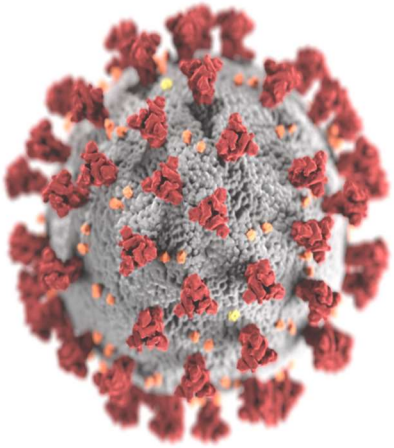


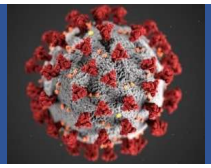
COVID-19 VACCINATION PLAN

Santa Clara County

Date: 12/1/20

Santa Clara County Public Health Department
vaccinebranch@eoc.sccgov.org

[JURISDICTION] COVID-19 VACCINATION PLAN



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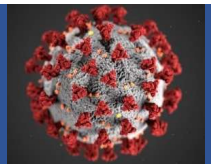


Introduction/Explanation

As is stated in the CDC COVID-19 Vaccination Program Interim Playbook for Jurisdiction Operations, immunization with a safe and effective COVID-19 vaccine is a critical component of the strategy to reduce COVID-19-related illnesses, hospitalizations, and deaths and to help restore societal functioning. The goal of the U.S. government is to have enough COVID-19 vaccine for all people in the United States who wish to be vaccinated. Early in the COVID-19 Vaccination Program, there may be a limited supply of COVID-19 vaccine, and vaccination efforts may focus on those critical to the response, providing direct care, and maintaining societal function, as well as those at highest risk for developing severe illness from COVID-19. California's COVID-19 Vaccination Plan, as well as a summary of CA's efforts to plan for COVID-19 vaccine, are both posted at https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/COVID-19Vaccine.aspx .

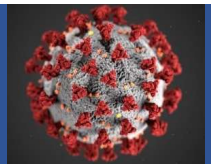
This CDPH document is modeled after the CDC playbook and follows the recommendations for local health jurisdictions that have been presented in weekly webinars with Immunization Coordinators, Emergency Preparedness Planners, Local Health Officers and Health Department Executives. Slides from webinars and other important documents are posted at http://izcoordinators.org/covid-19-vaccination-planning/ (Username: covidPlanningGroup and Password: covid2020!).

The intention of this document is to help prepare local health jurisdictions for the phased implementation of COVID-19 vaccine in their communities. Completion of this template is a requirement for the COVID-19 vaccine funding for your jurisdiction. We realize that there are still many unknowns about COVID-19 vaccine. Completion of this template, however, will help to ensure that the foundational planning components for your COVID-19 vaccine response are in place. This is a high-level planning tool that only requires concise responses. This completed template is **due to CDPH by:**

5:00 pm December 1, 2020
Please email completed templates to CDPH.LHDCOVIDVAC@cdph.ca.gov

Box size roughly indicates how much we'd like to hear about your plan for the different sections. Boxes will expand if you need to add more text.

Thank you. We look forward to learning about your strategies and plans as we embark on this new and critical vaccine journey.



Section 1: COVID-19 Vaccination Preparedness Planning

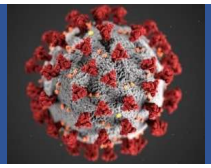
A. Describe the multi-agency Task Force/Entity that has been put together in your jurisdiction to plan for COVID-19 vaccine implementation.

The County of Santa Clara Public Health Department (PHD) is establishing two external groups to support efforts in planning for COVID-19 vaccine implementation: the COVID-19 Vaccine Providers Taskforce and the COVID-19 Vaccine Community Stakeholders Working Group.

COVID-19 Vaccine Providers Taskforce: This taskforce is composed of representatives from local healthcare systems, hospitals, clinic networks, and county agencies, including the County of Santa Clara Health System hospitals, Stanford University, Kaiser Permanente, Palo Alto Medical Foundation, Community Health Partnership (a consortium of community clinics), and others. This taskforce is dedicated to preparing vaccine providers from major healthcare facilities in the county to administer and manage the vaccine when it is available. Topics covered in this taskforce include provider enrollment, vaccine allocation, vaccine storage and handling, vaccinator preparedness and training, data management, and other critical vaccine logistics. This group met earlier in the year to plan enhanced flu vaccination activities in our County; the taskforce is now concentrated on COVID-19 vaccination planning. On November 19, over 50 vaccine providers joined the first taskforce meeting dedicated exclusive to the COVID-19 vaccine. At this meeting, we discussed vaccine logistics, answered questions, and received helpful feedback from participants.

COVID-19 Vaccine Community Stakeholders Working Group: This working group is composed of community leaders serving or representing our county's diverse racial/ethnic groups, geography, sectors, and special interest groups. The group will be co-chaired by PHD and a community leader. The goals of this group are:

- Establish bi-directional and transparent information sharing about local vaccine planning and administration in Santa Clara County.
- Support the development and dissemination of public messaging regarding vaccine allocation, safety, access, equity, etc.
- Advise on efforts to ensure access to COVID-19 vaccines and outreach efforts to promote community uptake of the COVID-19 vaccine when available.



B. Revisiting institutional memory and after-action reports, what are the major lessons learned from H1N1 in your jurisdiction and how are they being considered for COVID-19 vaccine implementation?

PHD prepared an After-Action Report/Improvement Plan (AAR/IP) for the 2009 – 2010 H1N1 influenza response (Appendix A). Below are the primary areas of improvement that are included in the AAR/IP Executive Summary, as well as a statement regarding how these areas are being considered for COVID-19 vaccine implementation.

Primary Areas for Improvement
A detailed analysis of the data for H1N1 response identified the following areas for improvement:

1. H1N1 Vaccine Implementation: The county-level decision not to activate the Disaster Service Worker (DSW) program for H1N1, specifically during the operation of the mass vaccination clinics, put significant strain on SCC PHD staff as a result of long hours worked over a prolonged period of time. If the H1N1 vaccination response had been prolonged, it is unclear whether staff could have maintained the established pace.

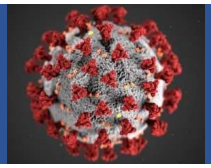
COVID-19 Vaccine Implementation: DSWs across several county departments have been activated in response to COVID-19. Plans and policies are now in place to support the DSW program. This process will be utilized during COVID-19 mass vaccination clinics.

2. H1N1 Vaccine Implementation: Many staff assigned to the response still had regular daily functions to perform. There appeared to be inconsistent and unclear communications to staff and supervisors regarding their obligations during the response and the expected duration of their engagement.

COVID-19 Vaccine Implementation: Activating the DSW program has largely decreased confusion regarding response functions and daily (normal work) functions. In addition, most if not all, departments within the County have activated their COOP plans to ensure that staff have a clear understanding of their roles and responsibilities. Managers maintain contact/communication with staff and the Department hosts monthly PHD all staff Zoom meetings to provide updates.

3. H1N1 Vaccine Implementation: Although the County Office of Emergency Services (OES), IT Department, and Procurement Department expedited the purchase of WebEOC during this response, it was insufficiently developed to augment and enhance response operations. WebEOC was intended to be used in a limited capacity, primarily the H1N1 staff registration process, and was not intended to provide comprehensive incident management for the H1N1 incident. SCC should have identified additional automation needs such as volunteer scheduling, management software, etc.

COVID-19 Vaccine Implementation: WebEOC is fully functioning and is currently utilized for the COVID-19 response. The County Office of Emergency Management (OEM) as well as



other key partners (such as EMS, PHD, and local area hospitals) utilize the system for situation status reporting, medical facility status reporting, resource requesting, etc.

4. H1N1 Vaccine Implementation: The distinction between the functions of the county Emergency Operations Center (EOC) and the Department Emergency Operations Center (DEOC) should be clarified. During the response, there was confusion among response staff as to which EOC was the proper source of information or support for specific issues.

COVID-19 Vaccine Implementation: Clear communication will be ensured by training County employees activated as DSWs on NIMS/SEMS/ICS. Additional training for staff needs to occur in the future. Some basic training is mandated by PHD. Staff have also been encouraged to complete ICS FEMA courses online.

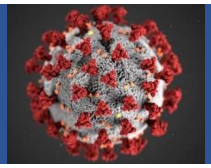
5. H1N1 Vaccine Implementation: At times, there were inconsistent and conflicting processes for purchasing necessary supplies and resources during the response. This created challenges from an oversight and reimbursement perspective.

COVID-19 Vaccine Implementation: The EOC Logistics section is responsible for purchasing supplies and equipment during the response. This process has been relatively smooth through the utilization of the 213 Resource Request Form. In addition, the Finance section in the EOC is currently tracking all expenses related to COVID. Statistical internal order numbers have been set up to track expenses separately, and to ensure there is proper documentation for reimbursement.

C. What lessons have been learned thus far from influenza vaccine activities in your jurisdiction that can be applied to COVID-19 vaccine distribution and administration?

The effort to promote and vaccinate a higher number of Santa Clara County residents was of utmost importance during the 2020-2021 flu season. In previous years, flu vaccination fairs were conducted by the County health system's pharmacy department at various Valley Health Center (VHC) locations on Saturdays. In order to increase the vaccination rates this season, the County's EOC, along with PHD, provided resources and marketing for the VHC locations in addition to opening the Santa Clara Fairgrounds as a mass vaccination site. All locations expanded their hours this year to 7 hours instead of 4 hours. The Fairgrounds is open to the public until mid-December, whereas in previous years, the effort ended in late October.

With support from the state Enhanced Flu Activities grant, PHD significantly scaled up marketing and advertising of flu vaccination, as well as news media engagement. Coordinating with partners, PHD worked in partnership with elected officials, city governments, libraries, and nonprofit organizations to distribute electronic and hardcopy tailored information in four languages about nearby opportunities to get free flu shots from County-operated sites or other providers. County Departments, County COVID-19 test sites, and PHD collaborated with community groups and businesses to help distribute tailored information. Even during a pandemic, hardcopy information in non-English languages remained particularly effective, and we distributed 50,000 total copies of many



geographically tailored flyers to priority populations. Paid advertising supported by the state grant include outdoor advertising, radio, and print advertising. Through early November, we issued 3 press releases; hosted an event for news media with elected officials and community leaders vaccinated on camera; offered dozens of interviews; and escorted more than 10 media outlets on tours of mass vaccination events to encourage earned media coverage resulting in millions of impressions. Some County mass flu vaccination events saw 10 times the turnout compared to previous years. With the greater promotion to the public to get vaccinated, we were able to vaccinate over 8,000 patients at these events by early November.

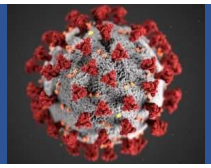
As an ongoing effort, the Public Health Pharmacy coordinates state supplied flu vaccine distribution to more than 50 providers throughout the County to uninsured and underserved populations. Many of the providers requested more than their usual allocation and were also planning on holding offsite flu vaccination clinics. To meet the demand for flu vaccines this year, the Public Health Pharmacy requested additional federal doses of flu vaccine from the State. Specific COVID guidance was created on offsite and drive-through vaccination clinics and was distributed to providers to ensure best practices at community events. The Immunization Branch staff also provided on-site support to ensure COVID-19 social distancing guidelines and infection control were enforced, in addition to appropriate storage, handling, and administration of the flu vaccines.

Many of the efforts for this year's flu season help to prepare us for COVID-19 vaccine distribution and administration. We are already preparing for the Public Health Pharmacy to receive and distribute COVID vaccines, and for the County Fairgrounds to receive vaccines and to continue to serve as a mass vaccination space.

