable funding to prepare for, respond to, <i>and</i> recover from emergencies.” • “Disease-specific grants, such as funding directed toward H1N1 efforts only, should be provided as a supplement to sustained preparedness funding.” • “Long-term funding is necessary to achieve a long-term goal.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>PHER Grants</i> <ul style="list-style-type: none"> • “The infusion of federal funding was extremely helpful, but policies that led to a one-year, time-limited categorization of funding made proper stewardship of the funding difficult. Formalized guidance was ever-changing, sometimes lacking, and often conflicting. Non-science-based reporting policies, including the PHER Monthly Reports, put states in a difficult position, knowing that their inaccurate estimates of spending would influence future policy and funding decisions.” • “Separate ASPR and CDC funding streams make it difficult and often impractical to integrate public health and hospital preparedness programs at the state and local levels.”
Mitigation Strategies:	<i>None identified in report</i>

- Recommendations Suggested:**
- “Public health emergency preparedness funding should include, in addition to preparedness and response, funding for recovery.”
 - “Integration of ASPR and CDC funding streams would likely result in better coordination on many levels.”
- Priority Assigned:** *None assigned in report*

COMMUNICATION

- Issue & Discussion:** *Media Relations and Ad Campaign Efforts*
- “Media campaigns did not address the vaccine safety/efficacy issue; this deterred many people from getting vaccinated.”
 - “Portraying the H1N1 vaccine as “new” at the national level, led to misunderstanding by the public.”
- Mitigation Strategies:** *None identified in report*
- Recommendations Suggested:**
- “CDC, HHS, and other federal ad campaigns should make it a policy to address the safety and efficacy of the vaccine, and also include prevention strategies in their messaging.”
- Priority Assigned:** *None assigned in report*

- Issue & Discussion:** *Communication*
- “Many medical providers did not receive proper communications around the appropriate use of antivirals.”
- Mitigation Strategies:** *None identified in report*
- Recommendations Suggested:**
- “Federal organizations need to do a better job communicating to medical providers about when and how to use antiviral medications, including a clear statement about inappropriate use of antivirals as a mass prophylactic agent.”
 - “Coordination/communication among federal partners should be improved. Perhaps a national Joint Information Center could be established during national public health emergencies to improve real-time situational awareness and consistent messaging.”
- Priority Assigned:** *None assigned in report*

IV.B Summary of State “B” Report

Please see the introduction to Section IV on page 89 for general information about the data contained in this subsection.

Overview of State “B” Issues/Barriers

- State “B” identified a total of 37 issues/barriers
- State “B” did not prioritize any of its issues/barriers in the report
- The identified issues/barriers are distributed into the following categories

Category	Number of Responses	Percent of State “B” Total Responses
ICS, Command and Control, and Authority	5	13.5%
Surveillance, Epidemiology, and Laboratory Services	4	11%
Medical Care and Countermeasures	6	16%
National Vaccination Campaign	6	16%
Workforce, Capacity, and Infrastructure	6	16%
Federal/State/Local Coordination	5	13.5%
Communication	5	13.5%
Other Issues	0	0%
Totals:	37	99.5%⁵

Successful Elements of H1N1 Response Identified by State “B”

(Items were taken from the state’s report discussing successful elements and mitigation strategies.)

ICS, Command and Control, and Authority

- “Pre-existing legislation related to emergency powers for the state health director and liability protection for providers and businesses assisting with a disaster were utilized and allowed for efficient and effective use of resources.”
- “The leadership and direction established by the Governor’s Office, as well as the development of a state H1N1 task force were successful in the command and control process.”
- “Excellent cooperation and collaboration between the local unified command and local mental health management agencies, local education agencies, local emergency management agencies, emergency medical services, hospitals, community partners, and the state’s public health coordinating center facilitated synchronized communication and response during the event.”
- “The issuance of quarantine and isolation orders, as well as communication from state leadership was also key contributions in the early phases of the event.”

⁵ Total may not add to 100% due to rounding.

- “Emergency declarations were critical in this process and PREP Act guidance from U.S. Department of Health and Human Services was readily available, as well as timely and understandable.”
- “Coordination between state and local authorities, decision to use a state emergency management team to facilitate distribution of medicine and supplies and competent staff were resources that worked well during the event.”

Surveillance, Epidemiology, and Laboratory Services

- “The use of existing state surveillance systems, as well as the easy transitions from one system to another assisted with successful disease surveillance; the CDC’s Influenza-Like Illness Network (ILI NET), the state epidemiologic tracking and collecting system, hospital-based epidemiologists, state public health laboratory, and the state medical assets tracking system were among the top surveillance systems participants identified to be valuable during the event.”
- “The state public health laboratory was successful in implementing a team approach to receive, process, test and report for H1N1 samples in a timely and efficient manner and provided the local health departments with regional surveillance reports.”
- “The state’s epidemiology program provided weekly webinars, communications with hospital epidemiologists, and guidance on sample submissions in a timely manner.”

Medical Care and Countermeasures

- “The waiver process for temporary expansion of hospital bed space was effectively distributed by state health services regulatory agency.”
- “The SNS/state stockpile was used efficiently and local SNS receipt and distribution were well executed.”
- “The manufacture and delivery of the vaccine were well executed.”
- “The functional use of temporary triage shelters in hospitals was also identified as a benefit.”
- “The direct delivery of vaccine to providers and pharmacies allowed efficiencies in transportation and workload during the event.”
- “Establishing practice standards and protocols to allow paramedics assisting local health departments administer vaccine were helpful.”

National Vaccination Campaign

- “Vaccination efforts averted a third wave of H1N1.”
- “Recruiting additional community providers to facilitate vaccine administration, expanding pharmacists’ role in vaccinating patients ages 14+, as well as including paramedics to assist local health departments with vaccine administration were critical components in the success of the vaccination efforts.”
- “Vaccines were available fairly rapidly (via weekly allocations).”
- “There were pre-established, clearly defined priority policies for vaccination delivery and ordering.”
- “Using Vaccines for Children [VFC] providers, school-based vaccination clinics, and direct shipment of vaccines to providers also facilitated vaccination efforts.”
- “Reporting through Vaccine Adverse Event Reporting System (VAERS) and the state immunization registry were cited as beneficial systems utilized during the incident.”
- “Manufacturers provided information directly to providers on recalled and expired vaccines which were helpful in the vaccination process.”
- “State and local levels demonstrated excellent teamwork; new cooperative partnerships were established, using local health departments as coordinating centers for local health care providers, and

supportive partnerships with local Chambers of Commerce assisted in the execution of a successful vaccine operation.”

- “Additional successes included the value of the PREP Act in the dissemination of information, making health care workers a target group, and a high vaccination uptake reported in the Latino population.”

Workforce, Capacity, and Infrastructure

- “The existing health agency staff was flexible, well organized, dedicated and efficient during the event.”
- “Response efforts from volunteer nurses at the local level and, at the state level, from state universities, were a large part of existing, collaborative partnership efforts.”
- “Insufficient staff was available for vaccination during the event and retired public health veterans at the local health department level offered expert assistance during the surge.”
- “When accessible, the use of school nursing staff, translators for non-English speaking patients and existing contracts and services with private vendors (i.e. trucking companies for distribution), as well as the individual training and agency cross-training conducted prior to the event proved advantageous during the incident in achieving a high level of collective preparedness.”
- “PHER funding allowed an increase in the local health department’s surge capacity by allowing and facilitating the hiring of temporary employees during the event.”
- “State public health laboratory work spaces, changes in work schedules and functional teams facilitated capability to meet an increased demand for testing, mailing of kits, and test result reporting.”

Federal/State/Local Coordination

- “Overall, interagency collaboration was successful at all levels.”
- “Public health and health care sector interaction, as well as health department interaction with local health care providers, hospitals, and EMS collaboration were rated ‘extraordinary’.”
- “Constant internal communication channels of federal, state and local agencies seemed to improve the efficiency and effectiveness of the H1N1 response.”
- “Access to funding permitted the utilization of additional staff in assisting with the vaccination efforts.”
- “PHER funding also supported temporary laboratory personnel.”
- “The state medical/ethical societies and the state judiciary committee, along with key stakeholders, convened a task force for the utilization of scarce critical care resources during the pandemic which proved advantageous.”
- “Communication vehicles, such as regular conference calls with federal officials (the Department of Homeland Security [DHS], Federal Emergency Management Agency [FEMA], CDC, etc.) for PIO’s as well as technical assistance calls from the Association for Public Health Laboratories (APHL), proved critical for specific technical issues.”
- “Webinars, websites and weekly telecasts using the state’s telecommunications agency assured common operating goals.”
- “Within the state’s laboratory forum, stakeholder engagement and lab response to members’ questions provided valuable feedback via impromptu conference calls, as well as the FAQ’s that were published.”

Communication

- “Participants discussed and credited successful communication efforts during the H1N1 event with and/or between media outlets and state and local agencies.”
- “Early communication of event details provided by the CDC and the state health agency via public media messages, conferences, briefings, interviews, broadcasts, website access and information, outreach messages (specifically about vaccination), laboratory result communication, as well as a high level of state participation (Governor and cabinet secretaries) were among the most successful means of communication during the incident.”

Summary of State “B” Issues/Barriers

(Items are presented in the same order as presented in the state’s report to ASTHO, although they are not in any priority order.)

Communication

- State internet-based systems to support EOC activities, hotlines and telephone systems were barriers to a more effective state response;
- Lack of a clear communication plan, and the failure to establish a joint information center (JIC), were seen as challenges for communications from the state to local health departments and the public;
- Concerns over inconsistent, incorrect and untimely information used by the media;
- Special challenges were encountered for vaccine information and at-risk population-specific communications; and
- Issues surrounding public requests for data and privacy concerns when reporting case information.

ICS, Command and Control, and Authority

- Concerns over conflicting N95 guidance;
- State travel policies should restrict state employee travel during emergency events;
- Clarification is needed on the differences between Stafford and non-Stafford Act declarations and the implementation and response related to each;
- Difficult to identify control and authority, especially with regards to schools and school resources; there was a lack of cohesive standards set forth by the CDC (policies were too localized and disparate, school dismissal guidance was confusing) causing inconsistent local practice; and
- Failure to establish a uniform command structure at the local level early in the incident resulted in agencies operating outside a command structure which lead to conflicting actions and messages to other stakeholders.

Surveillance, Epidemiology, and Laboratory Services

- Inconsistency with reporting H1N1 cases and confusion regarding which surveillance systems provided appropriate data;
- Public demand for information identifying the individual cases infected and the subsequent attempts of assigning blame to a particular group for bringing H1N1 into the community;
- Changing policies on testing, unanticipated public demand for testing and communication to clinicians about when testing is appropriate; and
- Early exhaustion of state laboratory staff and the lack of surge capacity resulted in the core staff working extended shifts during the event.

Medical Care and Countermeasures

- Agencies received non-urgent SNS materials after business hours creating stress and inflated costs;
- Concerns over conflicting N95 guidance;
- HHS began requesting HAvBED data directly from hospitals bypassing the state; lack of efficient HAvBED reporting at the county level;
- EUA policies were complex and confusing to the public and medical community;
- Regarding isolation policies, LHDs reported receiving criticism from parents who were unable to exclude their children from school for seven days after illness onset because they did not have a sufficient sick leave balance; and
- Conflicting guidance for the use of antiviral prophylaxis and short expiration dates on antivirals left staff and the public confused.

National Vaccination Campaign

- Reimbursement for administration of vaccine and the use of PHER funds, self-pay methods and third-party insurance was inconsistently applied throughout the state;
- CDC allocation predictions were frequently inaccurate and overestimated available supply;
- Federal policy to target limited vaccines ultimately impacted the uptake of the vaccine;
- Different formulations of vaccine made allocation and administration decisions difficult and created the potential for errors; communication around Live Attenuated Influenza Vaccine (LAIV) gave the public a distorted view on FluMist and inhibited the demand for this vaccine formulation;
- Vaccination guidance regarding triaging limited vaccine within target groups was vague or non-existent; vaccination guidance implementation and groups targeted differed from county to county; and
- Outreach to the African-American populations was not effective causing poor uptake in the community.

Workforce, Capacity, and Infrastructure

- Restrictions on H1N1 funds resulted in difficulty flexing staff to fill needs directly or backfill for staff diverted to the response;
- Reassigning an expanded staff to the response led to a challenge in continuing routine operations due to unclear guidance and planning at the local level;
- Extended and intense response by staff members left many exhausted as program staff were not prepared for the change in work schedule;
- PHER encumbrances and budget policies and procedures at the local health department level resulted in unused funds;
- Lack of a vaccination policy for laboratory workers and the late provision of vaccination opportunities for state employees were barriers; mandatory vaccination policies in selected workplaces resulted in significant challenges; and
- Conflicting information on education and outreach efforts to health care providers posed challenges.

Federal/State/Local Coordination

- Restrictions on the timing and use of PHER funds were barriers to the response;
- Given that the H1N1 incident was a declared public health emergency, the event should have been given the same status as other emergencies (i.e. a Stafford Act declaration);

- Better coordination of state and local policies (priority groups, N-95, vaccine distribution, case definitions) was needed to assure consistency between federal, state and local sectors in areas of emergency management, public health and education;
- Regular communication and coordination with PIOs at the city/county levels were deficient; and
- Community colleges, colleges/universities, private schools and day care centers acted independently; the information they made available to their respective student populations sometimes caused confusion.

Other Issues

None identified in the State “B” report

Text of State “B” Issues/Barriers/Recommendations

(Items are presented in the same order as presented in the state’s report to ASTHO, although they are not in any priority order.)

COMMUNICATION

Issue &

Discussion:

General Communication Issues

- “Participants identified the following as methods of communication that had difficulties during the event: 1) [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES], and 2) hotlines and telephone communication.”
- “The main issues related to [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES] included: poor access to [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES] during the event, slow web conferences, updated information not always reflected and a lack of connectivity with state and local emergency management.”
- “The [STATE PUBLIC HEALTH LABORATORY] hotlines were often unavailable; heavy traffic on phone lines became problematic and the [STATE IMMUNIZATION PROGRAM] was cited as not being as responsive as needed in returning phone calls.”

Mitigation

Strategies:

None identified in report

Recommendations

Suggested:

- “Improve local capability to utilize systems such as [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES].”
- “State should enhance [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES] such that it is usable at the state and local level. Develop policies for its use.”
- “More robust electronic communication conduit(s) to streamline communications outside of public health and communicate incident management.”

Priority Assigned:

None assigned in report

Issue &

Discussion:

Messaging Coordination

- “Lack of a clear communication plan, and the failure to establish a joint information center (JIC), were seen as challenges for communications from the system to the public.”

	<ul style="list-style-type: none"> “Participants concurred that there was a lack of communication between some of the local health departments (LHDs) and the local incident management teams until late in the outbreak.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> “State should develop policies that allow for activation of a JIC early in the event, even if other parts of the [STATE EMERGENCY RESPONSE] are not activated.” “State should establish a JIC early in the event.” “State should establish improved plans for communications with the public including incorporating feedback from the public regarding what works.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p><i>Media and Public Outreach</i></p> <ul style="list-style-type: none"> “Media communications to the public were a high priority concern among participants.” “Participants felt that messages released by the media prompted public fear and were often rooted in myth/rumor.” “Local, state and federal websites occasionally posted contradictory/outdated information related to the event.” “The inconsistency of identifying/utilizing a universal nomenclature for the event led to confusion (swine flu, H1N1, nH1N1).” “The severity of the outbreak was often misrepresented due to (1) the lack of detail and (2) irregular/reactive messages (uncertainty of causes and origin, impact reported to public using total number of deaths and not years of age as a severity indicators, public outreach materials distributed late) caused the public to discount/ distrust the vaccination communication strategies/campaign efforts.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> “Local governments need to enhance partnerships with local media and communications outlets.” “State should establish improved plans for communications with the public including incorporating feedback from the public regarding what works.” “Need more consistent means of communication vetted with the public and public health partners (event naming and information, reliable information on local media messages over local cable access and local government channel).” “More efficient methods of intra-agency communication between public health partners, Public Information Officer’s (PIO’s) and the public are needed.” “Need more efficient methods of communication between public health response partners (keeping certain information separate from public).”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p><i>Outreach to Minority, Special, Vulnerable Populations</i></p> <ul style="list-style-type: none"> “Special challenges were encountered for vaccine information and at-risk population-specific communications.” “Outreach plans and support for minority populations and “target groups” (African

Americans, college students) were not universal among counties during vaccination campaigns.”

Mitigation Strategies: *None identified in report*

Recommendations Suggested:

- “Public messages targeting at-risk populations (African Americans) are needed.”

Priority Assigned: *None assigned in report*

Issue & Discussion: *Information Sharing vs. Privacy*

- “Issues surrounding public requests for data were identified as troublesome when reporting cases (HIPPA violations prohibited disclosure of patient identification at the local level).”

Mitigation Strategies: *None identified in report*

Recommendations Suggested:

- “Well-established communication security for patient confidentiality (conference call/video system) is needed.”

Priority Assigned: *None assigned in report*

ICS, COMMAND AND CONTROL, AND AUTHORITY

Issue & Discussion: *Other; PPE – N95 Guidance; state HR policies; Emergency Declarations*

- “Participants identified N95 as an area of ICS, Command/Control and Authorization that did not work well during the event.”
- “Policies on travel restrictions (specifically air travel) for state employees during emergency events were strongly recommended setting an example for others.”
- “Clarification is needed on the differences between Stafford and non-Stafford Act declarations and the implementation and response related to each.”

Mitigation Strategies: *None identified in report*

Recommendations Suggested:

- “Federal government should re-evaluate policies regarding PPE guidance and provide flexibility for integration of evolving science.”
- “State should develop human resource policies that protect the workforce and allow for setting an example to others regarding health policy programs.”
- “Local governments should develop human resource policies that protect the workforce and allow for setting an example to others regarding health policy programs.”
- “Federal government should develop clear guidelines for the federal use of emergency declarations to include Stafford Act and non-Stafford Act declarations. Educate state and local agencies on the authorities of these declarations.”

Priority Assigned: *None assigned in report*

Issue & Discussion: *School Closings/Dismissals*

- “It was difficult to identify control and authority, especially with regards to schools and school resources.”

	<ul style="list-style-type: none"> • “Confusion with regards to public school closings and dismissals was apparent.” • “Information was inconsistent on a national level.” • “Locally, unilateral decisions were being made to close schools without consulting local health directors.” • “There was a lack of cohesive standards set forth by the CDC (policies were too localized and disparate, school dismissal guidance was confusing) causing inconsistent local practice.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Primary areas for improvement included better clarification/communication about school dismissal.” • “CDC school dismissal should address both preemptive and reactive dismissals (disease control measure versus operational/management issues) with better clarification and communication, as well as a clear understanding of the standards and trigger points for required control measures for [STATE] school/university closures.” • “Federal government should conduct forum for the development of consistent school closure policy and the continuation of services delivered through school administrations such as reduced cost meals and other social services.” • “State should develop and implement consistent policy standards for local school closure policies and the continuation of services delivered through school administrations such as reduced cost meals and other social services.” • “Local governments should develop and implement policies for local school closures and the continuation of services delivered through school administrations such as reduced cost meals and other social services.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p><i>Challenges Between State and Local Response</i></p> <ul style="list-style-type: none"> • “Failure to establish a uniform command structure at the local level early in the incident resulted in agencies operating outside a command structure which lead to conflicting actions and messages to other stakeholders.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “State should develop comprehensive policies for all state agencies for training and implementation of ICS.” • “Local governments should develop comprehensive policies for all local agencies for training and implementation of ICS.” • “Need a better delineated Emergency Declaration and role of the [STATE EMERGENCY MANAGEMENT AGENCY].” • “Establish comprehensive ICS policies.” • “Need more focus on the roll-out of [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES] at the local level.” • “Need to implement an established ICS for events that cross internal and external agencies (crossing county lines), staffing policies on the number of hours/shifts command staff can safely work during crisis before mandatory replacement is authorized, and initiating more ICS practice and exercises.”

Priority Assigned: *None assigned in report*

SURVEILLANCE , EPIDEMIOLOGY, AND LABORATORY SERVICES

Issue & Discussion:	<p><i>Surveillance and Case Reporting</i></p> <ul style="list-style-type: none">• “Inconsistency with reporting H1N1 cases and confusion regarding which surveillance systems provided appropriate data were discussed.”• “The requirement early in the pandemic to report individual cases of H1N1 was burdensome to LHDs who had to adapt methods while they completed other response tasks.”• “CDC required uploading spreadsheets for surveillance rather than using National Electronic Disease Surveillance Systems (NEDSS), which caused an increased workload at the state level.”• “Inconsistent case definitions were believed to have led to an undercounting of cases, and the changing federal and subsequent state requirement of what numbers to track (hospital vs. infected).”• “Participants suggested that identifying what data should be collected, who should collect it and how many tests will be done should be driven by pre-established criteria and decisions made by the state public health leadership instead of by individual doctors and hospitals.”• “Efforts are needed to increase the efficiency and usability of surveillance systems including hospital service utilization, school absenteeism systems and electronic death certificates to determine a real-time severity index to influence and inform policy.”
Mitigation Strategies:	<p><i>None identified in report</i></p>
Recommendations Suggested:	<ul style="list-style-type: none">• “It is recommended that a standardized way of reporting cases that can be easily understandable and track-able throughout the event be developed and implemented, as well as earlier availability of mortality rates.”• “It was recommended the [STATE] develop an electronic death certificate system.”• “Participants also desired: clear [STATE HEALTH AGENCY] guidance for local health departments on trigger points for response to surveillance data and supplementary information on surveillance systems in a quick, easy to use format.”• “Federal government should develop policies that clarify roles of the multiple response agencies and their responsibilities for data collection and support functions.”• “Federal government should develop policy standards for data collection: what is to be collected, who collects it and who can use it. This data includes human health, school absenteeism and hospital capacity information.”• “State should develop standards for local policy development regarding data collection.”• “State should develop state level policies for data collection: what is to be collected, who collects it and who can use it.”• “State should develop standard policies for actionable triggers identified through the use of these surveillance systems.”
Priority Assigned:	<p><i>None assigned in report</i></p>

Issue & Discussion:	Confirmatory Testing; Privacy Concerns <ul style="list-style-type: none"> • “The demand for the public to obtain identifying information about the individual cases infected and the subsequent attempts of assigning blame to a particular group for bringing H1N1 into the community, as well as the changing policies on testing, unanticipated public demand for testing and communication to clinicians about when testing is appropriate were difficulties experienced at the local level.” • “State and local public health agencies experienced a high demand from providers for specimen collection/transport by the [STATE PUBLIC HEALTH LABORATORY].”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Further national discussion is needed concerning uniform criteria and standards in disclosure and privacy of case information provided by health departments to the public.” • “Federal government should clarify regulations regarding patient privacy and provide education for PIO’s and media staff.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	Lab Capacity <ul style="list-style-type: none"> • “Early exhaustion of state laboratory staff and the lack of surge capacity resulted in the core staff working extended shifts during the event.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Primary areas for improvement for surveillance, epidemiology and lab services included developing emergency staffing policies with surge capacity.”
Priority Assigned:	<i>None assigned in report</i>

MEDICAL CARE AND COUNTERMEASURES

Issue & Discussion:	SNS Distribution/Delivery <ul style="list-style-type: none"> • “Issues regarding the SNS delivery to the state and the state’s subsequent delivery to the [LOCAL RECEIVING SITES] have been well-documented in other reviews.” • “Agencies received non-urgent SNS materials after business hours creating stress and inflated costs.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “More accurate information regarding SNS delivery and disposal is recommended.” • “The policy should be that SNS materials are delivered during business hours unless an emergent need is identified.” • “Allow dispensing of SNS products from non-traditional service providers during an event.” • “Develop policies and guidance on SNS disposal.” • “Need more direct guidance on use of SNS assets and guidance on priority groups for antivirals during shortage.” • “Clarify [LOCAL RECEIVING SITE] protocols.”

- “Federal government should develop and implement policies regarding the use of SNS resources once delivered. These policies may need to be revised or specialized for each incident.”
- “State should develop policies regarding shipment of SNS resources to [LOCAL RECEIVING SITES] that are appropriate to the level of urgency of need.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

PPE-N95 Guidance

- “OSHA and CDC required higher levels of PPE for H1N1 than seasonal influenza throughout the course of the pandemic.”
- “Professional organizations such as IDSA, SHEA and APIC issued science-based statements challenging the OSHA and CDC requirements.”
- “Despite informal communications from CDC that there would be changes in N95 recommendations, this never occurred.”
- “These conflicting positions lead to a great deal of confusion.”

Mitigation Strategies:

None identified in report

Recommendations Suggested:

- “Improve communication between OSHA, [STATE OCCUPATIONAL HEALTH AGENCY], NIOSH & labor unions.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

Medical Supplies/HAvBED; EUA; Sick Leave Policies

- “HHS began requesting HAvBED data directly from hospitals bypassing the state. There was a lack of efficient HAvBED reporting at the county level.”
- “EUA policies were complex and confusing to the public and medical community.”
- “With respect to isolation policies, LHDs reported receiving criticism from parents who were unable to exclude their children from school for seven days after illness onset because they did not have a sufficient sick leave balance.”

Mitigation Strategies:

None identified in report

Recommendations Suggested:

- “Federal government should develop policies that clarify roles of the multiple response agencies and their responsibilities for data collection and support functions.”
- “Federal government should develop policies regarding the EUA’s that are clear and user friendly.”

Priority Assigned: *None assigned in report*

Issue & Discussion:

Antiviral and Vaccine Issues

- “Conflicting guidance for the use of antiviral prophylaxis left staff and the public confused.”
- “Short expiration dates of the antivirals posed difficulties.”
- “Leaky syringes/needles and inventory control were also common early challenges.”

Mitigation Strategies:

None identified in report

Recommendations

- “Participants desired a clear policy on the roles of pharmacists (when/what they can be

Suggested:	used for) during an incident.”
	<ul style="list-style-type: none"> • “State should develop policies for practice standards of non-traditional vaccinators/dispensing practitioners for use during an emergency.” • “State should improve interagency cooperation especially with the non-traditional responder community to develop policies real-time during an incident. This non-traditional responder community includes agencies that have a regulatory function.” • “Develop easy triage algorithms that can be used to inform public what to do if they get sick.” • “Translate more materials into Spanish.” • “Improve communications with trusted leaders in the African-American population.”
Priority Assigned:	<i>None assigned in report</i>

NATIONAL VACCINE CAMPAIGN

Issue & Discussion:	Payment/Reimbursement <ul style="list-style-type: none"> • “Reimbursement for administration of vaccine and the use of PHER funds, self-pay methods and third-party insurance was inconsistently applied throughout the state.” • “It was reported that some individuals traveled to other health departments to receive “free vaccines” while others were charged by private providers for administration fees for the H1N1 vaccine; this created a perception that there was inequality to access.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Federal government should develop and communicate clear policies regarding the use of federal grant funds that can be used for operations and the intersection of the uses and other reimbursement programs (such as Medicare and Medicaid).”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	Availability and Allocation; Authority to Administer <ul style="list-style-type: none"> • “CDC allocation predictions were frequently inaccurate and overestimated available supply.” • “An allocation formula was implemented that addressed provider types however the unpredictable fluctuations in supply added to the allocation complexity. This further resulted in the inability to predict what vaccine and how much would be received by providers and thereby complicated planning clinics.” • “Vaccine delivery information to health care providers and the public was misleading. The White House and CDC raised expectations on early availability and quantity of the vaccine that was not met.” • “Federal policy to target limited vaccines ultimately impacted the uptake of the vaccine.” • “CDC recommendations were inconsistent with the WHO guidelines on vaccine dosage (recommend 1 vaccine dose for all populations). This presented some confusion on the appropriate dosage for children under the age of 10, as well as the recommendations for a second dose.” • “State/local level real-time surveillance on vaccine supply/demand, immunization
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	reporting and transferred vaccines was ineffective.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Improve electronic reporting systems for vaccines to alert providers of vaccination amounts being shipped in real-time.” • “Increase public awareness and interest on getting vaccinated (develop focus group on why people did not get vaccinated).” • “Expand the role of pharmacists and staff in vaccination.” • “State should develop policies for practice standards of non-traditional vaccinators and dispensing practitioners for use during an emergency.” • “State should develop policy standards for local agencies regarding policies that allow emergency certifications or expansion of practice for professionals and liability protection.” • “Local governments should develop policies that enable professionals who are not [HEALTH AGENCY] staff assist with expanded roles as provided by state policy.” • “Local governments should, in order to provide surge capacity, develop policies such as human resource, just-in-time training and certification.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p>Formulation</p> <ul style="list-style-type: none"> • “Having many different manufacturers helped with the rapid vaccine supply but resulted in many different formulations. This made allocation and administration decisions difficult and created the potential for errors.” • “Communication around Live Attenuated Influenza Vaccine (LAIV) gave the public a distorted view on FluMist and inhibited the demand for this vaccine formulation.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Limited vaccine formulation should dictate target group allocation.” • “Federal government should develop and communicate clear policies on the use of vaccine presentations.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p>Priority Groups; Other Vaccination Priorities; Authority</p> <ul style="list-style-type: none"> • “Vaccination guidance regarding triaging limited vaccine within target groups was vague or non-existent.” • “Confusion with regards to “who” is eligible to receive vaccinations among high risk populations, as well as unreliable assessment of high-risk clients at the provider level were issues that negatively impacted the campaign.” • “Vaccination guidance implementation and groups targeted differed from county to county.” • “This was all complicated by the slow ramp-up of vaccine supply.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations	<ul style="list-style-type: none"> • “Policy should be developed to include laboratory staff as health care workers.”