Early planning for mass vaccination events was crucial to determine the patient populations we wanted to reach, and eventually create the vision and goals for the flu season efforts. We also collaborated as a multidisciplinary team to gain expertise from various external healthcare partners within the County to share best practices to avoid shortages

During the planning phases for influenza mass vaccination at the County Fairgrounds, a project manager was hired to organize logistics and traffic experts weighed in on the walk-through model and ADA curbside model for public with disabilities. The Fairgrounds Expo Hall capacity was calculated based on Santa Clara County COVID-19 Indoor Capacity Limitations and all social distancing and infection control criteria were met. For ease of public access, the events were open for walk-ins instead of appointments. We took into account all weather considerations and planned for hot and cold temperatures inside the Expo Hall, outdoors, and at our curbside vaccination stations.

Early recruitment of vaccinators and non-medical staff was another critical component to the success of these events. The staffing numbers varied weekly based on demand, so the throughput was scalable. Staffing bilingual individuals proved to work best for attending to our diverse patient population, despite offering iPad and phone options for external interpreters. After each event, a de-brief meeting took place to continuously improve our workflow and

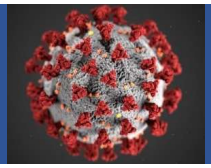


staffing ratios. Anonymous surveys also were emailed to all staff following the event to gain more feedback.

Our Mass Vaccination Clinic workflow was evaluated based on our inventory of prefilled syringes and multidose vials. A new workflow was created when multidose vials were utilized to separate the drawing stations from the vaccinator stations for infection control and public visibility purposes. Vaccinators who were able to vaccinate pediatric patients were placed at a set number of family stations to serve patients who arrived in groups with small children.

With already established infrastructure of mass vaccination clinic at the Fairgrounds, our local Health Department is ready to participate and assist in COVID-19 vaccine administration at all phases of the COVID-19 vaccine supply.

When ample supply of COVID-19 vaccinations is available, similar marketing to this year's flu season will be implemented to advertise mass COVID-19 vaccination events planned at the Fairgrounds.



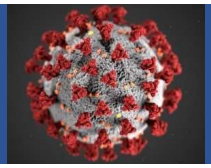
Section 2: COVID-19 Organizational Structure and Partner Involvement

A. Please share your local organizational (org) chart that is guiding COVID-19 vaccine planning by pasting it into the space below or add it as an Appendix at the end of this document.

Please refer to Appendix B for our local organizational chart guiding COVID-19 vaccine planning.

B. How are you engaging external partners in your planning process? Who are your primary external (outside of your local health department) planning partners?

PHD is engaging a range of partners across the county in our COVID-19 vaccine planning process. Our external partners consist of county agencies, community leaders, and vaccine providers. Inter-Agency Partners: Our vaccine planning is housed in our county's Emergency Operations Center, staffed by county leaders spanning many county agencies. PHD has established strong inter-agency partners that have paved the way for leveraging talent and resources across county agencies to plan and implement mass COVID-19 vaccinations. These agencies include Office of Emergency Management, Valley Medical Center Hospital, Office of Supportive Housing, Valley Health Care Clinics, and others. Vaccine Providers: We are engaging over 20 local healthcare systems, hospitals, clinic networks, and county agencies, including the County's hospitals and clinics, Stanford Healthcare, Kaiser Permanente, Palo Alto Medical Foundation, Community Health Partnership, and others on our Vaccine Provider Taskforce. On this taskforce, we work with providers to ensure they are prepared to administer and manage the COVID-19 vaccine when it arrives. We engaged many of these partners in flu planning and implementation earlier this fall, resulting in strong partnerships that can be sustained during COVID-19 vaccination. Community Leaders: To ensure engagement and transparency in our planning process for distribution of the COVID-19 vaccine with community stakeholders, we are in the process of establishing the COVID-19 Vaccine Community Stakeholders Working Group composed of multidisciplinary community leaders serving or representing our county's diverse racial/ethnic groups, geography, and sectors. The overarching goal of this group is to establish bi-directional communication between PHD and community leaders about vaccine planning and administration. This group will also serve as a venue for PHD to listen to community feedback and advice on vaccine uptake outreach and messaging strategies. The group will be co-led by Public Health Department staff and a community leader.



Section 3: Phased Approach to COVID-19 Vaccination

A. Have you incorporated a phased roll out of COVID-19 vaccine into your overall COVID-19 Response Plan? ☒ yes ☐no

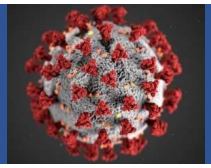
B. Have you established any point of dispensing (POD) agreements to potentially vaccinate Phase 1a populations? List entities with whom you have agreements and who they've agreed to vaccinate.

With the changing landscape of vaccine candidates and the concern of adequate storage and handling for frozen or ultra-frozen vaccines, we have determined that PHD, in addition to the 12 acute care hospitals within the county, will need to collectively vaccinate the Phase 1a populations. We cannot assume that everyone has the capability to vaccinate their employees that fall under the Phase 1a populations. We plan on establishing POD agreements with all of the acute care hospitals, including multi-county entities, to ensure that all county residents in the Phase 1a population will be able to receive the COVID-19 vaccine. We will work with the hospital systems to assess their vaccination capacity. If there is still a gap in the Phase 1a population after the hospital systems reach their capacity to vaccinate, PHD will provide any additional needed vaccinations. LHD will be responsible also as vaccine administrator for SNF staff as well as for small Community Clinic staff.

Additional references include:

Graphic on page 11 of CDC COVID-19 Vaccination Program Interim Playbook and

A phased approach to Vaccine Allocation for COVID-19 from National Academies of Sciences Engineering Medicine



Section 4: Critical Populations

A. Describe your efforts to identify the health care workforce, critical infrastructure workforce and vulnerable populations in your jurisdiction including reviewing the data from CDPH.

We are reviewing CDPH datasets and triangulating them with existing PHD data to identify any sectors in which CDPH data may need to be supplemented. For sectors in which CDPH data is found to be incomplete, we will develop targeted surveys to obtain supplementary data.

B. Describe your plan for communicating with acute care facilities about their readiness to vaccinate during Phase 1a. (Are they ready to hit the ground running?)

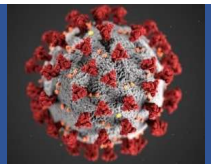
Group Communication: We have assembled a COVID-19 Vaccine Provider Taskforce that meets bi-weekly. This will provide an ongoing opportunity for PHD to disseminate vaccine readiness information and to receive updates on facility preparedness by Phase 1a vaccinators.

Individual (1 on 1) Communication: We will utilize existing outreach to acute care hospitals (via weekly hospital liaison calls) to reinforce messages communicated via the other channels listed above. PHD also created an email address for vaccine providers to get their questions addressed as they plan to vaccine Phase 1a critical populations.

C. With an eye on equitable distribution, how do you plan on reaching other populations that will need vaccinations in subsequent phases?

We plan to reach populations needing vaccinations in subsequent phases with the support of *promotores,* community leaders/influencers, and members of the COVID-19 Vaccine Community Stakeholders Working Group. Our community partners serve the invaluable role of being trusted community messengers. In this capacity, we will collaborate with our partners to help disseminate timely and accurate information about the vaccine; develop tailored vaccine outreach and educational materials; help instill trust in the vaccine; and promote vaccine uptake in our communities disproportionally affected by COVID-19. The role of community messengers and partners was critical to increasing COVID-19 testing in our jurisdiction, and we plan to apply those approaches to help to promote uptake of the COVID-19 vaccine.

Additional references include populations listed on page 14 of CDC COVID-19 Vaccination Program Interim Playbook



Section 5: COVID-19 Provider Recruitment and Enrollment

CDPH is identifying large health systems and other multi-county entities (MCEs) that will receive vaccine allocation directly from CDPH. Some MCE criteria are that the entity has facilities in three or more counties; is able to set policy for its facilities, can plan centrally and support implementation of a COVID vaccination program at all of its facilities in California; and that the entity can order, store and administer vaccine to its employees or arrange with an outside provider (other than the local health department) to do so. It is not necessary for local health departments (LHDs) to invite these entities to enroll as COVID vaccine providers. LHDs should review the list of MCEs for their jurisdiction and be familiar with the MCEs' vaccination plans.

A. What are you doing to identify non-MCE providers to invite to participate in Phase 1a? *(e.g. acute care hospital providers not affiliated with an MCE, staff of long-term care facilities, ambulatory care settings providers).*

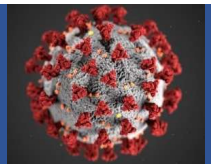
We are leveraging pre-established mechanisms for communication with all acute care hospitals and skilled nursing facilities in the county via our Hospital Health Preparedness Program and participation with the Santa Clara Valley Emergency Preparedness Healthcare Coalition (SCV EPHC) which includes the Santa Clara Section of the Hospital Council. As part of our COVID-19 response, our Emergency Operations Center Health Preparedness branch has weekly calls with each acute care hospital in the county. In addition, PHD continues to have a weekly COVID call with all hospitals and some community providers. We will utilize both arenas to identify non-MCE providers to invite to participate in Phase 1a.

B. How will you continue to recruit new providers to register and vaccinate during subsequent phases when there is more vaccine?

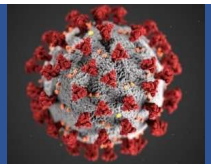
We will ask the state to request the California Medical Board to release contact information of all licensed medical providers to assist us in identifying new providers in the ambulatory setting to recruit as vaccinators in subsequent phases of the COVID vaccine roll-out. In addition, we have already directly engaged with the Santa Clara County Medical Association (SCCMA) to partner in outreach and communication to member physicians.

C. Who will be reviewing your local provider enrollment data to ensure that pharmacies and providers are enrolled?

PHD's Skilled Nursing Facility Liaison is responsible for promoting and reviewing local provider enrollment in programs such as the CDC Pharmacy Partnership for COVID Vaccination Program, and our local PPE Inventory Reporting. Strong relationships with healthcare providers and



pharmacies preceded the pandemic, and our jurisdiction is poised to ensure providers and pharmacies are enrolled to receive and administer the vaccine.



Section 6: Vaccine Administration Capacity

A. Looking at your previous dispensing and vaccination clinic activities, what elements have resulted in greater throughput results?

We have taken our experience from H1N1 and this current flu season's mass vaccination clinics to accommodate multiple conditions and patient populations. Elements that have resulted in greater throughput include: a large-scale POD site, scalable number of staff and vaccination stations, efficient pre-screening and registration process, pre-drawn vaccines, quality assurance processes, real-time vaccine inventory tracking to meet demand and minimize wastage, and weekly debriefs. Our weekly debrief meetings were used to assess progress and implement changes to account for evolving factors such as fluctuating patient census and weather changes.

This year, we implemented weekly flu fairs at the Santa Clara Fairgrounds Expo Hall, which is a large-scale POD site that can easily meet social distancing requirements. A higher number of staff and vaccination stations were implemented early in the flu season to increase throughput and reduce wait times.

The registration process was also analyzed to ensure patients were screened for COVID-19 prior to filling out registration forms, and staff screened patient's forms at the door to avoid patients coming inside the Expo Hall if they did not qualify to receive the vaccine. Drive through workflows were trialed to practice alternative options for clinics, especially with the changes in weather conditions.

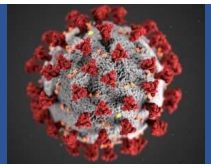
Staffing was adjusted based on the patient demand as well as formulation of the vaccine. Just in time training was reviewed on the day of each event and made the ability to cross train staff during the operation straightforward. A new workflow including pre-drawing vaccines was implemented to improve throughput when using vaccines from multidose vials.