Suggested:

- “Federal government should develop policies regarding service delivery to undocumented workers while they are in the U.S.”

Priority Assigned: *None assigned in report*

Issue & Discussion: *Outreach to Minority Communities*

- “Outreach to the African-American populations was not effective causing poor uptake in the community.”

Mitigation Strategies: *None identified in report*

- Recommendations Suggested:**
- “Improve communications toward minority populations (specifically, African Americas).”
 - “State should develop communications policies that ensure outreach to communities that are culturally competent and address barriers to access during an emergency. These policies should reflect input from these populations.”
 - “Generate guidelines about undocumented workers.”

Priority Assigned: *None assigned in report*

WORKFORCE, CAPACITY AND INFRASTRUCTURE

Issue & Discussion: *Flexing Capacity/Public Health Surge*

- “Due to unclear guidance and planning at the local level, reassigning an expanded staff to the response led to a challenge in continuing routine operations. For example, there was a limited nursing staff most of whom were used for vaccinations resulting in the closure of other services.”
- “Furthermore, due to the need for the H1N1 response, “routine” functions of the LHDs were compromised.”
- “Staff with critical skills was not identified prior to the event and it was difficult to make these decisions in the middle of a response.”
- “Restrictions on H1N1 funds resulted in difficulty flexing staff to fill needs directly or backfill for staff diverted to the response.”
- “The extended and intense response by staff members left many exhausted as dedicated staff was not prepared for the change in work schedule. With individual exceptions, the [EPIDEMIOLOGY PROGRAM] and [IMMUNIZATION PROGRAM] within the [STATE HEALTH AGENCY] carried the brunt of the workload for an entire year.”

Mitigation Strategies: *None identified in report*

- Recommendations Suggested:**
- “Other resources within agencies for this capacity need to be recruited through policies developed in advance.”
 - “Sustained investments by local, state and federal government to fund public health infrastructure and surge capacity across county lines to meet vaccination program needs, as well as for SNS receiving and distribution is recommended.”
 - “Identify staff to assist with vaccination efforts during surge.”
 - “Coordination in advance between vaccinators training and leadership cohorts.”
 - “Training additional nurses who are prepared for public health roles, training local

health departments to outsource flu clinics at non-traditional sites, schools and including more basic staff to keep programs running are strongly recommended.”

- “State should develop policies related to emergency expansion of practice during an incident thereby allowing for the development of surge capacity.”
- “While there have been some improvements, human resource policies need to be further developed and improved in order to track and compensate for time spent on response.”
- “Participants proposed that policies be developed to provide clear direction on flexing hours, overtime and shift flexibility (how long staff are eligible to work), compensation, and sick-leave for all employees.”
- “State should further develop human resource policies regarding compensation, tracking personnel time and workplace needs for state employees.”
- “Participants also identified that local government should consider allowing non-health department staff to receive compensation for extra hours worked for future incidents.”
- “State should further develop standards for human resource policies that can be used by local agencies in the development of their policies.”
- “Local governments should further develop human resource policies regarding compensation, tracking personnel time and workplace needs for local agency employees.”
- “In addition, more highly trained staff (epidemiologists, laboratory technicians, and budget staff) is required during surges for a sustained period; surge capacity can not be addressed with just in time training.”

Priority Assigned: *None assigned in report*

Issue & Discussion:	<i>PHER Funds</i> <ul style="list-style-type: none"> • “PHER encumbrances and budget policies and procedures at the local health department level resulted in unused funds.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Federal government should allow greater flexibility regarding PHER funds both in allowable expenditures and time to expend funds. Provide clarity regarding what is allowable in the grant.” • “State should establish and communicate clear guidelines for expenditure of funds to the local agencies.” • “Local governments should develop policies to expedite use of targeted funds delivered on short notice.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Workforce Vaccination Mandates</i> <ul style="list-style-type: none"> • “Mandatory vaccination policies in selected workplaces resulted in significant challenges.” • “There was a lack of vaccination policy for laboratory workers and state employee vaccination opportunities were provided late in the vaccination campaign.” • “Early employee vaccination would have led by example.”
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Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Develop policies on mandatory workforce vaccinations for various categories of workers.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Education/Outreach Capacity</i> <ul style="list-style-type: none"> • “Conflicting information on education and outreach efforts posed challenges.” • “Contradictory information on when nurses and providers should be redirected for education/outreach led to confusion.” • “It was unclear as to who could staff call-centers, specifically if it was a “flu line.””
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<i>None identified in report</i>
Priority Assigned:	<i>None assigned in report</i>

FEDERAL/STATE/LOCAL COORDINATION

Issue & Discussion:	<i>PHER Grants</i> <ul style="list-style-type: none"> • “Participants cited that ways to use the grant funds were unclear; an example provided was accepting grant funding versus third party reimbursements for vaccine administration.” • “Spending restrictions and the timing of the arrival of funds were major barriers.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Flexibility in the PHER grant to fund overall public health infrastructure, as well as the ability to carryover PHER money is desired.” • “More local discretion in spending instead of rigid categorization of funds would have allowed better use of funding; funds came too late to be useful for planning/surveillance but could have been used for other activities.” • “Federal government should allow greater flexibility regarding PHER funds both in allowable expenditures and time to expend funds. Provide clarity regarding what is allowable in the grant.”
Priority Assigned:	<i>None assigned in report</i>

Issue & Discussion:	<i>Interagency Collaboration</i> <ul style="list-style-type: none"> • “Given that the H1N1 incident was a declared public health emergency, participants felt the event should have been given same status as other emergencies (i.e. a Stafford Act declaration).” • “Agency collaboration between the White House/CDC/DHS and ASPR did not work in partnership with state protocols (i.e., bypassed states’ request for bed status from hospitals, federal public messages sent out before information was distributed to state and local health departments, etc).”
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	<ul style="list-style-type: none"> • “Considerable confusion was caused by additional data elements required by ASPR.” • “Consistently inaccurate vaccine projections from the CDC hampered state/local planning on a weekly basis.” • “FEMA documentation was confusing, and engaging key stakeholders was slower than the ideal.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Better coordination of state and local policies (priority groups, N-95, vaccine distribution, case definitions) to assure consistency between federal, state and local sectors in areas of emergency management, public health and education.” • “More coordination with stakeholders, both governmental and non-governmental, at all levels is strongly recommended.” • “State should identify policy barriers that inhibit agencies and organizations from working together. Develop policies that enable these interactions.” • “Federal government should develop policies that clarify roles and interdependency of the multiple federal response agencies and their responsibilities.” • “Participants felt a federal-level evaluation of the similarities and differences of a Stafford Act and the Public Health Emergency declaration would benefit the system as a whole and avoid silos for funding and response.” • “Federal government should evaluate the similarities and differences between a Stafford Act declaration and the Public Health Emergency declaration with an eye toward benefitting the systems as a whole and avoid silos in funding and response.” • “Further clarification of details for tracking expenses in order to accurately apply for reimbursement in a disaster declaration is needed.”
Priority Assigned:	<i>None assigned in report</i>
Issue & Discussion:	<p>Local Communication/Coordination</p> <ul style="list-style-type: none"> • “At the local level, regular communication and coordination with PIO’s at the city/county levels were deficient.” • “Private provider offices were not always up to date with changes in process/policy that occurred.” • “Community colleges, colleges/universities, private schools and day care centers acted independently. The information they made available to their respective student populations sometimes caused confusion.”
Mitigation Strategies:	<i>None identified in report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Participants advocated for the development of a common operating platform, such as [INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES], for communication at all levels, including a user-friendly template providing examples of scenarios.” • “State should develop a common operating platform ([INTERNET-BASED SYSTEMS TO SUPPORT EOC ACTIVITIES]) and establish policies regarding its use in an incident.” • “Clinical and public health lead agencies need to work more closely together at every level.”

- “Universities/colleges, public/private schools, and day care institutions should be provided with event information early on.”

Priority Assigned: *None assigned in report*

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IV.C Summary of State “C” Report

Please see the introduction to Section IV on page 89 for general information about the data contained in this subsection.

Overview of State “C” Issues/Barriers

- State “C” identified a total of 27 issues/barriers
- State “C” did not prioritize any of its issues/barriers in the report
- The identified issues/barriers are distributed into the following categories

Category	Number of Responses	Percent of State “C” Total Responses
ICS, Command and Control, and Authority	4	15%
Surveillance, Epidemiology, and Laboratory Services	2	7%
Medical Care and Countermeasures	3	11%
National Vaccination Campaign	8	30%
Workforce, Capacity, and Infrastructure	6	22%
Federal/State/Local Coordination	0	0%
Communication	4	15%
Other Issues	0	0%
Totals:	27	100%⁶

Successful Elements of H1N1 Response Identified by State “C”

(Items were taken from the state’s report discussing successful elements and mitigation strategies.)

ICS, Command and Control, and Authority

- None identified in report

Surveillance, Epidemiology, and Laboratory Services

- “Over the summer, many local public health departments were able to work with their school districts and colleges to implement policies and procedures for capturing ILI-related illness and surveillance data; unfortunately, not all school districts throughout the state were cooperative.”
- “School surveillance activities will be continued in the state due to the success of H1N1 ILI school-based surveillance.”

Medical Care and Countermeasures

- None identified in report

⁶ Total may not add to 100% due to rounding.

National Vaccination Campaign

- “All healthcare providers who administered H1N1 vaccine were required to pre-register; pre-registration was available online and accounted for the majority of enrollees.”
- “The quality of the federal vaccine supplies were adequate.”
- “The state drafted several draft executive orders to be implemented during a declared emergency, which orders expand public health authority to improve response. A few of these draft executive orders delegate authority for vaccination to healthcare practitioners, such as EMS providers, that do not have this responsibility under their normal scope of practice.”
- “The state did not declare a state emergency and did not implement any of the draft executive orders.”
- “The state health agency and local public health agencies agreed that vaccinator-staffing shortages could be addressed on a case-by-case basis. At no time during the outbreak were additional vaccinators requested.”

Workforce, Capacity, and Infrastructure

- “In general, the use of volunteers at the local level was effective; however, state and local public health found that they could not use volunteer staff as effectively for fulfilling key public health roles.”
- “Individuals with an intricate knowledge of the state’s public health system should have filled these roles internally.”

Federal/State/Local Coordination

- None identified in report

Communication

- “The coordination of information was massively improved from spring to fall, in large part because of a state health Google Group implemented at the state level. This was developed to ensure that healthcare workers only received H1N1 updates once a day rather than each time a federal HAN was issued (multiple times a day during the spring response).”

Summary of State “C” Issues/Barriers

(Items are presented in the same order as presented in the state’s report to ASTHO, although they are not in any priority order.)

Surveillance, Epidemiology, and Laboratory Services

- Not all school districts throughout the state were cooperative with local public health departments’ efforts to implement policies/procedures for capturing ILI-related illness and surveillance data; there is no mandate at the federal or state level to implement key public health practices within the school system; and
- Patients who were denied confirmatory testing because they did not meeting testing criteria would return to the ED multiple times demanding to be tested, often because their employer required that they have a doctor’s note verifying illness before they could be granted leave from work and/or to return to work.

National Vaccination Campaign

- U.S. Department of Defense sites did not receive vaccine in time to vaccinate their personnel prior to or during the peak of the outbreak; local health departments could vaccinate dependents of active duty personnel, but not active duty personnel themselves—including those that were pregnant or had other high-risk conditions;
- CDC minimum vaccine shipment of 100 doses required the state health agency to turn many providers away that otherwise would have been able to provide vaccine in their smaller practices;
- Delays and constant revisions in vaccine allocation undermined local mass vaccination efforts caused vaccination clinics to be cancelled; when vaccine was available, public demand had waned resulting in surplus vaccines and loss of credibility for state/local public health;
- Variations in population between urban/rural counties meant that many rural counties were able to vaccinate everyone who fell into a priority group quickly and move to vaccinating the general public sooner than the more populated counties; lead to confusion among residents in different counties;
- CDC recall of vaccine during the outbreak due to degrading vaccine and expiration date concerns caused confusion and panic among the public and could have lead to refusal to be vaccinated;
- Varying amounts of formulations, presentations and amounts of vaccine shipped to hospitals caused logistical issues and confusion among providers;
- The supplies sent in each shipment of vaccine did not always correspond to the type of vaccine shipped along with it; the types of supplies changed from shipment to shipment; and
- Questions remain at the local level about who can be given the authority to vaccinate (e.g., EMTs) and concerns over workers compensation and liability issues for volunteers.

Medical Care and Countermeasures

- Questions regarding the use of federally funded National Guard staff to assist in the transportation and security of vaccine or other federal assets during a declared national emergency;
- Confusion over conflicting N95 guidance; and
- Untimely federal response to state's request to pre-deploy SNS assets missed the outbreak's peak and assets were no longer needed.

Communication

- CDC communication during the first phase of H1N1 was overwhelming, including information sent via HAN; federal communications were at times repetitive and not clearly marked as updates;
- It was difficult for local healthcare providers and local health departments to keep up with recommendations and the volume of communications issued at the federal, state and local level;
- Local media often monitors/uses information directly from the CDC website without using state/local information; state agencies need to be more proactive in summarizing federal information and including state-specific information relevant to the current situation; and
- Federal agencies conducted too many conference calls on topics related to H1N1; information provided was inconsistent and audiences were pre-selected so people were getting different information.

Workforce, Capacity, and Infrastructure

- Healthcare workers expressed concern that there were limited numbers of personnel in their facilities that chose to be vaccinated against H1N1; hospital partners questioned whether mandating vaccination in this situation would work, as other vaccines (MMR) are mandated in order to work in a healthcare setting;

- Maintaining public health and hospital staffing during the peak of the H1N1 outbreak was a challenge;
- State and local public health agencies found that they could not use volunteer staff as effectively for fulfilling key public health roles;
- Surge capacity for hospitals continues to be an issue, as hospitals do not want to divert their staff to off-site facilities; staffing continues to be the biggest barrier to alternate care facility planning;
- Hospital personnel believe that credentialing continues to be an issue as well as Joint Commission issues surrounding EMTALA laws and the restricted roles of staff during an emergency; and
- Some facilities were reluctant to use volunteers from the state's ESAR-VHP database because those volunteers only undergo a state criminal background check; state volunteer databases need a higher level of background checks providing national data, not just state and local information.

ICS, Command and Control, and Authority

- CDC and the state health agency did not implement a formal ICS structure in response to the H1N1 event, although many local health departments in the state did;
- Disaster declarations posed several state/local issues that made it apparent that public health emergencies should be classified differently; there needs to be a formal response that does not trigger the full disaster declaration, but addresses public health-specific issues;

(Listed under “*Community Mitigation Measures*” heading by State “C”)

- CDC guidance during the first phase of H1N1 was inconsistent, especially in regards to school closure; and
- Hospital visitor restrictions varied from hospital to hospital; hospitals wanted policies to be consistent and have recommendations from the state since restrictions were hard to enforce without state guidance.

Federal/State/Local Coordination

State “C” combined coordination issues with communication issues above.

Other Issues

None identified in the State “C” report.

Text of State “C” Issues/Barriers/Recommendations

(Items are presented in the same order as presented in the state's report to ASTHO, although they are not in any priority order.)

SURVEILLANCE , EPIDEMIOLOGY, AND LABORATORY SERVICES

Issue & Discussion:

Data Collection

- “In summer 2009, local public health departments (LHDs) were able to work with their school districts and colleges to implement policies/procedures for capturing influenza-like illness (ILI)-related illness and surveillance data.”
- “Unfortunately, not all school districts throughout the state were cooperative.”
- “There is no mandate at the federal or state level to implement key public health practices within the school system.”

	<ul style="list-style-type: none"> • “Data on ILI absences was valuable in predicting the status of the current H1N1 outbreak within the community.” • “Schools and colleges need to be full partners with public health not only to assist in decisions surrounding school closures but also for setting up mass vaccination clinics within the community.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “School surveillance activities will be continued in [STATE] due to the success of H1N1 ILI school-based surveillance.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Continue to develop ongoing relationships at the state and federal level between public health and educational institutions. CDC, HHS and U.S. Department of Education should be communicating on how to better partner for routine and emergency disease surveillance.” • “Federal agencies should also better support their state/local counterparts in these efforts; U.S. Department of Education should loosen grant restrictions that interfere with collaboration with public health and that hinder reporting requirements.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	<i>H1N1 Confirmatory Testing; Employer Requirements</i> <ul style="list-style-type: none"> • “Hospital partners reported that it was not difficult to manage in-patient H1N1 cases, but it was difficult to manage patients in the emergency department (ED).” • “Many patients wanted to be tested for H1N1, even when they did not meet the testing criteria.” • “Patients who were denied confirmatory testing would often return to the ED multiple times demanding to be tested, often because their employer required that they have a doctor’s note verifying illness before they could be granted leave from work and/or to return to work.” • “Employees should not need confirmation of a widespread illness in order to receive permission from the workplace to stay home due to illness or the illness of a family member.” • “Schools saw an increase in the number of sick kids returning to school after one or two days due to parents who were unable or unwilling to take time off of work to care for their sick children.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Work with private organizations to change corporate culture; employees should be encouraged to stay home when they are sick and HR policies should not require documentation from a physician confirming H1N1 or other widespread illnesses.” • “Provide federal support for low-income families to stay home when kids are sick.” • “State/locals should continue to communicate with the business community and share public health guidance/recommendations.” • “Department of Education, in partnership with state/local public health, should work more closely with the private sector to provide information on school closures and other school issues that potentially impact parents/private sector employees.”
Priority Assigned:	<i>None assigned in state report</i>

NATIONAL VACCINATION CAMPAIGN

Issue & Discussion:	Administration; Federal Employees <ul style="list-style-type: none"> “State/local health departments were told that the U.S. Department of Defense (DOD) would be vaccinating their own personnel; however the DOD did not receive vaccine in time to vaccinate their personnel prior to or during the peak of the outbreak.” “Local health departments (LHDs) could vaccinate dependents of active duty personnel, but not active duty personnel themselves– including those that were pregnant or had other high-risk conditions.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> “DOD needs to provide vaccine to all military personnel as promised in a timely fashion or enable state/local health departments to vaccinate military personnel with financial and operational support from DOD.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	Allocation; Minimum Dose-Count Ordering Requirements <ul style="list-style-type: none"> “All healthcare providers who administered H1N1 vaccine were required to pre-register; pre-registration was available online and accounted for the majority of enrollees.” “The CDC minimum vaccine shipment of 100 doses required [STATE HEALTH AGENCY] to turn many providers away that otherwise would have been able to provide vaccine in their smaller practices.” “This type of logistical requirement caused problems for states with rural and frontier counties.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> “In the future, CDC should be more flexible with vaccine shipment allocations.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	Availability and Allocation <ul style="list-style-type: none"> “CDC over-promised and under-delivered vaccine allocations at the beginning of the influenza season; CDC’s continued revisions to vaccine allocations were likewise miscalculated.” “The constant revisions in vaccine allocation undermined local mass vaccination efforts, as the amount of vaccine to arrive in the state each week was always unknown. As a result, many mass clinics were cancelled at the last minute.” “At the beginning of the outbreak, people who did not fit into one of the limited priority groups were turned away and were unable to receive H1N1 vaccine.” “Once vaccine was available in large quantities, the number of cases in [STATE] began to decline and the general public was no longer interested in getting vaccinated.”
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Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “CDC needs to provide better projections on vaccine availability, demanding better estimates from vaccine manufacturers.” • “Federal government and vaccine producers need to implement new/non-egg based vaccine production technology.” • “Vaccine manufacturers need to be held accountable for their estimated vaccine production.” • “In the future, CDC should under-promise and over-produce, not the other way around.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	Priority Groups <ul style="list-style-type: none"> • “Per CDC guidance, [STATE HEALTH AGENCY] mandated that all LHDs enforce the priority groups before vaccinating the general population.” • “Due to variations in population between urban/rural counties, many rural counties were able to vaccinate everyone who fell into a priority group quickly and move to vaccinating the general public sooner than the more populated counties.” • “Residents in the state who did not fit into a priority group were confused as to why they could be vaccinated in a neighboring county and not their own.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “CDC should be more specific in defining priority groups so state/local health departments can more easily justify the transition to vaccinating the general public.” • “[STATE HEALTH AGENCY] should continue to enhance communications surrounding priority group issues during future events.” • “[STATE HEALTH AGENCY] should continue to support LHDs decisions’ on how to best meet the needs of their populations, ensuring that the highest risk are vaccinated and that vaccine is provided to as many people as possible.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	Vaccine Recall <ul style="list-style-type: none"> • “CDC recalled vaccine during the outbreak due to degrading vaccine, quality, expiration dates, etc.” • “When the public hears the word ‘recall’, they believe something is wrong; that the vaccine is dangerous.” • “The use of the word ‘recall’ can lead to people refusing to be vaccinated due to misinformation.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “CDC should never use the word ‘recall’ in association with vaccine unless there is a clear safety issue.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	Formulation <ul style="list-style-type: none"> • “The varying amounts of formulations, presentations and amounts of vaccine shipped to hospitals caused logistical issues and confusion among providers.” • “FluMist was the first vaccine presentation available for healthcare workers. In the past, healthcare workers were told that if they were vaccinated with FluMist, they could possibly transmit live virus to patients; thus many healthcare workers were not willing to be vaccinated with FluMist during H1N1.” • “Many hospitals sent the FluMist presentation back without vaccinating their healthcare workers.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “CDC needed to provide more specific information on FluMist and other intranasal presentations for healthcare workers.” • “Directives to vaccinate healthcare workers should come out from the federal level and not from the state, local or facility level.”
Priority Assigned:	<i>None assigned in state report</i>
Issue & Discussion:	Vaccine Supplies <ul style="list-style-type: none"> • “The quality of the federal vaccine supplies were adequate, however the type of supplies sent in each shipment did not always correspond to the type of vaccine shipped along with it; the types of supplies changed from shipment to shipment.” • “LHDs tried to make logistical decisions based on the materials received in prior shipments, but were unable to do so because the federal supply shipments contained inconsistent materials.” • “LHDs had to fill missing/inappropriate supplies with their own resources.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “All vaccine kits should contain the same supplies throughout the response. CDC should keep vaccine materials consistent in each shipment.” • “CDC should give states and locals the option to order supplies separate from the vaccine.” • “All tracking numbers on vaccine shipments should be timely and correct.” • “Send more yellow vaccination cards in future shipments.”
Priority Assigned:	<i>None assigned in state report</i>
Issue & Discussion:	Authority to Vaccinate <ul style="list-style-type: none"> • “[STATE] has drafted several draft executive orders to be implemented during a declared emergency, which orders expand public health authority to improve response.” • “Some of the draft executive orders delegate authority for vaccination to healthcare practitioners, such as EMS providers, that do not have this responsibility under their normal scope of practice.” • “[STATE] did not declare a state emergency and did not implement any of the draft

	<p>executive orders.”</p> <ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] and LHDs agreed that vaccinator-staffing shortages could be addressed on a case-by-case basis. At no time during the outbreak were additional vaccinators requested.” • “Questions remain at the local level about who can be given the authority to vaccinate.” • “LHDs are still looking for clear legal guidance from [STATE HEALTH AGENCY] or the Attorney General’s (AG’s) Office on the regulations regarding liability and workman’s compensation for the use of volunteers.” • “Training and workshops addressing state/local legal issues have been provided, but locals want specific guidance signed by the AG or [STATE HEALTH AGENCY]’s legal counsel.” • “During H1N1, different parties read the same regulations regarding the use of EMTs in different ways.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] will continue to provide the existing legal guidelines defining what different classes (EMT-B, EMT-I, etc.) of EMT’s can do under specific circumstances during a declared vs. non-declared disaster.” • “[STATE HEALTH AGENCY] will work with legal counsel to determine if a point of dispensing (POD) can be defined as a medical facility.”
Priority Assigned:	<i>None assigned in state report</i>

MEDICAL CARE AND COUNTERMEASURES

Issue & Discussion:	<p>SNS Stockpile Distribution</p> <ul style="list-style-type: none"> • “During a national event (such as a pandemic) that requires the distribution of SNS material, the [STATE HOMELAND SECURITY OFFICE] would like to know if federal resources can be used to pay for the transportation and security of vaccine or other federal assets.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Use [STATE] National Guard staff, paid for by federal funds, to increase surge capacity for law enforcement during large national events requiring the distribution of SNS assets.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	<p>PPE - N95</p> <ul style="list-style-type: none"> • “A lack of consistent federal guidance on the use of PPE caused a great deal of confusion for state and local personnel.” • “Federal guidance on the use of N95s was not provided soon enough and varying federal agencies (NIOSH and OSHA) provided conflicting information.” • “[STATE] disagreed with OSHA on the use of N95s and fit-testing for hospital personnel.” • “CDC continued to send varying models and types of N95s. It was not possible to fit-test all staff on a new respirator model during the middle of an outbreak because of the
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	<p>time involved, staffing requirements, and depleting federal supplies while doing the tests.”</p> <ul style="list-style-type: none"> • “Federal recommendations on who needs to wear the N95s should be released earlier and the risks of not wearing an N95 in a hospital setting need to be more clearly defined.” • “Many healthcare workers did not understand why surgical masks were acceptable for seasonal influenza, but not for H1N1.” • “Hospitals started following guidance provided by their own infection control departments instead of referring to inconsistent federal guidance.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “CDC needs to inform states about the types of respirators that are stockpiled to ensure that personnel are fit-tested on the models that may be sent during a large-scale disease outbreak.” • “States need clarification whether OSHA will penalize hospitals/institutions that follow their states’ worker protection recommendations if they conflict with NIOSH or other federal guidance for worker safety.” • “PPE recommendations should come from state health departments based on federal guidance.” • “Federal research needs to focus on providing an alternative to current N95 models; need to be easier to wear for longer periods of time. N95s with exhalation valves may be a better resource for now.” • “Various healthcare providers, including EMS, should enhance their current PPE stockpiles, including N95s.” • “Clarify the relationship between NIOSH recommendations and OSHA requirements, and the interaction between federal guidance and state regulations.” • “Clarify guidance for worker safety practices if official recommendations cannot be met (e.g., if the supply of N95s is inadequate).”
Priority Assigned:	<i>None assigned in state report</i>
Issue & Discussion:	<p><i>SNS Planning and Distribution</i></p> <ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] developed the state’s SNS request without local input as a proactive attempt at getting access to its state allotment of PPE and antivirals before the fall H1N1 outbreak.” • “HHS requires that all state requests for SNS resources be reviewed by the HHS director.” • “During an emergency event, timely response is of the utmost importance and cannot be achieved with this type of top-down policy.” • “[STATE HEALTH AGENCY] did not receive an answer to its initial request for SNS assets until two months after the peak of H1N1 ended in [STATE], by which time it no longer needed additional resources.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] should develop a local advisory group that can be called upon during an emergency to obtain input from LHDs and to assist in

communicating state response efforts to local counterparts.”

- “HHS should change their policy for approving state requests for SNS assets during an emergency event.”

Priority Assigned: *None assigned in state report*

COMMUNITY MITIGATION MEASURES

Issue & Discussion: *School Closure Guidance*

- “CDC guidance during the first phase of H1N1 was inconsistent, especially in regards to school closure.”

Mitigation Strategies: *None identified in state report*

Recommendations Suggested:

- “CDC should provide consistent guidance and version control.”

Priority Assigned: *None assigned in state report*

Issue & Discussion: *Hospital Visitor Restrictions*

- “Hospital visitor restrictions varied from hospital to hospital.”
- “Hospitals wanted policies to be consistent and have recommendations from the state; restrictions were hard to enforce without state guidance.”
- “Child welfare issues were also an issue at some hospitals as some parents left their children unattended in waiting rooms if they were not allowed to visit patients.”

Mitigation Strategies: *None identified in state report*

Recommendations Suggested:

- “Hospital visitor restrictions need to be more clearly communicated to the public as early as possible to ensure that children are left at home.”
- “Hospital visitor restrictions should be consistent statewide; guidelines should be provided by [STATE HEALTH AGENCY] during future outbreaks.”

Priority Assigned: *None assigned in state report*

COMMUNICATION/COORDINATION

Issue & Discussion: *Amount and Frequency of CDC Updates*

- “CDC communication during the first phase of H1N1 was overwhelming, including information sent via HAN.”
- “Much of this information was repetitive, and revisions of past guidance were not clearly labeled. HAN recipients did not know what information was new, what had been revised and what was already sent in prior email communications.”
- “Coordination of information was improved from spring to fall, in large part due to a [NAME] Google Group implemented at the state level, which was created to ensure that healthcare workers received H1N1 updates once a day rather than each time a federal HAN was issued (multiple times daily in spring).”
- “It was difficult for local healthcare providers and LHDs to keep up with

recommendations and the volume of communications issued at the federal, state and local level.”

Mitigation Strategies: *None identified in state report*

Recommendations Suggested:

- “CDC should summarize their revisions to HAN communications and guidance in bullets, clearly outlining changes made.”
- “CDC should post a version number on every guidance document.”
- “[STATE HEALTH AGENCY] should continue to consolidate federal guidance for state and local partners during future large-scale events to ensure state and local partners are not overwhelmed by federal communications and to ensure that state and local communications are also being received.”