B. What mapping information do you have access to that will help your recruitment efforts and POD plans? (e.g. disease hot spots, vulnerable communities, testing sites, POD sites etc.)

PHD has GIS capability and mapped several indicators related to health and social determinants of health. They include demographic data such as poverty, uninsured, essential workers, seniors, people with disability, multi-unit housing, and race/ethnicity to name a few. Disease hot-spots for COVID-19 have been mapped at the city, zip code and census tract levels. Testing sites for COVID-19 are updated weekly. We have mapped HINI and Influenza POD sites and can make the necessary updates and adjustments for the COVID-19 vaccination plans. In addition, PHD has mapped several vulnerability indices including – Social Vulnerability Index (SVI) and Healthy Places Index (HPI) and are currently working with academic partners to make these indices specific to COVID-19.

C. How will data be entered into CAIR/SDIR/RIDE from your POD sites?

a. ☒ PrepMod



b. ☐ Mass Vax module
c. ☒ Other - EHR data exchange to CAIR2.0

D. Please describe the staffing strategies you are planning for mass vaccination PODs. (e.g. mass vaccinator contract, Medical Reserve Corps, volunteers etc.) Also, in this section, please add any anticipated support you think you will need from the State for the different phases.

E.

The staffing strategy for mass vaccination PODs will mirror that of the County's mass vaccination flu efforts for the 2020-2021 flu season. Staffing coordination will be centralized through the County's Emergency Operations Center (EOC). In addition to county-affiliated nursing and pharmacy schools, County health system and PHD employees will be tapped as a staffing source. Contract nurses utilized during the County's flu clinics may continue to serve at mass vaccination PODs.

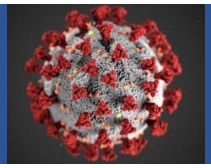
Non-medical roles will continue to be fulfilled by community volunteers. The County's EOC has a process for onboarding these non-medical community volunteers.

The local health department continues to expand staffing strategies and sources to include Medical Volunteers for Disaster Response (MVDRs), the Office of Education nurses and licensed vocational nurses (LVNs), and paramedics. We are looking to the State to continue supporting vaccination efforts by offering contract vaccinators as an option if the County's staffing strategies are unable to meet the demand for vaccination PODs.

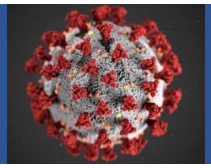
F. Describe your plan for identifying where PODs will be conducted in the community and for which populations.

Our PODs will be identified based on epidemiological data collected from COVID-19 test results (via CalREDIE/CalConnect) showing geographic areas with high COVID-19 infection rates and populations disproportionally impact by COVID-19. These populations include Latino(a) and African/African Ancestry communities. Our data indicate that South County and East San Jose are disproportionally impacted by COVID-19 and are the ideal locations to place PODs to reach these communities. Specific POD locations identified are the Santa Clara County Fairgrounds and nine Valley Health Center clinics located throughout the county that provide convenient access to residents of East San Jose and South County communities. These data also informed placement of flu PODs earlier this fall. Our jurisdiction used these PODs successfully as a trial run for COVID-19 POD placement and feel confident using them as COVID-19 PODs.

G. How will you assess provider throughput for LHDs PODs and for the broader provider community? *(Consider your current experience running socially distanced flu clinics to help answer this question.)*



PHD will engage multiple teams (e.g. Communicable Disease Program, EMS, Preparedness Program) to assess provider throughput, in much the same manner as flu clinics have been assessed. Specific steps include sending each provider a COVID-19 vaccination checklist before vaccinations begin, followed by a telephone consultation. Checklist focus areas include 1) clinic flow, emphasizing Social Distancing and appointment scheduling, 2) storage and handling as well as temperature monitoring, and 3) identification of a vaccine administration reporting method. An in-person site review will be conducted on the day of the vaccination clinic, to verify that previously discussed clinic plans have been implemented. A written summary report will be provided as a follow-up.



Section 7: COVID-19 Vaccine Allocation, Ordering, Distribution and Inventory Management

A. Who will be responsible for submitting allocations to State for conversion to orders? *(title/role of individual(s))*

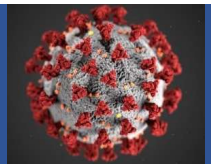
The COVID-19 Vaccination Planning Steering Committee, which includes the Health Officers, will collaborate and agree on allocations prior to submission. The EOC Vaccination Branch, which is led by public health pharmacists, will submit the allocations to the State via CalVax. These individuals will also be responsible for validating the provider's storage capacity and vaccination plan to support the Steering Committee in making informed allocations.

B. How will you use storage capacity information in the registration system to allocate doses?

We will validate the storage capacity information in the registration system with each provider to understand the estimated number of vaccines that the provider can hold. We will also assess the vaccination throughput to provide an overall picture of the population the provider is able to serve. This will give us a better picture of how many doses to allocate to each provider and at what rate, depending on vaccine availability.

C. Describe your process to follow up with providers who may not be meeting ordering, storage, inventory or IIS requirements.

PHD will audit providers on their ordering, storage, inventory, and CAIR2 reporting requirements. They will complete random audits by calling or emailing the provider to check in on their procedures, and conduct site visits, as necessary. If discrepancies are found with the provider's requirements and observed procedures, the EOC Vaccination Branch will provide guidance and escalate to the EOC Management if further action is needed. If the provider continues to not meet requirements, they may not receive allocations until corrective action is in place. In-service training will be available for those providers who do not meet key area requirements. Providers utilizing data exchange with CAIR2 will be monitored to determine the success rate of messages being transmitted within 24 hours of vaccine administration. When a provider is experiencing a high rate of message returns, PHD staff will meet with provider and State Data Exchange Specialists, to identify and resolve technical issues preventing successful message transmission. Storage and Inventory management will be addressed, as mentioned in Section 6F. Any issues in this area will have ideally been identified and corrected prior to vaccine distribution. Additionally, there will be periodic follow-up by PHD to respond to any related issues that may arise.



Section 8: COVID-19 Vaccine Storage and Handling

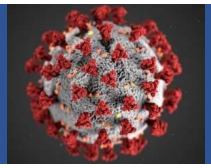
A. Describe your plan to assess cold storage capacity for LHDs and providers (including ultra-cold storage capacity)

PHD has already estimated storage capacity for refrigerated, frozen, and ultra-frozen vaccines in the event that providers are unable to receive them. Additional cold storage units have been procured and placed to ensure the local health department is available as an option.

PHD will start with assessing the cold storage capacity data provided by CDPH via their hospital COVID-19 vaccine survey. Cold storage capacity can be assessed for other providers via COVIDReadi. The EOC Vaccination Branch will reach out to the provider to confirm the information submitted and offer guidance on storage and handling. A site visit may be conducted to ensure all measures are in place to receive the vaccine. Periodic audits will be performed by the Vaccination Branch to ensure the viability of the vaccines.

B. Describe your plan to ensure that you have access to dry ice if needed.

Our County has a contract with a dry ice vendor, Airgas, and has been in contact with the vendor on a weekly basis in preparation for receipt of the vaccine. Weekly allocation has been established.



Section 9: COVID-19 Vaccine Administration Documentation and Reporting

A. How will you handle questions from local providers about vaccine administration reporting and have you identified the staff responsible?

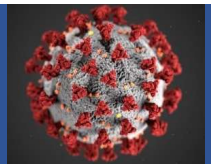
Prior to receiving allocations of the vaccine, PHD will have confirmed that the provider is reporting to CAIR2 directly, via PrepMod, the Mass Vax module, or through data exchange from their own EHR. After vaccine administration, the Vaccination Branch will also field questions from local providers on vaccine administration reporting. We will create an email address for providers to submit questions as well as a COVID vaccine provider website to ensure all providers have the resources they need for successful data reporting.

B. On a high level, what kind of data analysis are you planning to do regarding COVID-19 vaccine administration for your jurisdiction? For reference, see pages 45and 46 of California's COVID-19 Vaccination Plan.

PHD is planning to track metrics related to vaccine administration among populations in Santa Clara County. This includes tracking vaccine administration in three populations:

1) First responders and residents and staff in congregate residential settings
2) Patients that receive vaccinations from County hospitals and clinics and from mass vaccination sites
3) Higher risk groups within the general population, such as older adults and residents of areas more heavily impacted by COVID-19
    - The department has mapped several vulnerability indices including the Social Vulnerability Index (SVI) and Healthy Places Index (HPI) and are currently working with academic partners to make these indices specific to COVID-19. These indices (including socioeconomic status, insurance status, race/ethnicity, and age) highlight parts of the county with a higher proportion of high-risk individuals. These indices will be used to stratify analysis of vaccinations by geography.

PHD will track vaccine administration among the priority populations to ensure that the highest risk-populations receive the vaccines. To the extent that data are available, PHD will also use data from various health care systems in the county to analyze vaccination patterns by core demographics. The data will be shared publicly on the department website to include metrics such as vaccine distributed, high-risk populations reached and trends over time.



Section 10: Vaccination Second Dose Reminders

A. How will you inform vaccines at your PODs of second doses of COVID-19 vaccine and remind them when to come back?

In the early prioritization phases, the vaccine will be administered via appointments through PrepMod. At the time of their first dose, the patient will receive a vaccination card that accompanies the vaccine as a reminder and will leave with a second appointment for the subsequent dose. We will utilize all modes of communication possible to systematically text, email, and/or auto-call individuals for the second dose reminders. If PrepMod does not have all of these functionalities, we will explore contracting with a vendor who has the capability to provide these notifications.

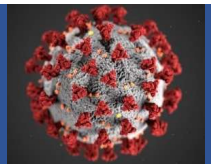
During the later prioritization phases set by the federal and state government, as the vaccine is more available to the public, public communication surrounding the need for a second dose will be critical. If scheduling a second appointment is not an option for a walk-in patient, then we will need to create a system where the patient receives a reminder prior about the due date of the second dose. Weekly reports should be run for the patients that will need to be vaccinated within the next week, and that set of patients will receive reminders to come in the recommended time frame.

B. How will you ensure that patients coming for their second doses receive the appropriate product?

Everyone receiving a COVID-19 vaccination from one of our providers will be given a reminder card that relays instruction for when the participant will need to return for a second dose. This reminder card will serve a dual purpose to provide patients and other providers documentation regarding the specific type of vaccination administered to the patient. It will be recommended that patients bring this card to their appointment for the second dose of the vaccination.

Prior to leaving, patients will be encouraged to sign up for an appointment time for their second dose. This appointment time will be recorded in PrepMod and/or the patient's EHR. It is our plan to utilize PrepMod's second-dose reminder feature or EHR reminders to email and text patients a reminder about their upcoming dose.

When the patient's return for their second appointment, the vaccinator will verify the vaccine product the patient initially received and ensure that the second dose is the same brand. If patients are walking in without an appointment, we will need to verify the vaccine they initially received prior to vaccinating the second dose by checking the electronic health records, PrepMod, or directly in CAIR2.

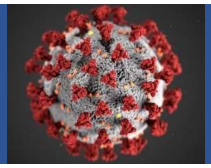


C. How will you communicate with/monitor other providers about second doses for their patients?

PHD will utilize existing systems, supplemented by additional outreach, to communicate with and monitor providers regarding second dose vaccinations.

Building on the past work of PHD's Immunization Education Program, other programs that interface with providers, and existing relationships with nongovernment associations of providers, we will continue to encourage provider participation in the California Immunization Registry (CAIR2), as well as other state centralized reporting systems developed for COVID-19 response.

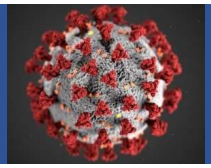
PHD will distribute information to providers and partner with organizations to further share information with their provider-members. We will continue to host regular calls with healthcare and long-term care partners to regularly communicate on the topic of second doses for patients. We will monitor data about second doses administered by other providers by querying CAIR2 and other COVID-19 vaccination data collection systems. When appropriate and if needed to assess gaps, we may continue Immunization Education Program activities including provider surveys and provider site visits to review qualitative and quantitative immunization program data.



Section 11: COVID-19 Vaccine Requirements for IISs or Other External Systems

A. What are your strategies for directing providers to the CDPH Provider Enrollment and Management page/system for all phases?

PHD will utilize existing programs, supplemented by additional outreach, to direct providers to the CDPH Provider Enrollment and Management page/system. Building on the past work of PHD's Immunization Education Program, other Department programs that interface with providers, and existing relationships with nongovernment associations of providers, we will direct providers to the CDPH Provider Enrollment page/system. PHD will distribute information directly to providers and will partner with organizations to further share information with their provider-members. PHD currently responds to provider inquiries related to COVID through a Provider Response Group; this group can help direct providers to the CDPH Provider Enrollment and Management systems. PHD also regularly publishes information online and via email for providers. PHD will continue to use these processes/systems, along with hosting regular calls with healthcare and long-term care partners to direct them to the Provider Enrollment and Management system. Additionally, a webpage will be created for providers to reference information, guidance, and other information pertaining to the vaccine.



Section 12: COVID-19 Vaccine Program Communication

A. On a high level, what is your COVID-19 vaccine communication plan? Please consider the following:
   a. Communicating with external providers
   b. Communicating with transparency to the general public
   c. Using multiple communication channels to ensure information is accessible to all populations
   d. Ensuring updated information on your website
   e. Establishing methods to hear (or learn about) and respond to public concerns and address potential vaccine hesitancy

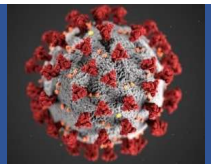
PHD will build on existing communication channels and partnerships, supplemented by additional outreach communication and community engagement, to share accurate, timely information about COVID-19 vaccines, seek feedback, and respond to information needs. The County's top priority is the safety and health of people who live or work Santa Clara County, and safe and effective vaccines can be tools in helping reach that goal.

EXTERNAL PROVIDERS: Communication with providers builds on the work of PHD programs with longstanding relationships and regular interface with providers and nongovernment associations of providers, including healthcare stakeholder calls, technical assistance to healthcare facility leadership, and provider inquiry response.

COMMUNITY ENGAGEMENT AND TRANSPARENCY: Because it is still relatively early stages, there is still a great deal that LHJs do not know. We are committed to communicating regularly and proactively with stakeholders and the entire community. The COVID-19 Vaccine Community Stakeholders Working Group and any associate sub-working groups will help to ensure consistent information distribution, community engagement, and transparency.

COMMUNICATION CHANNELS AND WEBSITE: Established channels include but are not limited to call centers, public inquiry email response, email newsletters, boots-on-the-ground business and community engagement staff from contracted nonprofits and community associations, hardcopy materials distribution with partners, websites, social media, regular partner/stakeholder calls, community video meeting appearances, and news media engagement. Ongoing language access investments help to ensure culturally competent materials in non-English languages across all channels. County COVID-19 web information includes sites for the public and for providers, updated daily.

LISTENING: We are working with health care partners, public officials, and community organizations, including establishing community advisory mechanisms for COVID-19 vaccine planning specifically, and these valued partnerships are the strong foundation to provide feedback for effective future implementation. PHD will also consider formal research on vaccine perceptions and access.

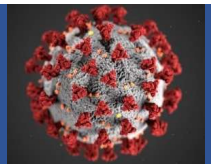


B. Describe how you will identify and work with trusted messengers to communicate with vulnerable and diverse communities.

The County is proactively planning to ensure effective partnership and community engagement for COVID-19 vaccine communication. This builds on activities already ongoing through the County Emergency Operations Center, which already partners with community leaders to record public service announcements in a variety of languages, appear in advertisements as trusted messengers for face masks and testing, and distribute information to congregations and members. The County Community Health program and Business Engagement program also contract with dozens of nonprofit and community associations to distribute COVID-19 information to their constituencies and provide feedback. Additionally, PHD will work with community organizations and community leaders includes establishing community stakeholder mechanisms for COVID-19 vaccine planning co-led with community, and these valued partnerships are the strong foundation for effective future implementation. Trusted messengers, including but not limited to community leaders, religious leaders, and primary care doctors, are a key component of building trust and ensuring vaccine access for vulnerable and diverse communities.

C. Describe how you will communicate with employers, community-based organizations, faith-based organizations, and other stakeholders.

The County is proactively planning to ensure effective COVID-19 vaccine communication with stakeholder groups. The County Community Health program and Business Engagement program already contracts with dozens of nonprofit and community associations to distribute COVID-19 information to their constituencies, including boots-on-the-ground visits to thousands of businesses, and these organizations will be invited to continue partnership with COVID-19 vaccine engagement. Additional established channels include but are not limited to business call centers, email inquiry response, email newsletters, hardcopy materials distribution with partners, websites, social media, regular partner/stakeholder calls, community video meeting appearances, and news media engagement. County COVID-19 web information is updated daily. Ongoing language access investments help to ensure culturally competent materials in non-English languages across all channels.



Section 13: Regulatory Considerations for COVID-19 Vaccination

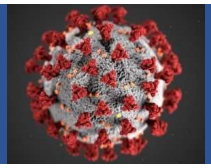
A. Have you designated where on your local website you will post the Emergency Use Authorization (EUA) Fact Sheets for COVID-19 vaccine? Please include the links to those pages.

The Fact Sheets will be linked from PHD's website for COVID-19 information for healthcare providers, accessible through the short link sccphd.org/covidproviders, as well as the website for the general public sccgov.org/cv19.

B. How will you communicate about EUA fact sheets to other providers and vaccinators in your jurisdiction? How will you ensure that all health department clinics use the proper EUA fact sheets?

PHD will utilize existing programs and platforms, supplemented by additional outreach, to communicate with providers and vaccinators about EUA fact sheets. This builds on the past work of the PHD's Immunization Education Program, other Department programs that interface with providers, and existing relationships with nongovernment associations of providers.

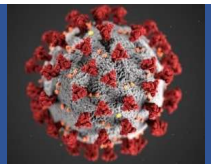
There will be an update to the sccphd.org/covidproviders webpage describing how and where providers can find the most updated EUA fact sheets. PHD will distribute information to providers and partner with organizations to further share information with their provider-members. PHD already responds to provider inquiries through the Provider Response team and publishes information online and by email for providers and will use these methods as well. We will continue to host regular calls with healthcare and long-term care partners.



Section 14: COVID-19 Vaccine Safety Monitoring

A. How will you communicate with providers in your jurisdiction about reporting of potential adverse events (via VAERS) and reporting of potential vaccine errors (via VERP)? Have you identified where on your local website you will post links to VAERS and VERP? If yes, please provide links to those pages below.

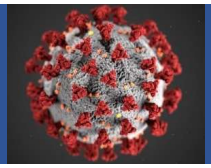
PHD will utilize existing programs and platforms, supplemented by additional outreach, to communicate with providers about reporting. This builds on the past work of PHD's Immunization Education Program, other Department programs that interface with providers, and existing relationships with nongovernment associations of providers. There will be an update to the sccphd.org/covidproviders webpage describing how and where providers should report to VAERS and VERP. PHD will distribute information to providers and partner with organizations to further share information with their provider-members. PHD already responds to provider inquiries through the Provider Response team and publishes information online and by email for providers and will use these methods as well. We will continue to host regular calls with healthcare and long-term care partners. When appropriate and needed to assess gaps, we may continue Immunization Education Program activities including provider surveys and provider site visits that include information about how to report.



Section 15: COVID-19 Vaccination Program Monitoring

A. What key metrics will you monitor regarding your overall COVID-19 vaccine plan in your jurisdiction? For reference see page 71 of California COVID-19 Vaccination Plan

doses allocated from State/CDPH to LHD (by vaccine type)
doses allocated from LHD to local providers (by vaccine type)
providers registered in CDPH online system (by provider type)
providers newly enrolled in CAIR2 > # providers onboarded > # providers exchanging data
doses ordered > by LHD > by provider type > by occupation setting
doses distributed > by vaccine type > by LHD > by provider > by provider type > by distributor > by date of distribution
doses administered > by vaccine type > by LHD > by provider > by provider type > by health system
unused/wasted doses
HCW receiving vaccine
individuals receiving vaccine > by vaccine type > by number of valid doses > by date of vaccination > by age > by race/ethnicity
reminder/recall messages sent
adverse events reported
vaccine errors reported
incomplete vaccination series
Vaccination coverage



> % target population vaccinated
> % county population vaccinated

B. How will you monitor the above metrics?

Enrolled provider's data will be entered into COVIDReadi. The number of doses allocated and distributed will be captured via CalVax, as well as the inventory for each provider who is ordering vaccines. Since CAIR2 is required among all vaccine administrators, this system will capture new providers, vaccine administration and patient information. The number of HCW receiving vaccines will be collected from the providers. The number of reminder messages sent and incomplete vaccination series will be tracked on PrepMod for providers utilizing it. Other providers that are not using PrepMod will be asked to provide periodic reports on reminder messages and incomplete vaccination series. Any adverse events or vaccine errors will be reported respectively to VAERS and VERP, and providers will be instructed to also inform the LHD.

Appendix A

Santa Clara County

Public Health Department

2009-2010 H1N1 Influenza Response After Action Report/Improvement Plan (AAR/IP)

June 30, 2010

Prepared by:

Center for Emergency Preparedness and Disaster Response

YALE NEW HAVEN HEALTH

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HANDLING INSTRUCTIONS

1. The title of this document is the Santa Clara County Public Health Department 2009-2010 H1N1 Influenza Response After Action Report/Improvement Plan (AAR/IP).

2. The information gathered in this AAR/IP is considered to be For Official Use Only and should be handled as sensitive information not to be disclosed. This document should be safeguarded, handled, transmitted and stored in accordance with appropriate security directives. Reproduction of this document, in whole or in part, without prior approval from the Santa Clara County Public Health Department is prohibited.

3. At a minimum, the attached materials will be disseminated only on a need-to-know basis and when unattended, will be stored in a locked container or area offering sufficient protection against theft, compromise, inadvertent access and unauthorized disclosure. Items may not be discarded unshredded in open trash.

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EXECUTIVE SUMMARY

Overview

Beginning in the spring of 2009, the Santa Clara County Public Health Department responded to the outbreak of a novel influenza A strain identified as H1N1. On April 29, 2009, the county's Director of Emergency Services proclaimed a local emergency in response to human cases of swine influenza A virus. The onset of H1N1 influenza was identified in Mexico in March 2009, with the first case in the United States confirmed in April 2009. On June 11, 2009, the World Health Organization (WHO) raised the pandemic alert level to Phase 6, thereby declaring a worldwide pandemic for H1N1 influenza. By this point, many jurisdictions throughout the United States, including Santa Clara County, had identified clusters of the illness and had initiated response actions to monitor, explain and mitigate the impact of the disease on the population. Ultimately, the spread of the disease was significant but the severity of the illness was relatively mild and similar to that of seasonal influenza.

During the summer of 2009, nearly all regions of the country saw a significant decline in the number of reported cases of H1N1 influenza. This national trend was mirrored by Santa Clara County; however, a small number of instances of the virus were being reported at summer camps and summer schools. County response initiatives were reduced in a manner and level commensurate with the reduction in the size and scope of the outbreak. At that time, Santa Clara County Public Health Department (SCC PHD) staff capitalized on the diminished H1N1 response activities and engaged in planning initiatives in anticipation of a reemergence of widespread H1N1 influenza in the fall and winter of 2009 and 2010. On September 29, 2010, the County Board of Supervisors proclaimed a local emergency to human cases of swine influenza A (H1N1).