Priority Assigned: *None assigned in state report*

Issue & Discussion: *Messaging Coordination; Public/Media Outreach*

- “Local media often monitors/uses information directly from the CDC website without using state/local information.”
- “CDC is looked to as the ultimate authority on large public health issues and critical state/local information can be overlooked or disregarded if CDC’s messages conflict with, or don’t include, key state/local talking points.”
- “State agencies need to be more proactive in summarizing federal information and including state-specific information relevant to the current situation.”
- “Talking points should be systematically provided to all participating public information officers.”
- “The state needs to be looked to as the buffer between interpreting federal guidance and providing consistent messaging to local communities.”

Mitigation Strategies: *None identified in state report*

Recommendations Suggested:

- “CDC should include a statement in all press releases that individuals / media go to their state and/or LHD to receive specific regional/local public health information.”
- “[STATE HEALTH AGENCY] should take all CDC information and translate it so that it mirrors state guidance; state and locals need to ensure that communications are consistent.”

Priority Assigned: *None assigned in state report*

Issue & Discussion: *Messaging Coordination*

- “Federal agencies conducted too many conference calls on topics related to H1N1.”
- “The information provided was inconsistent and audiences were pre-selected so people were getting different information.”

Mitigation Strategies: *None identified in state report*

Recommendations Suggested:

- “Reduce the number of conference calls.”
- “Ensure that the same information is provided on all calls; make call notes available to everyone by posting these notes on a public website for everyone involved in the response effort to see.”
- “Keep conference call times and days consistent.”

Priority Assigned: *None assigned in state report*

WORKFORCE, CAPACITY, AND INFRASTRUCTURE

Issue & Discussion:	Health Care Surge; Workforce Mandates <ul style="list-style-type: none">• “Many healthcare workers expressed concern that there was limited numbers of personnel in their facilities that chose to be vaccinated against H1N1.”• “Hospital partners questioned whether mandating vaccination in this situation would work, as other vaccines (MMR) are mandated in order to work in a healthcare setting.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “During future pandemics, the federal government should mandate that influenza vaccination be required of all healthcare practitioners.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	Public Health Surge; Volunteers <ul style="list-style-type: none">• “Maintaining public health and hospital staffing during the peak of the H1N1 outbreak was a challenge.”• “Using volunteers at the local level was generally effective; however, state and local public health found that they could not use volunteer staff as effectively for fulfilling key public health roles.”• “Individuals with an intricate knowledge of the [STATE] public health system should have filled these roles internally.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “The use of volunteers needs to be restricted to non-critical public health roles.”
Priority Assigned:	<i>None assigned in state report</i>

Issue & Discussion:	Health Care Surge; Alternate Care Sites <ul style="list-style-type: none">• “Surge capacity for hospitals continues to be an issue, as hospitals do not want to divert their staff to off-site facilities. Staffing continues to be the biggest barrier to alternate care facility planning. The solution may be to surge as much as possible in the hospital where staff capacity already exists in addition to using retired medical personnel and students.”• “In rural areas, they are encouraging people to stay at home and creating guidance to this effect.”• “Hospital personnel also stated that credentialing continues to be an issue as well as Joint Commission issues surrounding EMTALA laws and the restricted roles of staff during an emergency.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none">• “Need to re-evaluate roles for volunteers and contractors during an emergency event, clearly defining those roles for public health staff vs. volunteers and ensuring the proper staffing is available for emergency response needs.”

- “Local healthcare coalitions need to look at using retired medical personnel as well as medical and nursing students for surge staffing.”
- “All critical players (employees and contractors) need to have VPN [virtual private network] access established in advance. This ensures that business operations continue in the event that employees can not be in the office, e.g. poor weather conditions, sickness, etc.”
- “Need to resolve the missing reference to “EMTALA” in the President’s Declaration of National Emergency.”

Priority Assigned: *None assigned in state report*

Issue & Discussion:	<p>Volunteer Surge</p> <ul style="list-style-type: none"> • “All [VOLUNTEERS ON THE STATE’S ESAR-VHP VOLUNTEER REGISTRATION SYSTEM] must pass a [STATE POLICE] background check before they are allowed in the system, however, the [STATE POLICE] background check is limited to illegal activity conducted in the [STATE].” • “Many partners were not comfortable using [VOLUNTEERS FROM THE STATE’S VOLUNTEER REGISTRATION SYSTEM] as their criminal history outside of the [STATE] is unknown. This has lead to limited use and enrollment in [THE STATE’S VOLUNTEER REGISTRATION SYSTEM].” • “State volunteer databases need a higher level of background checks providing national data, not just state and local information.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “Conduct federal background checks for all ESAR-VHP volunteers. This should be done by HHS – states can not afford to conduct these background checks using current funds.”
Priority Assigned:	<i>None assigned in state report</i>

ICS, COMMAND AND CONTROL, AND AUTHORITY

Issue & Discussion:	<p>ICS</p> <ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] did not implement a formal ICS structure in response to the H1N1 event, although many LHDs in [THE STATE] did.” • “Many LHDs in [THE STATE] have been using ICS to conduct seasonal flu activities for years to meet state/federal requirements.” • “CDC did not seem to be formally using ICS to respond to H1N1.” • “Each [STATE HEALTH AGENCY] program was compartmentalized based on how the CDC was organized.” • “LHDs use ICS now, not only because it is federally mandated, but also because the system works. ICS is not a training issue, but a culture issue; it must be used for daily response, not just during large-scale outbreaks.”
Mitigation Strategies:	<i>None identified in state report</i>
Recommendations Suggested:	<ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] needs to implement ICS in a more formal way.” • “CDC needs to use ICS and make formal ICS positions and Incident Action Plans

(IAPs) available to states for review.”

Priority Assigned: *None assigned in state report*

Issue &

Discussion:

Emergency Declarations; ICS; Command and Control

- “Disaster declarations posed several state/local issues that made it apparent that public health emergencies should be classified differently.”
- “Public health emergencies tend to emerge slowly and require a longer period of response. This is why it can be difficult to determine when to declare an emergency, establish ICS, etc.”
- “There needs to be a formal response that does not trigger the full disaster declaration, but addresses public health-specific issues.”
- “Since the [STATE EMERGENCY MANAGEMENT AGENCY] cannot stand up the state EOC until the Governor declares a state emergency, [THE STATE] needs a better process for activating the state EOC without an emergency declaration.”
- “Several counties received pressure from their partners to declare a local disaster to free up additional resources.”
- “As the case mortality rate was not unlike that of seasonal influenza, state and local health departments did not see the need to formally declare a state/local disaster.”

Mitigation

Strategies:

None identified in state report

Recommendations

Suggested:

- “[STATE] needs to implement more flexible disaster declarations to account for public health response.”
- “Change current policies to enable the [STATE EMERGENCY MANAGEMENT AGENCY] to activate the state EOC and free up additional state/local resources without the Governor declaring an official state of emergency.”
- “The federal government needs to clarify the implications of alternative types of federal emergency declarations.”

Priority Assigned: *None assigned in state report*

IV.D Summary of State “D” Report

Please see the introduction to Section IV on page 89 for general information about the data contained in this subsection.

Overview of State “D” Issues/Barriers

- State “D” identified a total of 15 issues/barriers
- State “D” prioritized its issues/barriers in the report as well as the categories. Priority order for the categories and issues/barriers in each were

Priority Assigned by State “D”	Category and Priority Issues within Category
1 st	Federal/State/Local Coordination 1.1 PHER grant issues 1.2 Federal agency coordination/communication issues
2 nd	Communication 2.1 Quantity/quality of federal agency communications 2.2 Federal/state/local case reporting issues
3 rd	ICS, Command and Control, and Authority 3.1 Federal vs. state emergency declarations 3.2 School closure guidance issues
4 th	National Vaccination Campaign 4.1 Federal estimates for vaccine delivery 4.2 Federal/state/tribal vaccine allocation issues 4.3 Vaccine payment/reimbursement issues
5 th	Workforce, Capacity, and Infrastructure 5.1 Impact of PHER grant limitations on laboratory capacity
6 th	Medical Care and Countermeasures 6.1 N95 guidance issues 6.2 SNS asset mismatch to state needs 6.3 HHS/state HAvBED reporting issues
7 th	Surveillance, Epidemiology, and Laboratory Services 7.1 Electronic laboratory reporting issues
8 th	Other Issues 8.1 WHO pandemic phases and HHS pandemic plan

- The identified issues/barriers are distributed into the following categories

Category	Number of Responses	Percent of State “D” Total Responses
ICS, Command and Control, and Authority	2	13%
Surveillance, Epidemiology, and Laboratory Services	1	7%
Medical Care and Countermeasures	3	20%
National Vaccination Campaign	3	20%

Category	Number of Responses	Percent of State “D” Total Responses
Workforce, Capacity, and Infrastructure	1	7%
Federal/State/Local Coordination	2	13%
Communication	2	13%
Other Issues	1	7%
Totals:	15	100%⁷

Successful Elements of H1N1 Response Identified by State “D”

(Items were taken from the state’s report discussing successful elements and mitigation strategies.)

Overall Strengths Identified

- “The state credits the federal government for permitting state and local health officials to oversee and determine H1N1 vaccine allocation and distribution needs.”
- “The state has established strong working relationships with tribal nations, state and local agencies, and healthcare providers.”
- “The total federal funding amount distributed to the state was sufficient.”
- “In less than a year, the federal government developed and delivered a vaccine for a novel influenza virus.”

Federal/State/Local Coordination

- “Under the Public Health and Social Services Emergency Fund, Congress allocated response funding to prepare for and respond to the novel influenza A (H1N1) virus.”
- “Federal, state, and local partners swiftly coordinated H1N1 response efforts.”
- “As the lead federal coordinating agency for H1N1 response, the U.S. Department of Health Services (HHS) provided funding resources to states.”
- “Although setbacks at all levels of government occurred, public health agencies diligently succeeded with administering H1N1 vaccine to the public.”
- “The state recognizes the federal government for establishing a priority for pandemic readiness and planning.”
- “Public health officials agreed previous funding resulting from avian influenza established a foundation for a national response, requiring states and local governments to identify pandemic planning as a priority.”
- “To mitigate conflicting information from various federal and state agencies, the state utilized a cross-agency unified command structure to determine all policy issues.”

Communication

- “State and local public health officials acknowledge the federal government for coordinating public health information with the national media during the initial phases of the outbreak.”
- “Communications was a strength during the nationwide response; however, some communication issues occurred.”

⁷ Total may not add to 100% due to rounding.

- “The state created a robust media marketing campaign that focused on vaccine promotion and proper hygiene to prevent influenza spread. However, the delayed arrival of vaccine required state and local governments to adjust marketing strategies mid-course.”

ICS, Command and Control, and Authority

- “The federal government provided states with recommendations for responding to the H1N1 pandemic; these recommendations were developed as tools for the state to follow.”
- “Although the state recognizes the federal government’s efforts in this regard, states had to develop guidance and policies specific to state conditions and authorities.”
- “The state health agency informed healthcare partners of the existing state licensing flexibilities in absence of a state emergency declaration.”
- “State and local public health departments coordinated with the state health agency to develop state-specific recommendations for school closure.”

National Vaccination Campaign

- “The national vaccine manufacturing and distribution process was seen as effective.”
- “At the state and local level, public health agencies successfully provided H1N1 immunizations to a large number of people.”
- “In addition to working with local public health departments, the state health agency coordinated distribution of the vaccine by working directly with the Indian Health Service and tribal communities; the state health agency allocated a percentage of the state’s vaccine allotment to the Tribal Nations.”

Workforce, Capacity, and Infrastructure

- “The magnitude of the H1N1 pandemic overwhelmed a public health system that was already at capacity.”
- “In addition to performing routine tasks, medical and public health staff carried additional duties.”
- “Many public health agencies across the state conducted response efforts with minimal personnel and shortages of credentialed staff.”
- “To address laboratory staff capacity issues, additional cross-trained staff were utilized to process the H1N1 specimens and perform administrative duties; at times, staff were obtained from temporary workforce agencies and local health departments.”

Medical Care and Countermeasures

- “The state health agency published recommendations to use N95 masks for healthcare workers when performing aerosol-generating procedures.”
- “The state health agency worked with the state occupational health agency to declare an N95 shortage, thereby allowing the flexibility to prioritize the use of N95 masks.”
- “The state developed and implemented a strategy for distributing the available SNS assets to the local jurisdictions.”
- “The state health agency requested hospitals to respond to both the HHS situational awareness report and the HAvBED requests.”

Surveillance, Epidemiology, and Laboratory Services

- “The state public health laboratory utilized additional staff resources to handle laboratory surge.”

Summary of State “D” Issues/Barriers

(Items are presented in the same order as presented in the state’s report to ASTHO.)

Overall Recommendations for Improvement

- “Improve multi-agency coordination at the federal level prior to releasing federal guidance and regulatory directives.”
- “Information dissemination from federal agencies must comprehensively be approved by all federal parties.”
- “The three-phased federal funding approach affected vaccination response and planning at various levels.”
- “Federal guidance and regulatory directives should be evidence or scientific-based, unless federal recommendations are relaxed to allow state and local government the latitude to determine alternative planning.”

Federal/State/Local Coordination

- State/local pandemic response and planning efforts were hindered by phased allocation, timing and clarity of the Public Health Emergency Response (PHER) funding guidelines; and
- Federal agencies’ communication/coordination practices conflicted with state/local response efforts, information from federal agencies hindered state/local response efforts to provide timely information, and state, tribal, and local government, as well as non-profit agencies, received conflicting messages from the DHS, USDA, FDA, ED, and OSHA.

Communication

- Federal communications to the states and the public regarding the timing, amount, and type of vaccine affected state/local planning efforts; state/local marketing efforts created a demand for a vaccine that was not available at the time and once adequate supplies became available, the demand had diminished; and
- Inconsistent case report data between the state and CDC created confusion among public health agencies; disparity in reporting data impacted state/local public health officials by requiring local governments to clarify the conflicting data.

ICS, Command and Control, and Authority

- A presidential emergency declaration prior to a state declaration resulted in a need for clarification of the declaration process for public health agencies and healthcare partners; and
- Recommendations by the federal government to close schools were inconsistent with the severity and magnitude of the pandemic; state decided not to follow the federal recommendations to broadly close schools due to secondary effects (economic, social, and political impacts).

National Vaccination Campaign

- Overly optimistic projections for vaccine availability complicated vaccine clinic planning and public information efforts;
- Established vaccine allocation and distribution protocols between the federal government and Tribal Nations using the Indian Health Service were not followed; and
- Policies regarding cost-reimbursement issues with CMS needed clarification.

Workforce, Capacity, and Infrastructure

- Funding restrictions provided an additional barrier to mounting surge capacity to process H1N1 specimens at the state public health laboratory due to restrictions on workforce costs in PHER.

Medical Care and Countermeasures

- Ambiguity regarding federal guidance versus regulatory directives on the use of N95 masks created healthcare institution risk of potential regulatory consequences;
- Distribution of some SNS materiel without a state request resulted in the delivery of excess assets that did not match state needs; and
- HHS requests for information regarding HAvBED directly to the hospitals conflicted with information requests from the state.

Surveillance, Epidemiology, and Laboratory Services

- Lack of electronic lab test reporting capabilities contributed to delays reporting and analyzing epidemiological data.

Other Issues

- *HHS Pandemic Influenza Plan* does not reflect the 2009 World Health Organization (WHO) phases; state needs to know if HHS will adopt the new WHO phases, thereby requiring an update to the state's operational pandemic plan.

Text of State “D” Issues/Barriers/Recommendations

(Items are presented in the same order as presented in the state's report to ASTHO.)

FEDERAL/STATE/LOCAL COORDINATION

Issue & Discussion:

PHER Grants

- “State/local pandemic response and planning efforts were hindered by phased allocation, timing and clarity of the Public Health Emergency Response (PHER) funding guidelines.”
- “Grant limitations ultimately led to issues with capitalizing on the cadence of the vaccine supply and demand and administering the vaccine to the public (i.e., when demand for the vaccine was highest, grant restrictions were allowing limited response capabilities).”
- “Unclear allocation amounts outlined in the three-phased funding approach, combined with vague disbursement timelines, resulted in public health agencies being unable to develop and adjust their plans for vaccine distribution.”
- “State and local public agencies received vague guidelines between two focus areas in Phase I. For example, PHER Phase I, Focus Area 2 limited funding to 25% for epidemiology and laboratory response. The state recognizes if projected amounts of all PHER funding phases were provided at one time, public health planning efforts could have developed more quickly based on the recommended priority groups and severity of the pandemic.”

Mitigation Strategies:

- “The state distributed funding to local and tribal partners as a cost-reimbursement grant during the response which created unnecessary billing contingencies with private

community vaccinators.”

- “Several public health agencies solicited vendors through RFPs to conduct mass immunizations. RFPs called for vendors to provide immunizations and accept limitations to the scope of work by removing costs to patients. Vendors providing mass immunizations agreed to vaccinate all persons, and in return, counties would cover administration fees for insurance billing.”
- “To avoid vaccine distribution delays, public health agencies developed pandemic planning strategies dependent upon disbursement amounts in Phases I and II versus developing a single strategy early in the planning process. HHS apportioned funding using a three-phase approach through a population-based formula. Based upon the funding amounts allocated in Phases I and II, state public health planners anticipated similar amounts in Phase III.”

Recommendations Suggested:

- “Provide funding in one lump-sum with general restrictions during the first disbursement phase.”
- “Create one cooperative agreement award with one phase, similar to a block grant.”
- “Distinguish between response grants and planning grants. Review and/or remove the accounting restrictions attached to cooperative agreement awards.”
- “Avoid categorical limitations for which response funding can be used (e.g. epidemiology, laboratory services and workforce limitations).”

Priority Assigned: 1.1

Issue & Discussion:

Governmental Coordination

- “Federal agencies’ communication and coordination practices conflicted with state and local response efforts. Information from federal agencies hindered state and local response efforts to provide timely information. State, tribal, and local government, as well as non-profit agencies, received conflicting messages from the DHS, USDA, FDA, ED, and OSHA.”
- “During the initial pandemic wave, local public health agencies advised school districts to prepare for school closures due to the unknown severity and magnitude of the virus. Part of this planning process included the HHS guidance that ensures students who participate in the schools’ free- and reduced-price lunch programs continue to be fed during prolonged school closures. As both [STATE HEALTH AGENCY] and the [STATE EDUCATION AGENCY] began to plan for this provision, the USDA stated that food commodities from the National School Lunch Program (NSLP) could not be used in non-congregate meal settings. This misalignment of federal expectations led to a more diluted planning effort in providing meals to these students. In lieu of a solid plan to ensure continued meal service, local school districts were just advised to provide a list of food banks and other food service programs resources to parents and students participating in the NSLP.”

Mitigation Strategies:

- “To mitigate conflicting information from various federal and state agencies, the state utilized a cross-agency unified command structure to determine all policy issues.”
- “Although, a statewide school dismissal order was not issued, a comprehensive remedy for providing food to children was not determined.”
- “The federal government has since provided a work-around to the prohibition on using federal food commodities in non-congregate settings by allowing the Food Stamp Program (titled the “Pandemic Supplemental Nutrition Assistance Program” to be used.).”

Recommendations

- “Ensure federal agencies adhere to national incident management standards and

Suggested: collectively make appropriate policy decisions when guidance crosses into more than one federal agency.”

Priority Assigned: 1.2

COMMUNICATION

Issue & Discussion:	Public Outreach/Vaccine Availability Messaging <ul style="list-style-type: none">• “Communications to the states and the public regarding the timing, amount, and type of vaccine affected state and local planning efforts.”• “Public health officials encountered issues with vaccine distribution planning efforts due to the premature announcements of vaccine availability for the public.”• “Because of the lack of vaccine supply, state/local marketing efforts created a demand for a vaccine that was not available at the time. Once adequate supplies became available, the demand had diminished.”
Mitigation Strategies:	<ul style="list-style-type: none">• “State and local public health agencies had to adjust/postpone vaccine promotion efforts to avoid creating additional demand for a vaccine that was not yet available to the general population.”• “[STATE] created a robust media marketing campaign that focused on vaccine promotion and proper hygiene to prevent influenza spread. However, the delayed arrival of vaccine required state and local governments to adjust marketing strategies mid-course.”
Recommendations Suggested:	<ul style="list-style-type: none">• “Establish public information campaigns early in the response utilizing a unified consistent message.”• “Ensure that messaging for vaccine demand and excess vaccine supply are prepared ahead of time.”
Priority Assigned:	2.1

Issue & Discussion:	Messaging Coordination; Data Reporting Disparities <ul style="list-style-type: none">• “Inconsistent data between [THE STATE] and CDC created confusion among public health agencies.”• “Several times federal officials relayed data via national media reports re: cases and deaths; unfortunately, the reports were made before the state could notify local public health officials. This created discrepancies between state and local reports.”• “Disparity in reporting data impacted state/local public health officials by requiring local governments to clarify the conflicting data.”
Mitigation Strategies:	<ul style="list-style-type: none">• “Public information staff had to repeatedly explain data discrepancies at the state and local level.”
Recommendations Suggested:	<ul style="list-style-type: none">• “When reporting data at the federal level, provide a disclaimer stating state and local data may be more accurate.”• “Insure that state and local public health officials are notified of case fatalities before reports are made at the national level.”
Priority Assigned:	2.2

ICS, COMMAND AND CONTROL, AND AUTHORITY

Issue & Discussion:	Emergency Declaration <ul style="list-style-type: none">• “A presidential declaration prior to a state declaration resulted in a need for clarification of the declaration process for public health agencies and healthcare partners.”
Mitigation Strategies:	<ul style="list-style-type: none">• “[STATE HEALTH AGENCY] informed healthcare partners of the existing state licensing flexibilities in absence of a state declaration.”
Recommendations Suggested:	<ul style="list-style-type: none">• “Provide states with notifications regarding a pending Presidential Declaration to assist in incident action planning.”
Priority Assigned:	3.1

Issue & Discussion:	School Closure <ul style="list-style-type: none">• “Recommendations by the federal government to close schools were inconsistent with the severity and magnitude of the pandemic.”• “[STATE] decided not to follow the federal recommendations to broadly close schools due to secondary effects (economic, social, and political impacts).”
Mitigation Strategies:	<ul style="list-style-type: none">• “State and local public health departments coordinated with the [STATE EDUCATION AGENCY] to develop state-specific recommendations for school closure.”
Recommendations Suggested:	<ul style="list-style-type: none">• “Federal guidance should contain verbiage that states can develop alternate recommendations based on local conditions and authorities.”• “Conduct additional federal multi-agency meetings prior to developing guidance.”• “Continue to accept feedback from states regarding policy decisions.”
Priority Assigned:	3.2

NATIONAL VACCINATION CAMPAIGN

Issue & Discussion:	Vaccine Availability <ul style="list-style-type: none">• “Overoptimistic projections for vaccine availability complicated vaccine clinic planning and public information efforts.”• “The federal government announced H1N1 vaccine quantities prematurely, creating public expectations that abundant amounts of vaccine would be available. Actual vaccine amounts initially available were far less than originally anticipated. The type of vaccine initially available (i.e. nasal spray versus injection) further complicated the matter. This made it very difficult for local health departments to execute vaccination strategies and establish priorities.”• “Participants agree federal H1N1 vaccine projections must be announced when appropriate, even if later in the response to allow states and locals to develop more accurate vaccine allocation and distribution plans.”
Mitigation Strategies:	<ul style="list-style-type: none">• “Review plans to release vaccination information prior to distribution.”
Recommendations	<ul style="list-style-type: none">• “Federal agencies need to ensure that vaccine projections are more accurate and

Suggested: realistic.”

Priority Assigned: 4.1

Issue & Discussion:	Allocation; Distribution <ul style="list-style-type: none">• “Established vaccine allocation and distribution protocols between the federal government and Tribal Nations were not followed.”• “The federal government has an established protocol for vaccine allocation and distribution to Tribal Nations. During the H1N1 response, the mandate to begin working with state/local health was problematic due to need to register their providers with the central distribution system.”• “Although [THE STATE] has established collaborative relationships with the Tribal Nations, they were asked to circumvent an established process with IHS thereby creating a challenge for state/local public health departments to coordinate vaccination efforts.”
Mitigation Strategies:	<ul style="list-style-type: none">• “[THE STATE] allocated [A PERCENTAGE] of state’s vaccine allotment to the Tribal Nations.• “In addition to working with local public health departments, [STATE HEALTH AGENCY] coordinated distribution of the vaccine by working directly with IHS and tribal communities.”
Recommendations Suggested:	<ul style="list-style-type: none">• “Review plans, policies and procedures for providing direct public health resources to Tribal Nations.”• “Follow the established federal protocol for vaccine allocation and distribution to Tribal Nations.”
Priority Assigned:	4.2

Issue & Discussion:	Administration; Payment and Reimbursement <ul style="list-style-type: none">• “Policies regarding cost-reimbursement issues with CMS needed clarification.”• “Reimbursement for services regarding CMS maximum allowable rates was problematic, impacting the number of individuals receiving vaccinations.”• “Guidance regarding third-party billing became unpredictable with policy changes occurring multiple times. [STATE] received vague direction on use of third-party billing options with grant funding.”• “The barrier allowed healthcare providers/community vaccinators to charge the public for H1N1 vaccine; this resulted in the public paying for a “free” vaccine in varying amounts across the state.”
Mitigation Strategies:	<ul style="list-style-type: none">• “There was no uniform remedy for this issue in [STATE]. Local health departments dealt with reimbursement issues individually.”
Recommendations Suggested:	<ul style="list-style-type: none">• “Provide recommendations surrounding cost-reimbursement issues prior to vaccine distribution to enable state / local health departments to plan accordingly.”• “Provide states with total, unrestricted funding amounts prior to vaccine distribution to allow public health agencies to anticipate immunization administration fees.”
Priority Assigned:	4.3

WORKFORCE, CAPACITY, AND INFRASTRUCTURE

Issue & Discussion:	<i>Surge Capacity; Public Health Lab Funding</i> <ul style="list-style-type: none">• “Funding restrictions provided an additional barrier to H1N1 specimens at the [STATE PUBLIC HEALTH LABORATORY].”• “The [STATE PUBLIC HEALTH LABORATORY] received a surge of H1N1 specimens impacting the state’s ability to process lab specimens and confirmed lab results in a timely manner.”• “Specimen processing was also impacted by internal hiring issues and equipment availability; PHER Phase I funding restrictions regarding workforce costs provided an additional barrier to managing laboratory surge.”
Mitigation Strategies:	<ul style="list-style-type: none">• “Additional cross-trained staff were utilized to process the H1N1 specimens and perform administrative duties. At times, staff were obtained from temporary workforce agencies and local health departments.”
Recommendations Suggested:	<ul style="list-style-type: none">• “Provide more flexible funding guidelines to maximize and plan for workforce capacity issues as needed.”
Priority Assigned:	5.1

MEDICAL CARE AND COUNTERMEASURES

Issue & Discussion:	<i>PPE Guidance; N95 Respirators</i> <ul style="list-style-type: none">• “Ambiguity regarding federal guidance versus regulatory directives on the use of N95 masks created healthcare institution risk of potential regulatory consequences.”• “CDC recommended the use of N95 masks for healthcare workers when caring for patients with pandemic influenza; OSHA disseminated a federal regulatory directive to follow the CDC recommendations for stricter use of PPE.”• “[STATE HEALTH AGENCY] released its infection control guidance for healthcare workers which recommended the use of N95 masks only when performing aerosol-generating procedures, thereby countering the CDC recommendations.”• “Although the [STATE HEALTH AGENCY] recommendations were less restrictive, hospital and healthcare institutions were at risk of regulatory consequences if they did not adhere to the OSHA directive.”
Mitigation Strategies:	<ul style="list-style-type: none">• “[STATE HEALTH AGENCY] published recommendations to use N95 masks for healthcare workers when performing aerosol-generating procedures.”• “[STATE HEALTH AGENCY] worked with the [STATE OCCUPATIONAL HEALTH AGENCY] to declare an N95 shortage, thereby allowing the flexibility to prioritize the use of N95 masks.”
Recommendations Suggested:	<ul style="list-style-type: none">• “Coordinate jointly with all federal agencies, including OSHA, on the use of PPE for healthcare workers.”
Priority Assigned:	6.1

Issue & Discussion:	SNS Stockpiles <ul style="list-style-type: none"> • “The distribution of SNS materiel without a state request resulted in the delivery of excess assets.” • “Some SNS assets received at the state level were not matched with state needs and resulted in excess resources.” • “The public health need would have been better served if they had queried the states prior to SNS distribution.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “[STATE] developed and implemented a strategy for distributing the available assets to the local jurisdictions.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Distribute assets based on needs through formal state requests following the established Division of Strategic National Stockpile (DSNS) protocol.”
Priority Assigned:	6.2

Issue & Discussion:	Medical Supplies; HAvBED <ul style="list-style-type: none"> • “Requests for information by the federal government directly to the hospitals conflicted with information requests from the state.” • “Throughout the H1N1 response, [STATE HEALTH AGENCY] consistently gathered available bed numbers and situational assessment data from hospitals.” • “The federal government at various times directly requested ventilator status from these same hospitals.” • “Unfamiliar with the new federal request process, hospitals followed state protocols by only reporting situational awareness to [STATE HEALTH AGENCY]; this reporting discrepancy caused the federal government to assume hospital resources and infrastructure were inadequate.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] requested hospitals to respond to both the HHS situational awareness report and the HAvBED requests.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “The federal government should follow established protocol for coordinating directly with states for hospital information.”
Priority Assigned:	6.3

SURVEILLANCE , EPIDEMIOLOGY, AND LABORATORY SERVICES

Issue & Discussion:	Case Reporting; ELR <ul style="list-style-type: none"> • “The lack of electronic test reporting capabilities contributed to delays reporting and analyzing epidemiological data.” • “The process of reporting data manually by laboratory staff is exhaustive and time consuming. This issue led to delays in reporting real-time results and characterization of the H1N1 pandemic.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “The [STATE PUBLIC HEALTH LABORATORY] utilized additional staff resources to handle laboratory surge.”
Recommendations Suggested:	<ul style="list-style-type: none"> • “The federal government should fund and expand electronic reporting capabilities nationally.”
Priority Assigned:	7.1

OTHER

Issue & Discussion:	<i>Messaging about Pandemic Severity</i> <ul style="list-style-type: none">• “The HHS Pandemic Influenza Plan does not reflect the 2009 World Health Organization (WHO) phases.”• “Since the revision of the WHO phase descriptions in 2009, [STATE HEALTH AGENCY] has inquired about the potential alignment of the <i>HHS Pandemic Influenza Plan</i> with the new WHO phases. State operational pandemic plans need to mirror the <i>HHS Pandemic Influenza Plan</i> for consistency during multi-agency responses.”
Mitigation Strategies:	<ul style="list-style-type: none">• “[STATE] did not identify or conduct a remedy or work around activity for this issue.”
Recommendations Suggested:	<ul style="list-style-type: none">• “Update the <i>HHS Pandemic Influenza Plan</i> to reflect new WHO phases and changes.”• “Provide guidance to states seeking to revise state operational pandemic influenza plans.”
Priority Assigned:	8.1

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IV.E Summary of State “E” Report

Please see the introduction to Section IV on page 89 for general information about the data contained in this subsection.