While the reemergence of the H1N1 virus in the fall of 2009 was detectable, it did not reach the same level of severity as it had the preceding spring. Nevertheless, several initiatives were either continued or commenced by SCC PHD in order to monitor and mitigate further spread of the illness. Much of the fall planning focused on the distribution and administration of the H1N1 vaccine, which became available in late October 2009. Distribution of the vaccine to hospitals, clinics, health care providers, other clinical stakeholders and partners was managed by the SCC PHD, while the administration of the vaccine to designated[1] members of the public was accomplished through vaccination clinics held throughout the county. The emergency proclamation was terminated on March 2, 2010.

Major Strengths

The information contained in this report was obtained from a variety of sources, including the review of internal SCC PHD and Santa Clara County documents including Incident Action Plans (IAPs), surveillance data, vaccination clinic throughput data, staffing and organizational charts, press releases, and face-to-face and telephonic staff interviews. Based on the analysis of this data, the following major strengths were identified:

1. Clear and trusted communication channels existed between the Health Officer and the Deputy Health Officers that allowed for dynamic and flexible decision-making. Further, accessibility to a dedicated Deputy Health Officer for the public information officer (PIO)

[1] Pregnant women, people living with or providing care for infants under six months, children and young adults between the ages of six and 24, adults between the ages of 25 and 64 who have medical conditions that put them at a higher risk for flu-related complications and health care and emergency medical services workers.

helped foster situational awareness through timely development and review of risk communication messages.

2. Despite inconsistent and, at times, vague guidance from federal and state partners regarding the emerging public health threat, the SCC PHD provided its staff and county response partners with direction that enabled staff to implement initiatives relatively quickly. To the extent possible, leadership minimized frequent changes to the guidance and protocols and when change was necessary, leadership attempted to explain the reason(s) for the changes.

3. The SCC PHD and the county provided clear and timely risk communications messages to their partners and to the public. Despite inconsistent guidance from federal and state partners, and conflicting public messages being issued by neighboring counties, leadership explained the rationale for many of its response initiatives and decisions. Additionally, leadership adhered to those decisions despite occasional pushback from partners and the public.

4. The SCC PHD capitalized on reduced operational requirements during the summer of 2009 and conducted extensive planning for fall response operations based largely on best practices identified during the spring stage of the response. This planning included vaccination acquisition, allocation and administration (including mass vaccination clinics), improvements to the specimen testing process, and strategies to keep schools open.

5. The county successfully operated several mass vaccination clinics to provide H1N1 vaccine to county residents that were at higher risk from the disease. These vaccination clinics included six weekend clinics held at the Santa Clara County Fair Grounds Expo Hall and several additional weekend and occasional weeknight clinics conducted at community-based health centers. In total, these mass vaccination clinics provided more than 53,000 doses of the H1N1 vaccine to at-risk populations.

Primary Areas for Improvement

Detailed analysis of the data identified the following areas for improvement:

1. The county-level decision not to activate the Disaster Service Worker (DSW) program, specifically during the operation of the mass vaccination clinics, put significant strain on SCC PHD staff as a result of long hours worked over a prolonged period of time. This strain affected staff well-being. If the response were prolonged, it is unclear whether staff could have maintained the established pace.

2. Many staff assigned to the response still had regular daily functions to perform. These responsibilities contributed to increased stress levels among some staff. There appeared to be inconsistent and unclear communications to staff and supervisors regarding their obligations during the response and the expected duration of their engagement.

3. Although the Office of Emergency Services (OES), Information Services Department (ISD) and Procurement expedited the purchase of WebEOC during this response, it was insufficiently developed to augment and enhance response operations. WebEOC was intended to be used in a limited capacity, primarily the H1N1 staff registration process, and was not intended to provide comprehensive incident management for the H1N1 incident. SCC should identify additional automation needs such as volunteer scheduling, management software and a dark site. OES needs to determine which external partners,

both within outside of the county, are also operating WebEOC and whether integration can occur between systems.

4. The distinction between the functions of the county EOC and the DEOC should be clarified. During the response, there was confusion among response staff as to which EOC was the proper source of information or support for specific issues.

5. At times, there were inconsistent and conflicting processes for purchasing necessary supplies and resources during the response. Pre-existing relationships and agreements between agency departments and vendors were generally viewed as favorable; however, these created problems from an oversight and reimbursement perspective.

RESPONSE SUMMARY

Background

Following the initial detection and emergence of the H1N1 influenza virus in April 2009, the SCC PHD began a multi-faceted effort to detect, explain and mitigate the spread and impact of the novel organism. On April 24, 2009, the SCC PHD sent the first of several Health Alert messages to primary care providers, hospital emergency departments and urgent care providers that included a situational update, guidance for surveillance and infection control and resources for additional information. At that point there were eight individuals in the United States diagnosed with H1N1 influenza: six in California and two in Texas. None of the California cases were in Santa Clara County. By April 28, 2009, the first suspected case of H1N1 was identified in Santa Clara County. The SCC PHD continued to provide information to health care providers and also began distributing public information regarding the illness. The Public Health Information Line (PHIL) was staffed to answer the public's questions regarding H1N1. By May 1, 2009, four schools in the county were closed due to clusters of the disease.

Throughout May 2009, the spread of the disease continued to escalate throughout the county, the state of California and across the nation. While the rapid spread of the disease began to stress the health care system and county response efforts, the severity of the disease remained relatively low. By the end of May 2009, while California had 804 confirmed or suspected cases of H1N1 influenza, there were no reported deaths associated with the illness. The SCC PHD and the county continued to provide regular risk communications concerning the disease, often having to interpret and disseminate unclear, inconsistent or conflicting information from federal and state partners, while continuing widespread disease surveillance and laboratory testing. The SCC PHD also engaged in planning for the distribution of antiviral medication using a multimodal system involving assets from the Strategic National Stockpile (SNS) and chain pharmacies. Assets from the SNS were distributed to hospitals and other health care facilities and were intended to serve under- and uninsured populations. To alleviate the demand on SNS assets, the SCC PHD also worked with chain pharmacies to ensure that antiviral medications were sufficiently stocked to serve existing demand.

By the summer of 2009, the number of confirmed and suspected cases began to decline. It was believed that several factors contributed to this decline, including the end of the school year, which eliminated a natural congregate environment, and aggressive public health initiatives aimed at mitigating the spread of the disease (e.g., hand washing, social distancing). There were still small clusters of H1N1 identified during the summer months, primarily at summer camps and summer schools, but these cases continued to be relatively mild. During this time, the SCC PHD engaged in planning for an anticipated reemergence of H1N1 influenza in the fall and winter of 2009 and 2010. Foci of this planning included the anticipated arrival of an H1N1 vaccine sometime in the fall and the development of activities designed to mitigate school closures.

As anticipated, there was a reemergence of H1N1 activity in the fall of 2009, but it was not nearly as widespread as in the spring and the severity remained mild. Nevertheless, the SCC PHD was prepared to acquire, apportion and administer the H1N1 vaccine, which arrived in the county in late October 2009. There were inconsistencies in the amount of vaccine allotted to Santa Clara County throughout the fall as well as inaccurate information concerning the delivery dates for any given apportionment. The SCC PHD provided vaccine to health care facilities and providers in the county and operated or supported several mass vaccination clinics throughout the county. The mass vaccination campaign included six clinics held at the Santa Clara County Fair Grounds Expo Hall on weekend days beginning on November 7, 2009 and concluding on

January 16, 2010. Other weekend and occasional weeknight vaccination clinics were held at various county community health centers. All mass vaccination clinics targeted residents that were at higher risk of contracting the disease or experiencing complications from the disease; the criteria describing who could receive the vaccine was based on federal guidance and included:

- Pregnant women
- People living with or providing care for infants under six months of age
- Children and young adults between the ages of six and 24
- Adults between the ages of 25 and 64 with medical conditions that put them at a higher risk for flu-related complications
- Health care and emergency medical services workers

The mass vaccination clinics continued through the end of April 2010, and provided more than 53,000 doses of the H1N1 vaccine to the residents of Santa Clara County, in both intramuscular and nasal form.

SCC H1N1 Response Timeline

April 2009	The first cases of H1N1 influenza are confirmed in United States.
April 2009	The first cases of H1N1 influenza are confirmed in Santa Clara County.
April 24, 2009	Santa Clara County (SCC) Public Health Department (PHD) Emergency Operations Center (DEOC) activated. The Director of Emergency Services proclaims a local emergency.
April 28, 2009	A state of emergency is declared for the state of California for H1N1 influenza.
May 2009	The first schools in Santa Clara County are closed due to H1N1 influenza.
May 6, 2009	SCC OES activates the county Emergency Operations Center (EOC) and the Joint Information Center (JIC).
June 2009	The first death in California is confirmed as a result of H1N1 influenza.
June 2009	The school year ends.
June 11, 2009	The World Health Organization (WHO) raises the Pandemic Alert level from Phase 5 to Phase 6, declaring a worldwide pandemic for H1N1 influenza.
July 2009	The SCC PHD begins planning for the fall and winter response to H1N1 influenza.
September 2009	The County Board of Supervisors proclaims a local emergency. SCC OES partially, virtually activates the county EOC.
October 31, 2009	The first allotment of H1N1 vaccine is delivered to SCC PHD.
November 7, 2009	The first mass vaccination clinics are held at Santa Clara County Fair Grounds and multiple community health centers.
January 16, 2010	The last mass vaccination clinic is held at the county fair grounds.
March 2010	The County Board of Supervisors terminates the Local Emergency Proclamation. On March 1, 2010 SCC OES de-activated the partial, virtual activation of the county EOC.
April 29, 2010	The last vaccinations are administered at mass vaccination clinics at the community health centers.

EVALUATION METHODOLOGY

Overview

Information regarding the SCC PHD 2009-2010 H1N1 Influenza Response was collected and analyzed both during and after response operations. Subject matter expert evaluation, independent of the SCC PHD, was provided by the Yale New Haven Center for Emergency Preparedness and Disaster Response (YNH-CEPDR). The analysis of data sources, including interviews with response staff and the review of internal response documents (e.g., IAPs, organizational charts, risk communication information) is reflected in this ARR.

Evaluation of the agency's response is organized by six capabilities found in the Target Capabilities List (TCL). The relevant capabilities included in this report are:

- Epidemiological Surveillance and Investigation
- Laboratory Testing
- Emergency Operations Center Management
- Medical Supplies Management and Distribution
- Mass Prophylaxis
- Emergency Public Information and Warning

As a result of the depth and richness of the data provided for analysis, there were occasions in which observations resulted in opposing perspectives and opinions. In cases where documentation was found to disprove a particular observation, that specific observation was not included in this report. However, conflicting observations were not excluded. As such, there are recommendations in this report that may appear contradictory. It is recognized that not all recommendations contained in any AAR will be implemented; by presenting contrary recommendations, this report aims to provide SCC PHD with a broad perspective of a complex response.

Data Sources

Information regarding observations related to the response was collected from interviews and documentation. Interviews (on site and teleconference) were conducted by YNH-CEPDR staff with experience in public health response as well as specific knowledge of the agency response. The interview sessions allowed staff and leadership to provide open and honest feedback, and were largely delineated by capability. Interviews that were unable to be conducted on site were held via phone conversations. Interviews were conducted with hospitals and clinics, mass vaccination clinics and warehouse operations, the public health pharmacy, the PHD Emergency Operations Center (DEOC), PIOs and the Joint Information Center (JIC), the county Emergency Operations Center (EOC), surveillance and epidemiology, and PHD leadership.

Additional data sources:

In addition to the interviews, additional data sources reviewed relative to the response included IAPs, surveillance data, vaccination clinic throughput data, staffing and organizational charts, press releases, frequently asked questions (FAQs) and other public and risk communications materials.

ANALYSIS OF OBSERVATIONS

Epidemiological Surveillance and Investigation

Role of Health Officer/Deputy Health Officers

Observations

In the early stages of the SCC PHD response to H1N1 influenza in the spring of 2009, the Health Officer and Deputy Health Officers quickly recognized the potential severity of the virus outbreak. This group identified potential public health issues likely to emerge during widespread influenza activity, such as the need to close schools, laboratory testing and risk communications. However, the group of Health Officers perceived that others in the SCC PHD did not recognize the importance of developing an epidemiological understanding of the disease to support decision-making. There were questions surrounding certain response elements and whether SCC would take the lead on these issues or whether the state or the Centers for Disease Control and Prevention (CDC) were responsible. The Health Officer group recommended that the SCC PHD take the lead on addressing these issues to ensure that the local epidemiology of the disease was understood and to ensure that sufficient information was available to support decision-making early in the response.

Recommendations

Revise current plans to address triggers for early recognition of the potential severity of a novel organism. Ensure that the plans address the need to use the Health Officers group as subject matter experts in the decision-making process. Clearly identify specific public health issues that are likely to arise in many, if not all, infectious disease outbreaks (e.g., the need to close schools, mass dispensing/mass vaccination operations, risk communications). Develop action plans to rapidly implement corrective actions to address these issues.

Increase awareness of epidemiology by developing and adding a new component to existing preparedness training initiatives for all PHD staff.

Ensure that county and agency plans address the need for local management of response operations in the early stages of a public health emergency, recognizing that federal or state assistance and guidance will likely not be available immediately.

Analyzing the disease

Observations

Surveillance and epidemiological response sought to understand whether there were identifiable clinical characteristics of this organism that could distinguish it from other ILIs. Due to its clinical similarity with seasonal flu, surveillance and epidemiology staff believe that this outbreak would have been much more difficult to pinpoint had its initial outbreak occurred in the fall rather than the spring, given the prevalence of seasonal ILI activity in the fall and winter months. Staff initially tried to analyze as much data as possible regarding the virus concurrently occurring in Mexico, given reports suggesting a severe morbidity and mortality rate. However, the overall burden of disease in the population in Mexico was unknown, which prevented a true understating of the disease's severity.

It was determined that the incoming data needed analysis by staff to determine what decisions needed to be made and what data were useful for making those decisions (and conversely, what information was extraneous). Many Health Officers required a broad perspective on the situation and were inconsistently available to focus exclusively on this data/information

management. The request to incorporate a CDC EIS officer was helpful in providing additional support.

There was insufficient use of existing epidemiological staff within the PHD. The same epidemiological staff members were often tapped for related duties. The department did not access the full compliment of staff with epidemiology experience.

Recommendations

Identify a staff capable of managing the collection and analysis of critical information for decision-making to support the Health Officers and other senior staff in the PHD. Train and exercise potential staff pre-event to perform this function.

Enlist staff with epidemiology backgrounds, training and experience during a large and/or prolonged public health emergency and response to provide surge capacity for these roles. Identify and address any existing training gaps.

Laboratory Testing and Surveillance

Observations

It was clear relatively early in the spring stage of the response that laboratory confirmation of suspected cases of H1N1 influenza was critical. However, the Public Health Laboratory (PHL) did not have the capacity to support the level and volume of testing demanded of it. There were no commercial laboratories prepared to conduct specimen testing until the fall of 2009, so the sole burden fell on the PHL. The inability of the PHL to keep up with testing expectations caused a ripple effect in terms of understanding transmission characteristics. This created challenges in enacting certain public health policy. Initially, leadership was challenged with the decision of whether to enact public health policy based on suspected but unconfirmed cases of H1N1, while also understanding that waiting for laboratory confirmation could delay mitigation efforts. Acting on unconfirmed cases could result in angry backlash from the public.

Staff involved in both surveillance and epidemiology functions stated that the Health Officer or a Deputy Health Officer should have made specimen testing decisions (e.g., prioritization of samples, what constitutes a viable specimen, criteria for testing). However, these decisions were made by laboratory personnel. The epidemiology staff has the preferred expertise to make these decisions.

Counting and reporting all confirmed and suspected cases of H1N1 continued until August 2009.

Recommendations

Laboratory, epidemiology and control staff should collaborate on a decision-making process for testing samples and consider developing a decision-making algorithm to expedite the testing process.

(See the Public Health Laboratory Testing section of this report for additional recommendations regarding the specimen testing process.)

Centralizing public health nurses

Observations

Within the past year, the SCC PHD took steps to centralize oversight of the public health nurses regardless of their specific assignments and locations. As a result of this re-organization, the process of mobilizing public health nurses during this response for case-based surveillance was nimble. Although interaction with the county's hospitals was clear and timely, the process for

transferring surveillance data from public health nurses to PHD epidemiologists (located in a separate unit) could have been more efficient. Staff providing disease surveillance support were not completely transitioned to ICS, resulting in day-to-day activities competing for their attention.

Recommendations

Further refine the centralization of the public health nurses to augment rapid deployment for case-based surveillance during an infectious disease outbreak. Identify methods and processes to improve the communication of relevant data from public health nurses in the field and the PHD epidemiologists.

Surveillance system

Observations

The bio-surveillance system used by the PHD was the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE), which was first deployed in the county in 2005. All county hospitals except two participate in ESSENCE. Surveillance and epidemiology staff reported that it was particularly valuable during the fall and winter response stages as a valuable tool to maintain situational awareness.

Recommendations

Based on utilization of ESSENCE during this response, identify best practices associated with this system to ensure that it continues to provide situational awareness and decision support in future responses.

Public Health Laboratory Testing

Specimen testing

Observations

The Santa Clara County Public Health Laboratory (PHL) quickly became a central part of response operations during spring 2009. While specimen testing continued through the fall and winter of 2009-2010, the virus was relatively well described after the spring and response operations more closely resembled that of seasonal influenza testing (although with increased attention and volume). During the H1N1 response, test results were sent to multiple departments within the SCC PHD as well as external partners. Often, contact information (e.g., fax numbers) of the test result recipients changed multiple times over the course of the response, making it very difficult for PHL staff to maintain normal operations. PHL staff reported that these additional reporting requirements created difficulty as they were transmitting test results beyond standard operating procedures. Typically, test results are only sent to the party that submitted the sample.

PHL staff reported being contacted directly by external parties and stakeholders for various reasons, such as sample submissions and ongoing incident information. Additionally, there were attempts by numerous stakeholders and members of the public to deliver individual specimens outside of the established protocols and chain of custody.

Recommendations

Provide clear expectations as to appropriate communications channels to the PHL during an event. Provide additional safeguards (e.g., security) to ensure compliance.

Given the level of the emergency and the fact that responders were dealing with a novel organism, the PHL served as a critical operational unit and should have been insulated from the shifting dynamics of response coordination.
Provide the PHL with a single point-of-contact at the DEOC to receive and disseminate test information and specimen test results.

Acquiring resources

Observations

Multiple issues were identified concerning ordering materials for the PHL. These include the decision to order additional equipment at the outset of the response without full consideration of the staffing required to operate these items. There was a lack of clarity on what types of purchases should be made through the DEOC versus the county EOC) and the limitations on ordering certain items by anyone other than PHL staff. PHL staff explained that the laboratory maintains day-to-day relationships with certain vendors that may better position it to obtain supplies and/or equipment on short notice or in emergent situations. The PHL maintained internal protocols for tracking purchases, which allowed for easier post-response reimbursement of incurred costs. PHL staff explained that they had little or no capacity to provide a full-time liaison to the DEOC and/or purchasing units.

Recommendations

Identify PHL liaisons to serve in a coordination role in the DEOC during an event. Ensure that these individuals are provided with training and experience in day-to-day laboratory operations and can effectively advocate for laboratory needs in a multi-function coordination environment.

Reporting test results

Observations

The established protocols for receiving and testing samples were frequently disrupted by incoming priority samples. There were also numerous requests for updated numbers of confirmed cases throughout the testing process that distracted from response operations. PHL staff stated that when achieved, the daily reporting of aggregate numbers was helpful. Staff acknowledged that some disruption, particularly early in the response, was unavoidable due to the need for information to support decision-making. A greater understanding of laboratory processes and procedures among decision-makers was helpful in setting manageable expectations and avoiding unnecessary disruptions.

Recommendations

Engage laboratory liaisons (as described previously) to revise plans and procedures and to coordinate preparedness activities (e.g., workshops, seminars) among senior leaders, DEOC staff and laboratory staff. The purpose of these activities is to engage staff in discussing the anticipated requirements and limitations during an emergency event concerning a novel organism.

Laboratory surge plans

Observations

It was noted by some PHL staff that internal laboratory surge plans did not function during this response due to staff reductions in recent years. Staff also conveyed that the agency lacked sufficient plans to provide external laboratory resources to support laboratory surge operations (e.g., staff sharing agreements, MOUs for testing specimens other laboratories).

Recommendations

Revise laboratory surge plans and procedures based on current staffing levels. Identify mechanisms to support laboratory operations, including memoranda of understanding with other

labs to support additional specimen testing and/or staff sharing agreements to ensure additional PHL capacity during a public health emergency.

Back up power

Observations

During the H1N1 response within the DEOC, a power failure occurred. This disrupted activities within the Lab and DEOC since they are both collocated in the same building. A back-up generator was borrowed from a separate department and power was restored, although much time was lost and the logistics involved were challenging.

Recommendation

Obtain funding and purchase a back up generator specifically for the Public Health Laboratory. Although DEOC activities can occur off-site, laboratory operations are only able to continue within its original facility. During a wide-spread emergency/disaster, it may not be possible to borrow a generator for the laboratory.

County EOC and Public Health DEOC

The analysis and recommendations in this Target Capability section address observations and feedback pertaining to both the county EOC and the DEOC. Some observations and recommendations are specific to one EOC or the other while some observations and recommendations are more global in nature and may have applicability to both settings. It is recognized that some recommendations, while listed for one EOC, may have broader applicability and is also relevant to the other EOC.

County EOC

Interagency communication and coordination

Observations

Communication with key stakeholders was inconsistent until the latter stages of the fall 2009 response when weekly calls were coordinated by the county EOC. It was determined that the presence of the Health Officer on these calls provided a high level of value and supported a better understanding of the variations in the information being released by federal and state officials as well as that of adjacent counties. This staff presence was especially important because conflicting information was being relayed by parent organizations, local governments and neighboring counties. Regular communications between the county EOC and the Health Officer were critical for providing visibility and transparency to the considerations behind guidance issued. In addition, communications provided broader awareness of environmental factors impacting the issuance and consistency of information and guidance.

Recommendations

Establish regular conference calls with stakeholders at the onset of an incident and include the Health Officer in those calls. Consider utilizing alternate communication methods (e.g., WebEOC) to maintain regular communication and situational awareness.

Improvements to responses

Observations

Several observations and recommendations were made following this response that could enhance future EOC activations and response operations. These observations and recommendations include:

- Identify appropriate processes for multiple IAPs.
- Establish appropriate staffing levels for the county EOC during partial activations, given day-to-day duties and the need to maintain continuity of operations.

- Delineate and expand definitions of EOC activation throughout the county's planning processes.

Recommendations
Consider the above observations and recommendations and develop a plan for assessing these recommendations and, if appropriate, address them.