Overview of State “E” Issues/Barrier

- State “E” identified a total of 13 issues/barriers
- State “E” prioritized its issues/barriers in the report within each category, but did not prioritize the categories. The priority issues in each category were

Category and Priority Issues within Category
ICS, Command and Control, and Authority 1.1 School closure guidance issues
Surveillance, Epidemiology, and Laboratory Services 2.1 School absenteeism surveillance system issues
Medical Care and Countermeasures 3.1 N95 supply issues 3.2 Timeliness of federal/state clinical guidances 3.3 Guidance for using SNS countermeasures on under/uninsured
National Vaccination Campaign 4.1 Vaccine allocation and prioritization issues 4.2 Multiple vaccine formulations issues 4.3 Vaccine supplies and state requirements for thimerosal-free vaccine
Workforce, Capacity, and Infrastructure 5.1 Public health surge capacity issues
Federal/State/Local Coordination 6.1 PHER/cooperative agreement structure issues
Communication 7.1 Outreach to health care stakeholders 7.2 Timing/triggers of vaccination campaigns 7.3 Timing/focus/visibility of state/federal vaccination campaigns
Other Issues • None identified

- The identified issues/barriers are distributed into the following categories

Category	Number of Responses	Percent of State “E” Total Responses
ICS, Command and Control, and Authority	1	8%
Surveillance, Epidemiology, and Laboratory Services	1	8%
Medical Care and Countermeasures	3	23%
National Vaccination Campaign	3	23%
Workforce, Capacity, and Infrastructure	1	8%
Federal/State/Local Coordination	1	8%

Category	Number of Responses	Percent of State “E” Total Responses
Communication	3	23%
Other Issues	0	0%
Totals:	<i>13</i>	<i>101%⁸</i>

Successful Elements of H1N1 Response Identified by State “E”

(Items were taken from the state’s report discussing successful elements and mitigation strategies.)

ICS, Command and Control, and Authority

- “Schools worked closely with local health departments through daily communications regarding recommendations to close or remain open.”
- “Local health departments built upon relationships already developed with schools through earlier identification of POD sites or regular meetings, and by providing timely, accurate information about 2009 H1N1.”

Surveillance, Epidemiology, and Laboratory Services

- “Improvements were made to school absentee surveillance reporting systems and additional training/outreach to local health departments/schools, leading to a 240% increase in school participation rates.”
- “Local health departments worked to share school closures/absentee rates throughout counties no matter which surveillance system was used.”

Medical Care and Countermeasures

- “State had hospitals’ preferred N95 brands stockpiled in state cache due to prior surveying of hospitals.”
- “State health agency staff worked closely with over 750 nursing homes throughout the state to develop respiratory protection plans for staff.”
- “Once approved, federal and state clinical and countermeasures guidance was distributed widely via the state portals to health care providers and the state health agency website.”
- “As federal and state clinical and countermeasures guidance evolved, the state health agency began highlighting just the changes in lengthy documents, so that providers could quickly assimilate the new information.”
- “New relationships/partnerships were established with pharmacies statewide.”
- “Private and chain pharmacies, and some FQHCs were provided with a cache of antivirals for under- and uninsured individuals; individuals were taken at their word if they stated they had no insurance.”

National Vaccination Campaign

- “The state health agency distributed vaccine to both providers and local health departments, with local health departments taking on the role of redistributors, allowed for sharing mechanisms between providers within a county.”
- “Opening up vaccination in November to all community members markedly increased vaccination rates in the state.”

⁸ Total may not add to 100% due to rounding.

- “The state health agency provided local health departments with spreadsheets to inform them as to which providers in their jurisdiction were getting vaccine.”

Workforce, Capacity, and Infrastructure

- “The state used volunteers to deal with staffing shortages; they saved counties tens of thousands of dollars, and remained committed and engaged in PODs throughout the vaccination campaign.”

Federal/State/Local Coordination

- “Funding obtained through the PHER grant was used to quickly hire additional regional health department staff to assist with response efforts.”

Communication

- “The state successfully used a variety of mechanism to communicate about H1N1, including: state/local websites to control messages and provide information; activation of state/local call centers and hotlines; sharing of weekly disease reports on the state health agency’s public website; bimonthly calls with representatives of professional provider organizations; ongoing press briefings with the Governor and state health director; presentations at healthcare forums, community meetings and school activities; and use of reverse 911 for communicating school-based messages.”
- “The state health agency and local health departments used social media sites, including Twitter and Facebook, to distribute messages.”
- “The state health agency public website was designed to include a specific page for H1N1, information on which was updated regularly.”

Summary of State “E” Issues/Barriers

(Items are presented in the same order as presented in the state’s report to ASTHO.)

ICS, Command and Control, and Authority

- Confusion existed regarding school closure guidance; schools believed they needed local health department approval to maintain state aid.

Surveillance, Epidemiology, and Laboratory Services

- New electronic school surveillance reporting system initiated to track school absenteeism was not widely used by local health departments because it was seen as a burden on school nurses; perception that too many reporting systems existed.

Medical Care and Countermeasures

- N95s supplied by the federal government were not a brand used by hospitals in the state; required new fit tests;
- Clinical guidance from CDC was delayed at the federal level; guidance also delayed at the state level when executive approval was required from more than one agency and overall time for review/approval; and
- No process for local health departments to use SNS for under- and uninsured individuals; state health agency waited too long to push out antivirals to pharmacies/health centers serving these populations.

National Vaccination Campaign

- Allocation system to states was too complicated and priority group rankings were confusing; providers received unwanted vaccine leading to confusion and waste;

- Too many options for vaccine and rules tied to vaccine type (age, thimerosal-free, FluMist) resulted in limited vaccination of priority target populations when insufficient quantities of a particular type were received; and
- Limited amount of thimerosal-free vaccine available in the beginning made it challenging to vaccinate high-risk populations due to state law requiring thimerosal-free vaccine children and pregnant women.

Workforce, Capacity, and Infrastructure

- Current public health infrastructure already stretched to the limit due to budget cuts, attrition of staff, inability to replace staff, and ongoing responsibilities that did not stop in the middle of a pandemic flu event.

Federal/State/Local Coordination

- Using the CDC Cooperative Agreement as a mechanism to provide emergency response funding was onerous; delayed resource allocation.

Communication

- Information/educational materials provided to direct care providers and front-line medical office staff were not timely or did not occur at all; providers and their staff were not always able to provide accurate information about priority groups/vaccination types to patients, causing confusion/frustration within communities;
- Timing of vaccination campaign was out of synch with vaccine supply; no triggers were identified as to when it was appropriate/necessary to launch campaigns; and
- Needed stronger, earlier, and more visible messages from the state, particularly about the safety, availability of vaccine, and need for medical treatment; state's contracting and message clearing process, along with insufficient initial funding, created the delay.

Other Issues

None identified in the State "E" report.

Text of State "E" Issues/Barriers/Recommendations

(Items are presented in the same order as presented in the state's report to ASTHO)

ICS, COMMAND AND CONTROL, AND AUTHORITY

<i>Issue & Discussion:</i>	<i>School Closure & Community Mitigation</i> <ul style="list-style-type: none"> • "Confusion existed regarding the school closure guidance; schools believed they needed local health department approval to maintain state aid." • "Concern/confusion among parents about the high absenteeism rate in the schools; schools not excusing students whose parents chose to keep them home due to perceived risk of illness, risking truancy." • "School closures resulted in children congregating at other sites, defeating the rationale for closure."
<i>Mitigation Strategies:</i>	<ul style="list-style-type: none"> • "Schools worked closely with local health departments (LHDs) regarding recommendations to close or remain open through daily communications"

(EFFECTIVE).”

- “LHDs built upon relationships already developed with schools through earlier identification of POD sites or regular meetings, and by providing timely, accurate information about 2009 H1N1 (EFFECTIVE).”
- Recommendations Suggested:**
- “Improve communication between [STATE HEALTH AGENCY] and [STATE EDUCATION AGENCY] (STATE).”
 - “Strengthen/promote more widely the [STATE HEALTH AGENCY] message to “keep your child home if sick” and infection control measures for parents. (STATE)”
 - “Recruit educator support of parental choices to keep child home, without requiring physician notes or other justification. (STATE)”
 - “Coordinate/provide guidance from [STATE HEALTH AGENCY]/[STATE EDUCATION AGENCY] in a more timely manner. (STATE)”
 - “Work to provide consistent messages/communication between school districts within each county (STATE).”

Priority Assigned: 1

SURVEILLANCE , EPIDEMIOLOGY, AND LABORATORY SERVICES

- Issue & Discussion:**
- Surveillance Data Collection/Analysis**
- “An electronic [SCHOOL SURVEILLANCE REPORTING SYSTEM] was initiated to track school absenteeism; a number of LHDs did not utilize the system as it was perceived as being a significant burden on school nurses, who were short-staffed.”
 - “A lag in reporting occurred when all schools were not utilizing the system, and there was a perception that too many reporting systems existed.”
- Mitigation Strategies:**
- “The [SCHOOL SURVEILLANCE REPORTING SYSTEM] was streamlined/improved; additional training/outreach to LHDs/schools. Average participation rates increased 240%, from [250 TO OVER 850 SCHOOLS] (EFFECTIVE).”
 - “LHDs worked to share school closures/absentee rates throughout the county no matter which system was used (EFFECTIVE).”
- Recommendations Suggested:**
- “Use existing surveillance system, rather than a new one, especially during an event (STATE).”
 - “Develop policies for access, data entry, integration of existing systems (STATE).”
 - “Continue to use [SCHOOL SURVEILLANCE REPORTING SYSTEM] for all communicable disease surveillance; strengthen partnership between LHDs and schools to improve system (STATE Recommendation).”

Priority Assigned: 1

MEDICAL CARE AND COUNTERMEASURES

- Issue & Discussion:**
- N95 Respirators**
- “N-95s supplied by the federal government were not a brand used by hospitals in [STATE]; required new fit tests.”
 - “Respiratory protection programs in long-term care facilities, particularly those that

	included N95 fit testing, were not in place or able to be used.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “Hospitals did not want to accept the federally-supplied N95s due to fit test issues.” • “Unclear why N95s were needed for influenza.” • “Nursing homes were ill-equipped to take on N95 fit testing and airborne precautions in the midst of a pandemic event.” • “[STATE] surveyed the hospitals two years ago to identify the brand they purchased. When SNS assets deployed, [X]% were placed in the [STATE CACHE], and [SAME X]% of state assets—the preferred brand—were distributed (<i>EFFECTIVE</i>).” • “[STATE HEALTH AGENCY] staff worked closely with all nursing homes [OVER 750]) throughout the state to develop respiratory protection plans (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Federal survey should be conducted of the states to determine the preferred brands of assets used by hospitals; stockpile these in the SNS (<i>FEDERAL</i>).” • “FDA-approved respirators should be purchased without an expiration date, so wouldn’t need an EUA (<i>FEDERAL</i>).” • “Respiratory protection programs within facilities need to be reviewed; modifications made to improve programs, specifically in the context of nursing homes (<i>STATE</i>).” • “Review N95 guidance for practicality without compromising safety (<i>STATE</i>).”
Priority Assigned:	1

Issue & Discussion:	Guidance/Policies <ul style="list-style-type: none"> • “Clinical guidance from CDC was delayed at the Federal level; also at the state level when executive approval was required from more than one agency and overall time for review/approval.” • “Approval processes slowed release of important information to clinicians, resulting in dependence on CDC guidance over state guidance.” • “Recreating documents from CDC, [STATE HEALTH AGENCY], and provider professional organizations created confusion/further delays in distributing guidance to providers.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “Once approved, guidance was distributed widely via the [STATE HEALTH CARE PROVIDER PORTAL], and posted on the [STATE HEALTH AGENCY] website (<i>EFFECTIVE</i>).” • “As guidance evolved, [STATE HEALTH AGENCY] began highlighting just the changes in lengthy documents, so that providers could quickly assimilate the new information (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Federal clinical guidance should be developed / disseminated more rapidly (<i>FEDERAL</i>).” • “State approval processes need to be streamlined to expedite information release to clinicians as quickly as possible (<i>STATE</i>).”
Priority Assigned:	2

Issue & Discussion:	Stockpiling and Distribution of Antivirals <ul style="list-style-type: none"> • “No process for LHDs to use the stockpile for under- and uninsured individuals.” • “[STATE HEALTH AGENCY] waited too long to push out antivirals to pharmacies
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	for these populations.”
	<ul style="list-style-type: none"> • “At-risk populations who used CHC/FQHCs did not receive antivirals in a timely manner.” • “CHC/FQHCs frustrated with their inability to access medication for their patients quickly and easily.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “New relationships/partnerships were established with pharmacies statewide (<i>EFFECTIVE</i>).” • “Private and chain pharmacies, and some FQHCs were provided with a cache of antivirals for under- and uninsured individuals. Individuals were taken at their word if they stated they had no insurance (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Deploy antivirals as appropriate to pharmacies and health centers much earlier in an event; develop protocols/policies for community members to access the medication (<i>STATE</i>).” • “Maintain/strengthen relationships with private and chain pharmacies (<i>STATE</i>).”
Priority Assigned:	3

NATIONAL VACCINATION CAMPAIGN

Issue & Discussion:	Allocation Approaches <ul style="list-style-type: none"> • “Allocation system to states was too complicated; number of allocation variables increased in an attempt to make allocation fair across the state across priority groups.” • “LHDs felt they should have been more involved in making choices regarding provider allocation; LHDs had a better perspective on the providers and populations served. LHDs could have been a broker for vaccine between state and provider. LHDs did not want to reallocate it, but could have provided better information to the state.” • “Priority group rankings were confusing; providers received unwanted vaccine leading to confusion and waste.” • “CDC reported vaccine types/amounts on a daily basis; some days no allocations provided. Lack of regular allocation amounts prevented state planning/scheduling.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “Having distribution to both providers and LHDs with LHDs taking on the role of redistributors allowed for sharing mechanisms between providers within a county (<i>EFFECTIVE</i>).” • “Opening up vaccination in November to all community members markedly increased vaccination rates (<i>EFFECTIVE</i>).” • “Provided LHDs with spreadsheets to inform them as to which providers were getting vaccine (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Allocation amounts should be underestimated but overproduced by the suppliers (<i>FEDERAL</i>).”
Priority Assigned:	1

Issue & Discussion:	Formulation and Manufacture <ul style="list-style-type: none"> • “Insufficient vaccine available early in the campaign.” • “CDC projections of vaccine supply by week were not accurate.”
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	<ul style="list-style-type: none"> • “Too many options for vaccine and rules tied to vaccine type (age, thimerosal-free, FluMist); limited vaccination of priority target populations when insufficient quantities of a particular type were received.” • “Variety in vaccines (nasal spray – live attenuated, thimerosal-free, multi-dose with thimerosal, pediatric-specific) lead to public confusion/concerns about whether they were receiving the “right” (safest) vaccine.” • “Because vaccine was late/did not match projections, state planning for vaccine distribution and local planning for mass vaccination clinics could not be done; public/provider trust was compromised.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “[STATE] routinely had to substitute vaccine from different manufacturers rather than what providers had requested, depending on amount and type of vaccine received. This slowed the process of allocation significantly (<i>INEFFECTIVE</i>).” • “State and LHDs and providers had to do significant education regarding thimerosal and FluMist; could only promote FluMist or vaccine with thimerosal if no other option was being offered (<i>EFFECTIVE but time consuming</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “There should only three types of vaccine available: FluMist, thimerosal-free for pregnant women, and one formulation for age six months and older. (<i>FEDERAL</i>)”
Priority Assigned:	2
Issue & Discussion:	<p>Vaccination Guidance/Policy</p> <ul style="list-style-type: none"> • “Limited amount of thimerosal-free vaccine available in the beginning made it challenging to vaccinate high-risk populations. Thimerosal-free vaccine required by law in [STATE] for children and pregnant women.” • “The [STATE HEALTH DIRECTOR’S] letter suspending law regarding use of vaccine with thimerosal for pregnant women/children came too late.” • “LHDs faced threats of law suits from the public and resistance from providers.” • “[STATE] law leads people to believe that thimerosal is unsafe; people uncomfortable with the shift of messaging, even in a shortage.” • “Providers saw thimerosal as a liability; were reluctant to give it to pregnant women and children.” • “There is confusion over whether the order will expire on [DATE] and what impact that will have on messaging to providers.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “The [STATE HEALTH DIRECTOR’S] letter suspended the law regarding use of vaccine with thimerosal for pregnant women and children. However, it was perceived as coming too late (<i>INEFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Additional education/outreach to providers needs to occur prior to the [STATE HEALTH DIRECTOR’S] letter coming out suspending an existing law (<i>STATE</i>).” • “OB/GYNs need more education and support in understanding the safety of vaccine with thimerosal (<i>STATE</i>).” • “The law regarding thimerosal should be lifted; should be a priority for the [STATE HEALTH AGENCY] (NOTE: The [STATE HEALTH DIRECTOR’S] suspension of current law extended to [DATE]) (<i>STATE</i>)”
Priority Assigned:	3

WORKFORCE, CAPACITY, AND INFRASTRUCTURE

Issue & Discussion:	<i>Flexing Existing Staff/Volunteers</i> <ul style="list-style-type: none">• “Current public health infrastructure already stretched to the limit due to budget cuts, attrition of staff, inability to replace staff, and ongoing responsibilities that did not stop in the middle of a pandemic flu event.”• “Other workload activities were put on hold to the extent possible, as staff focused on H1N1 response efforts.”• “Despite reduced staffing, the response to H1N1 was outstanding, with staff working many additional hours, holidays and weekends; this is not a long-term solution.”
Mitigation Strategies:	<ul style="list-style-type: none">• “The most significant “work around” was the use of volunteers. They saved counties tens of thousands of dollars, and remained committed and engaged in PODs throughout the vaccination campaign (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none">• “Increase funding levels and resources for public health infrastructure to sustain required services (<i>FEDERAL</i>).”• “Engage volunteers in additional preparedness training and exercises (<i>STATE</i>).”
Priority Assigned:	1

FEDERAL/STATE/LOCAL COORDINATION

Issue & Discussion:	<i>Grant/Cooperative Agreement Flexibility</i> <ul style="list-style-type: none">• “Using the CDC Cooperative Agreement as a mechanism to provide emergency response funding was onerous; delayed resource allocation.”• “Needing to write four grant submissions in six months was time consuming, inefficient, and taxed limited staff who were already involved in significant response efforts.”
Mitigation Strategies:	<ul style="list-style-type: none">• “Funding obtained was used to quickly hire additional regional health department staff to assist with response efforts (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none">• “Greater flexibility with federal funding should be allowed (<i>FEDERAL</i>).”• “Allow unspent monies to be carried forward (<i>FEDERAL</i>).”• “Ensure federal funding for ongoing state and local pandemic flu preparedness (<i>FEDERAL</i>).”
Priority Assigned:	1

COMMUNICATION

Issue & Discussion:	<i>Stakeholders</i> <ul style="list-style-type: none">• “Information/educational materials provided to direct care providers and front-line medical office staff, who were answering the phones and receiving the questions, were not timely or did not occur at all.”• “Providers and their staff were not always able to provide accurate information about
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	priority groups and vaccination types to patients, causing confusion and frustration within communities.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “Used of state and county websites to control messages and provide information (<i>EFFECTIVE</i>).” • “Activation of state and local call centers and hotlines (<i>EFFECTIVE</i>).” • “Sharing of weekly disease reports on [STATE HEALTH AGENCY] public website (<i>EFFECTIVE</i>).” • “Bimonthly calls with representatives of professional provider organizations (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Develop / identify contact lists for individual providers (<i>STATE</i>).” • “Target providers who treat high-risk populations (<i>STATE</i>).” • “Distill state guidance/changes to one page of bullet points that are sent with entire guidance document (<i>STATE</i>).” • “Prepare FAQs for office staff who answer the phones (<i>STATE</i>).” • “Establish relationships with pharmaceutical representatives to use them as an avenue for providing information to physicians/physician office staff (<i>STATE</i>).”
Priority Assigned:	1

Issue & Discussion:	<i>Media Relations/Ad Campaign Efforts</i> <ul style="list-style-type: none"> • “No triggers were identified as to when it was appropriate/necessary to launch campaigns.” • “Availability of funds and the timing of the need were misaligned.” • “Local news moving to internet media; more electronic information and efficient ways to reach the public were needed.” • “Translation services needed for diverse populations.” • “Media messaging was out of synch with vaccine supply.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “[STATE HEALTH AGENCY] and LDHs used social media sites, including Twitter and Facebook, to distribute messages. The [STATE HEALTH AGENCY] public website was designed to include a specific page for H1N1, and information updated regularly (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Allow CDC funds to be spent on media campaigns, as smaller counties could not afford PSAs and local politicians pushed back on placing this in local budgets (<i>FEDERAL</i>).” • “Provide information in languages aside from English and Spanish (<i>FEDERAL</i>).” • “Develop guidance for use of social media so that stakeholders are not trying to learn how to best use it “on the fly.” (<i>STATE</i>)”
Priority Assigned:	2

Issue & Discussion:	<i>Public Outreach</i> <ul style="list-style-type: none"> • “Needed stronger, earlier, and more visible messages from the state, particularly about the safety, availability of vaccine, and need for medical treatment. [STATE’S] contracting and message clearing process, along with insufficient initial funding, created this delay.”
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	<ul style="list-style-type: none"> • “Protracted DHHS decision process re: a national “brand” for their H1N1 campaign also impeded state efforts, as we wanted to ensure consistent messaging.” • “It was necessary to begin messaging encouraging vaccination well in advance of vaccine availability. This created demand when there was no, or insufficient, supply. However, if we had waited, the predominant vaccine messages would have been those questioning vaccine safety.” • “Messages focusing on H1N1 symptoms were confusing. Message should have been ‘If you are sick, stay home!’” • “Parents were not returning with their children under 10 years of age for second dose of vaccine.”
Mitigation Strategies:	<ul style="list-style-type: none"> • “Ongoing press briefings with the Governor and [STATE HEALTH DIRECTOR] (<i>EFFECTIVE</i>).” • “Presentations at healthcare forums, community meetings and school activities (<i>EFFECTIVE</i>).” • “Use of reverse 911 for communicating school-based messages (<i>EFFECTIVE</i>).”
Recommendations Suggested:	<ul style="list-style-type: none"> • “Streamline the clearance process at both the federal and state levels for messages to the public and to stakeholders (<i>FEDERAL and STATE</i>).” • “Allow greater flexibility with CDC funding, so that it can be used for timely messaging to the public (<i>FEDERAL</i>).” • “Develop an outreach plan for the public to increase understanding of vaccine safety and the importance of being vaccinated (<i>FEDERAL</i>).”
Priority Assigned:	3

Appendix 1: ASTHO H1N1 Barriers Project State Meeting Guide



ASSESSING POLICY BARRIERS TO EFFECTIVE PUBLIC HEALTH RESPONSE TO THE H1N1 INFLUENZA PANDEMIC PROJECT

A Guide to Participating States Conducting Facilitated Discussions/After-Action Reviews

March 29, 2010

I. Overview

On behalf of the project partners, CDC and NACCHO, ASTHO would again like to thank you and your jurisdiction for your willingness to participate in the field assessment component of this important initiative (hereafter referred to as the "Review"). Through this project, we intend to systematically identify and assess key policy barriers, both legal and non-legal, encountered during the H1N1 response and offer a course of action to address these barriers. The goal is to advance continued strengthening and overall improvement in the national public health system's collective capabilities to effectively respond to future pandemics and other emerging threats. Your efforts will help inform a way forward to address existing policy barriers of national scope and concern, as well as those unique or special to your jurisdiction. Your work will be augmented by a literature review and an ASTHO-sponsored survey of state and territorial health officials and key agency staff, all of which will be used to create a composite picture of barriers identified, their impact, and suggested ways to mitigate their affects with the goal to improve outcomes of future public health responses.

There are five states participating in this component of the project: Arizona, Colorado, New York, North Carolina, and Wisconsin. This simple Guide will assist you in conducting the review by providing sufficient structure to yield a desired level of consistency and uniformity among the participating states, while allowing considerable latitude in designing an approach and methodology to meet the needs and circumstances of each jurisdiction.

II. Defining "Policy Barrier"

For the purposes of this project, a "policy barrier" is loosely defined as a plan, course of action, principle or procedure adopted by a governmental entity which impeded or impaired your agency's/jurisdiction's ability to more effectively respond to the H1N1 public health emergency. Barriers described through this project warrant remedial consideration since it will most likely recur in a future emergency. A policy barrier can be of a legal (e.g., law or regulation) or non-legal (e.g., administrative order, agency guidance) nature, and of national, regional or intrastate scope. While important, it is not the intent of this project to capture issues of concern dealing with the operational, logistical, and administrative

elements of the response; we are seeking only high level policy matters warranting immediate attention.

III. Planning and Scheduling the Review

In planning for the Review, several key elements should be considered:

- As specified in your sub-award notice, the Review must be conducted by April 30, 2010.
- It is our expectation that the Review will be a daylong event or reasonable portion thereof, to fully discuss and deliberate the issues.
- To the extent practicable, an in-person event is preferred but it is recognized that this may not always be feasible and, as such, teleconference, videoconference, and webinars are suitable alternatives.
- The Review may be a free-standing event or part of larger previously planned H1N1 After-Action Reviews.
- Invited participants should be of sufficient position to have a working knowledge of and exposure to the policies that were operational during the H1N1 response.
- Invited participants should represent a broad range of stakeholder interests including local public health and tribal entities; cross-sector agencies such as education, law enforcement, and emergency management; political leadership at a state and local level; health care providers; community and faith based organizations; and the general public.

IV. Documenting Policy Barriers

To assist you in focusing and facilitating the Review, attached you will find a list of potential Policy Barrier "Themes" identified through an environmental scan process. This list is not exhaustive nor is it intended to lead or narrow your discussion. It is simply provided to prompt thought and stimulate recall of important issues that arose during your H1N1 response activities.

Documenting the findings and recommendations of the Review participants is essential. To this end, we recommend that for each policy barrier identified, the following information be collected:

1. A clear and succinct description/definition of each barrier (including any citation or reference) and the legal and non-legal aspects of the barrier
2. How the barrier impacted/impeded the public health response and its consequences (give an example)
3. What remedies or "work arounds" were pursued and were they effective
4. Recommendations for corrective action(s) to remove the barrier

We do not expect you to generate an endless list of federal and state, legal and non-legal barriers. The most meaningful information to surface from your review would be for you to identify and discuss the three (3) most significant barriers encountered (following the four points above) warranting immediate action in each of the following categories:

- ICS, Command and Control, and Authority
- Surveillance , Epidemiology, and Laboratory Services
- Medical Care and Countermeasures (including non-pharmaceutical interventions)
- National Vaccination Campaign
- Workforce, Capacity, and Infrastructure
- Federal/State/Local Coordination
- Communications
- Other

V. Reporting the Outcome of Your Review

As stated in your sub-award notice, each participating state is obligated to submit to ASTHO by no later than May 15, 2010 summary proceedings of your Review (approximately five pages in length but it could be longer if necessary) to include the following:

1. Date and location of the Review
2. Overview of participant make-up
3. A description of the top three policy barriers identified and discussed (containing the four elements listed in Section IV) in each of the theme categories also listed in Section IV.

While not a requirement of the sub-award, each participating jurisdiction is encouraged to generate a more detailed written record of the Review proceedings for your own future reference.

VI. Technical Assistance

ASTHO and CDC stand ready to assist you as you plan for the upcoming Review. Should you have any questions or require assistance, please do not hesitate to contact Jim Blumenstock at jblumenstock@astho.org ; 571-527-3134 or Charlotte Porter at cporter@astho.org; 571-527-3150.

Attachment: Policy Barriers “Themes” Document

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