DEOC

Transitional planning

Observations
During the summer of 2009 when response activities diminished, DEOC operations transitioned into planning units. When the DEOC was reactivated in the fall, the work of the planning cells did not directly align with or integrate into an operational decision-making process. In some cases, the decisions that were made in the DEOC did not take into consideration the planning that had occurred since the spring. DEOC staff identified the need for stronger integration of policy development and operations. It was also recognized that there were proposed policy changes that were never formally concluded and it was unclear whether these proposals remained under consideration.

Recommendations
Revise plans and procedures to ensure that appropriate planning leads are included in operational decision-making during a DEOC activation.

Revise or develop procedures to ensure the inclusion of key administration/operations staff in policy discussion. Include policy-making staff in administration/operational discussions during planning and response activities.

Develop a process to track the status of proposed policies and to identify and communicate a policy's final status (e.g., implemented, deferred).

CDC assistance

Observations
A CDC Epidemic Intelligence Service (EIS) officer was requested from the CDC and assigned to support the DEOC. It was determined that this position was a critical asset to the response, particularly with regard to providing an understanding of, and rationale for, current and anticipated federal guidance.

Recommendations
Continue to utilize CDC response support programs, including EIS, as necessary or appropriate.

Overarching issues

Levels of activation

Observations

Staffs at the DEOC and the county EOC reported difficulty in maintaining a sustained focus on emergency operations over the course of the response and in stepping away from their day-to-day functions. This was more problematic during the fall response when the county EOC utilized a virtual activation and the DEOC was not activated on a full-time basis. Coordination activities during the fall generally did not require full-time activation of the EOC and DEOC so staff were engaged in their day-to-day functions as well as response activities. While staff were generally amenable to being assigned to emergency operations, some reported a lack of clarity regarding expectations for their day-to-day responsibilities. Further, some staff reported that their supervisors were not necessarily aware of the extent to which their staffs would be committed to the emergency response.

Recommendations

SCC OES should identify strategies for a scaled-down activation, whether part-time, virtual (e.g., WebEOC) or some other level of activation that does not require full implementation of ICS. All activations, regardless of size and scope, should include (to the extent possible) defined periods of dedicated activity. Communicate expectations of their commitment to staff and supervisors.

Acquiring resources

Observations

It was reported that there was some confusion during the response's early stages concerning the lack of central coordination of logistic operations. Acquisition and allocation of resources occurred at the DEOC, the county EOC and within normal functional settings (e.g., agencies, departments). There was concern that some items may have been double ordered or not ordered at all. Eventually, the county's Administrator issued an order that all procurement was to be coordinated through the county EOC, which generally resolved the issue. The DEOC and county EOC staff reported that having DEOC logistics staff imbedded at the EOC was critical to facilitating the procurement process. Their knowledge of public health operations and organizational knowledge of SCC PHD (e.g., knowing who to call for specific information) was beneficial.

The Finance and Administration section of the county EOC, in coordination with the SCC PHD, established cost centers to order necessary items. However, due to improper paperwork and absent receipts, issues remained for receiving reimbursement for some purchases. There was also difficulty reimbursing staff time for those assigned to response operations on a provisional basis.

Recommendations

The DEOC and county EOC should establish roles for coordinating procurement at the onset of an incident.

The DEOC should assign a Logistics Officer to the EOC for any public health incident where the EOC is coordinating procurement.

The finance sections of the DEOC and EOC should revise or develop clear protocols for the reimbursement process and critical information required to process expenditures. All potential response staff should be trained on these critical needs to ensure compliance during a response.

Web EOC should be utilized to track resource requests and status.

Electronic tools and resources

Observations

The use of SharePoint for sharing documents and maintaining situational awareness was established during the response and was helpful for version control and tracking the review process. WebEOC was also partially utilized for this response (the county EOC was in the process of purchasing the program and expedited its procurement for this response). WebEOC was described as useful in the limited capacity in which it was used. From an information technology perspective, the DEOC and EOC function on different operating systems and SCC PHD staff assigned to the county EOC could not access their files or e-mail. Similarly, EOC staff not based in the EOC for their day-to-day functions could not access their programs. Requests to access the files and e-mail were not formally made to EOC technical support staff. The DEOC logistics section established a section-specific e-mail address (not linked to an individual). They reported greater success providing situational awareness and facilitating staff transitions by referencing the previous day's e-mails received in this account. EOC logistics staff reported that this approach was useful. It was also noted that once WebEOC is fully implemented, this application will further support situational awareness by providing a platform that can be securely reached via any Internet-accessible location.

Recommendations

The DEOC should continue to coordinate with the county EOC to establish SharePoint and WebEOC systems and develop policies and procedures for their use during an emergency. Identify the information that should be maintained in WebEOC and establish protocols to ensure that the information is updated as needed. Identify and remedy any issues that may exist in accessing the data from various systems and platforms.

Information Services should investigate methods to allow emergency coordination staff to have remote and secure access to their file systems and e-mail.

Establish a formal protocol for receiving, logging and responding to requests for equipment and support, and ensure that responses are made in a timely manner.

Disaster Service Worker (DSW)

Observations The SCC PHD staff and volunteer organizations provided the primary staffing resources for response operations. This was identified as particularly difficult during planning the mass vaccination clinics in the fall. The county DSW system routinely enrolls all county employees as potential volunteers during an emergency. Routine registration of county employees is reportedly a complex process and subject to collective bargaining agreements. Staff indicated that a senior-level decision was made not to activate the DSW system within the county. There was significant concern that additional staff were needed and that operations could not be sustained at a higher level of intensity or for a longer duration of the response. The county EOC noted that the SCC PHD clearly defined the numbers and expertise required of support staff. A potential reason why the DSW program was not activated was the perception that is was unnecessary because the SCC PHD was effectively managing the response with staff they either had or had access to. While the SCC PHD effectively managed staff resources throughout the response, there was significant concern with staff burnout. Several staff stated that if the response had been more intense or of a longer duration, burnout would have become a major issue. However, the external perception may have been that everything was well controlled.

Recommendations

Coordinate with county senior leadership to determine and document the scope of response that would activate the DSW.

Identify potential sources of additional staff to support public health operations for response scenarios that could overwhelm public health staff but that would not necessarily activate the DSW system.

Medical Supplies Management and Distribution

Dispensing antiviral medication

Observations

During spring 2009, the SCC PHD initially attempted to establish an inventory of antiviral medication among all county pharmacies to assist individuals in filling prescriptions for antiviral medication. However, the SCC PHD quickly concluded that this task was too complex and did not provide an accurate assessment in real time of where antiviral medication was located. The SCC PHD established an agreement with one of the county pharmacy chains whereby nine strategically located sites would receive antiviral medication. This information was communicated to health care providers and patients who needed to fill prescriptions. The use of county assets (through the state and federal SNS) also facilitated filling prescriptions for the uninsured. This program was widely identified as a best practice that alleviated significant concern about accessing antiviral medication.

Recommendations

Establish memoranda of agreement/understanding with area pharmacies to serve as potential strategic dispensing locations for medical countermeasures in appropriate emergency scenarios.

Revise policies and procedures for distributing medical countermeasures to include the option to utilize strategic pharmacy locations as appropriate.

Ancillary supplies

Observations

Many medical supplies were initially in short supply. For example, when vaccine became available in the fall, specific syringes (e.g., self-retracting pediatric syringes) were unavailable. These shortages were exacerbated by the fact that the vaccine supply included more multi-dose vials than pre-loaded syringes. Supplies received from the state were generally inconsistent with those ordered or expected.

Recommendations

Review the types of supplies that were difficult obtain during this incident (e.g., pediatric administration supplies) and analyze for common themes. Review medical countermeasure stockpile strategies and revise as appropriate.

Supply management

Observations

Staff reported that the management of medical supplies was predominantly conducted via multiple Microsoft Excel spreadsheets that were created and managed by different stakeholders and that were often not reconciled with one another.

Recommendations

Coordinate with partners to establish a single supply management system and/or identify a single point of contact to maintain and reconcile databases of medical supplies.

Pharmacy involvement at warehouse

Observations

The public health pharmacy staff had someone on site at the warehouse to assist with managing and storing medical supplies. This support position was a critical asset in providing consultation regarding storing medication and clarifying medical storage instructions. On-site warehouse staff were also critical to accommodating the needs of the storage environment (e.g., climate control). Because the warehouse location was not publicly disclosed, the public health pharmacy was utilized as a central location for providers to obtain their allotments of vaccine. The annex location alleviated the need to release the warehouse's location.

Recommendations

Continue to place public health pharmacy staff on site at warehouse facilities for future response operations.

Ensure that warehouse security considerations and use of the public health pharmacy for targeted distribution operations are part of planning and future response.

Observations

Originally, ordering and distributing vaccine to providers was to be managed by the state. However, the state later requested that the county take a coordinating role. Although the county had not planned to fill this role, it effectively maintained situational awareness regarding the receipt of vaccine by tracking who had ordered and received vaccine.

Recommendations

Review plans/procedures and include provisions for coordinating vaccine distribution to providers as appropriate.

Mass Prophylaxis

Decision to operate mass vaccination clinics

Observations

The SCC PHD held mass vaccination clinics at the Santa Clara County Fair Grounds beginning on November 7, 2009 and on subsequent weekend days until the last clinic on January 16, 2010. In total, six vaccination clinics were held at the fair grounds. In addition, several smaller provider-based clinics were held throughout the county during roughly the same period. The decision to utilize a county-based clinic was not a component of the initial planning for fall operations. However, it eventually became apparent that due to vaccine production shortages, providers were not receiving sufficient vaccine quantities to reach at-risk populations. The decision was then evaluated based on whether there was sufficient vaccine available to the county to reach the affected population through mass vaccination clinics. Multiple strategies were discussed and locations considered, and it was ultimately decided to use the fair grounds and one primary clinic to take advantage of the economies of scale in regards to staffing. Health care providers who served high-risk populations also held limited vaccination clinics throughout the county. The decision-making process for initiating mass vaccination occurred in a very dynamic environment but was ultimately based on a reasonable analysis of the ability to effectively and efficiently reach at-risk populations. However, existing operational plans were not fully utilized for decision-making. This led to unnecessary and potentially incorrect deliberations and assumptions in developing and implementing the strategy to hold the vaccination clinics (e.g., staffing levels were underestimated based on planning assumptions).

Other county vaccination clinics were conducted by the Valley Health Center (VHC) and the Gardner Family Health Network (GFHN).

In all, more than 53,000 doses of H1N1 vaccine (both intramuscular and nasal) were administered through county vaccination clinics between October 30, 2009 and April 29, 2010 at 16 sites. See Table 1.

Table 1

Clinic Site	VHC	Public Health	GFHN	TOTAL
Total doses	19,380	26,854	7,101	53,335

Recommendations
Ensure that relevant planners are included in operational decision-making.

Safety and comfort issues
Observations
The site chosen for the mass vaccination clinic had multiple unrelated events operating concurrently, causing potential conflicts. Multiple safety hazards were noted, including a longer-than-expected line of people which blocked access points to the fair grounds being used for other events. There were two law enforcement agencies on site, with one responsible for clinic operations and the other responsible for maintaining order in the line. The agency responsible for line security withdrew its presence during the first clinic. While no major safety incidents were reported, there were multiple concerns, including people "cutting" in line as well as the aforementioned safety issues with blocked access points to the fair grounds. Some of this was resolved through measures such as adding steel fencing along the line, expanding the line inside the building where dispensing was conducted (partially due to inclement weather) and increasing staff assigned to converse with those in the line to ensure that they were eligible for the vaccine. Subsequent clinics during this period restricted how early people could wait in line. Staff reported that accommodating the line required additional planning, such as installing portable toilets and providing additional staff. It was estimated that line management required 30% more staff than in existing planning assumptions.

Recommendations
Coordinate with the county EOC to ensure an appropriate level of law enforcement/security presence throughout vaccination/dispensing operations.

Incorporate line accommodations utilized in this response (e.g., steel fencing) into plans and procedures for mass vaccination/dispensing.

Increase line management staffing levels and flow monitors in mass vaccination/dispensing plans and procedures.

Tactical communications
Observations
Talkabout radios used during the response were not an effective communications method. Staff inside the vaccination site could not communicate with staff outside the facility. 800 MHz radios were functional but staff reported difficulty using the radios due to a lack of familiarity with the equipment and proper radio etiquette.

Recommendations

Develop and deliver pre-event training and drills on the use of 800 MHz radios for staff who would likely be assigned a radio during vaccination/dispensing operations.

Revise mass vaccination/dispensing tactical communications plans to reflect the limitations of Talkabout radios.

Throughput

Observations

In order to improve throughput, real-time adjustments were made to the mass vaccination clinic's layout and staffing levels. Although these changes reportedly significantly increased throughput, the modifications were not consistently communicated to all clinic staff simultaneously. Security staff noted that it was difficult to follow the changes to the clinic flow as this was not consistently communicated through the established chain of command. It was also noted that the clinic's on-site command center was generally unmanned because leadership were coordinating staff in their respective areas of the clinic.

Recommendations

Review/revise mass vaccination/dispensing plans/procedures as appropriate to reflect changes to increase throughput for this event.

Establish a briefing schedule of all clinic leadership (e.g., every two hours) to assess progress and implement changes. To the extent possible, postpone any alterations to overall clinic flow operations until after these briefings to ensure that all staff are aware of the changes.

Ambulatory care clinic vaccinations

Observations

In addition to the mass vaccination operations at the fair grounds, several ambulatory care sites were engaged to provide vaccinations to the community. Six sites were identified throughout the county to provide vaccinations. Planning for these sites was conducted concurrently and separately from planning for the fair grounds. Specific planning for these clinics was impacted by the fact that the number of allocated vaccine was less than planners expected. As a result, one site experienced a surge of nearly 5,000 residents waiting in line for vaccination despite the fact that the state only provided 1,000 doses. Planners stated that they had to walk through the waiting residents and pull residents out of line based on established high-priority criteria. The potential public safety implications of a significantly larger-than-expected operation were not viewed favorably by local law enforcement. In fact, the above-described scenario prompted the senior law enforcement official on site to instruct planners on what the prioritization should be.

Eventually, the ambulatory care clinics were limited to patients of the Valley Health Center, which largely serves under-and uninsured populations. This scaled-back operation was consistent with the staffing resources available for vaccination operations and based on the amount of vaccine the sites received from the state.

Training staff for work in the ambulatory care vaccination sites was coordinated by the emergency management coordinator for ambulatory care. Training materials used for the fair grounds vaccination clinics were modified and used but the training itself was separate from the training for the fair grounds clinics.

It was unclear whether there was an established communications chain between the ambulatory care vaccination clinics and the county EOC. The county EOC was often not staffed when the

vaccination clinics were held so it was unclear how issues such as logistics or resource management were coordinated.

Recommendations
All planning for vaccination clinics, regardless of where they are being held, should be coordinated by the SCC PHD to ensure consistency in staffing levels, staff qualifications, resource management and training.

Establish clear communications channels to link ambulatory care vaccination sites to county EOC or DEOC to provide support and clear points of contact.

Emergency Public Information and Warning

County Public Information Officer (PIO) collaboration

Observations
The public health PIO effectively integrated and coordinated with other county PIOs. It was determined that this was due to ongoing collaborative training, exercise and response activities among the PIO community. In this response, the public health PIO typically focused on message development and the external PIOs provided support in disseminating information and communicating with the media. This approach was described as successful and an appropriate use of the external PIO expertise.

There were occasions when confusion arose regarding which PIO was taking the lead. At least one instance was reported wherein inaccurate information was reported by the county PIO during a conference call with school officials.

Recommendations
Continue to collaborate with the PIO community in preparedness and response efforts and establish clear lines of communication between the PIO/JIC and target audiences. Ensure consistency and reliability in messages.

Health Officer/Deputy Health Officers

Observations
Initially, it was difficult to get timely approval of public information from the Health Officer and Deputy Health Officers. Agency leadership were occupied with numerous meetings and conference calls, which greatly impacted their availability. A few days into the spring response, a system was established wherein a Deputy Health Officer was assigned to the PIO to approve information that normally required the approval of either the Health Officer or two Deputy Health Officers. The relationship among the Health Officer, Deputy Health Officers and PIO staff was recognized as a key strength throughout the response. Due to time constraints on the Health Officer and Deputy Health Officers, PIO staff developed messages in anticipation of policy or other strategic information based on existing resources and provided them to the Deputy Health Officer for approval. This was an effective measure to ensure timely public messaging.

When the county EOC was activated, the Health Officer was often assigned to that location and served as Deputy Director of Emergency Services, with the responsibility for briefing the county leadership team and providing situational awareness. When the Health Officer was not at the county EOC, he was often located in the DEOC. Many of the responsibilities included

deciphering federal and state guidance, informing the development of risk communications, and interpreting the surveillance, epidemiology data and laboratory test results.

Access to health educators was identified as a bottleneck in developing risk communications information. Once additional health educators were made available, the messages were developed in a more timely fashion. Temporary PIO support positions were made available through emergency federal funding, which was approved through the state. These positions were considered invaluable in supporting fall response operations.

Recommendations

Revise public information plans and procedures to include best practices for message approval developed during this response.

Revise plans and procedures to include the assignment of a Deputy Health Officer to the PIO at the beginning of an incident to review and approve risk communications messages. Identify additional health educators to support drafting information/messages for the PIO throughout an incident.

Community partnerships

Observations

During recent years, the ability of the SCC PHD to establish community-based relationships has been negatively impacted by budget reductions. This includes the inability to establish community-based partnerships to conduct non-emergency public information campaigns, and to engage public health nurses for vaccination campaigns.

During the spring response, there was concern that Mexican migrant labor populations may be at increased risk for H1N1. The SCC PHD coordinated with the Mexican Consulate to provide outreach education to migrant worker camps. The SCC PHD also coordinated with the Mexican Consulate and the San Jose International Airport to provide educational materials to passengers on flights arriving from Mexico City (also initially identified as a risk group). Other relationships with credible community partners were generally unable to be established until late in the fall response.

Recommendations

The PHD should coordinate and collaborate with county OES, which oversees the Collaborating Agencies Disaster Relief Effort (CADRE) program that is active in disaster planning and response. CADRE brings hundreds of non-profit organizations together to work with the county.

Additional outreach

Observations

Some preparedness activities supported by existing federal or state funding and through former funding from the National Association of County and City Health Officials Advanced Practice Center funding contributed to developing resources used during this response. These resources included:

- A homecare guide for those caring for sick individuals
- A workshop (train-the-trainer format) and preparedness training kits for groups that work with vulnerable populations (although specific to H5N1, much was transferable). The toolkits are entitled, “Pandemic Flu Preparedness for Community Based Organization.”

- Community-based public information workshops (the timing of delivery coincided with the initial detection of the outbreak in the spring)

- APC toolkit entitled, "Emergency Dark Site Toolkit – A Toolkit On How To Build, Use and Maintain a Dark Site for Public Health Emergencies."

- APC Toolkit entitled, "Community Emergency Response Team (CERT) Pandemic H1N1 Influenza Train-the-Trainer Toolkit."

The last initiative became highly important when usage of the public health Web site led to performance bottlenecks. This new site was rapidly completed and was used as the primary portal to the public health Web site (if H1N1 information was requested, the user was kept on the "dark site" to access the information, otherwise they were directed to the public health Web site). Traffic was monitored until the inquiries into other public health issues surpassed H1N1 inquiries, and then the primary public health Web site was re-instated as the primary access point. The county, through the EOC, has been working on a parallel public information system that has additional PIO functionality. While the public health "dark site" was ultimately utilized, it is not clear which solution will be the preferred primary method in the future.

Recommendations

Continue to identify emergency preparedness funding streams to support public information operations during an event and develop systems and relationships that can be engaged to support public information response operations.

Coordinate with the county to finalize requirements and options for a "dark site" system for future emergencies. Ensure that plans and procedures reflect this.

Continue outreach and education to vulnerable populations, specifically mono-lingual Spanish speakers through the "Promotoras".

Social media

Observations

The use of online communications and social networks (e.g., Facebook, Twitter) to monitor public concern and to communicate with the public was identified as a valuable tool to maintain situational awareness and to reach many people, particularly young adults who were disproportionately at risk for this disease. Facebook and Twitter were also specifically identified as useful as a public health e-newsletter, which was in the planning stages and piloted during this response. There was concern at the county administration level that there was no policy for utilizing social media. It was ultimately agreed that the SCC PHD could retain their existing social media sites but that no new sites could be established without a formal county policy. Ensure that someone (e.g., PIO, designated non-technical staff) updates the content and responds to requests in a timely manner. Disclaimers should be provided if updates cannot be promptly achieved.

Recommendations

Continue to publish the e-newsletter and update plans and procedures to reflect the use of the newsletter to disseminate information in an emergency.

Establish guidelines for using social media to ensure a balance between various communication modalities in an emergency.

Translation of response materials

Observations

Early in the response, many materials were translated into other languages by staff at the area hospitals. However, their capacity to do this was quickly overwhelmed. As materials were revised, it became difficult to update all translated versions (e.g., the English versions were updated immediately on the Web site, but there were delays and incongruities with the Spanish and Vietnamese versions until they were translated). In some cases, hospitals required the information and offered translation services to assist SCC PHD and to expedite the information for their service population. Some translation contract services were engaged during the response. While the county is only required to translate materials into Spanish and Vietnamese, additional translations were conducted by hospitals and health care organizations for other target populations (e.g., Russian, Chinese).

Recommendations

Formalize translation support relationships utilized during this response to ensure predictable capacity for future emergencies, including hospitals, other health care organizations and private providers. The county executive's office and OES are currently investigating using the 211 call center and translators to assist in this and other emergencies.

Public Health Website

Observations

The Public Health website was overwhelmed with viewers in the beginning of the H1N1 emergency. The overload caused the website to shut down, requiring the Public Health Department to construct a "Dark Site" that would be hosted from external servers. There were also multiple complaints that the layout of the Public Health website was difficult to navigate, particularly in locating H1N1 emergency information.

Recommendations

Update Public Health website so that more viewers can access it at the same time. Redesign Public Health website so that it is easier to navigate. Allow for current emergency information to be easily viewable.

Call center

Observations

The public call center setup had various levels of escalation to enable transfer to external call centers. The implementation of scripts and FAQs based on monitoring received calls enhanced the effectiveness and consistency of messages delivered through these outlets. In general, this strategy worked very well. However, the strategy to accommodate calls from health care providers was unclear and further stretched staff resources.

Recommendations

Develop criteria and a threshold for activating and operating a call center. In situations where establishing a call center is not warranted, identify alternate methods to provide necessary information.

Revise public call center plans and procedures to include the development of scripts and FAQs based on lessons learned from this response.

Develop and implement MOU (Memorandum of Understanding) with 211 Santa Clara County for additional support.

Joint Information Center (JIC)

Observations

The JIC was established at the DEOC and later moved to the county EOC. It was then moved back to the DEOC. The original relocation to the EOC was partly due to the unsuitability of the DEOC to support PIO staff and operations. However, construction of a new DEOC was completed during the summer and this new DEOC operated during the fall/winter response. This DEOC provided a more suitable location to support PIO staff and operations. It was noted that the JIC needed to be co-located with the key decision-makers for the incident. Due to the center of activity at the DEOC, this was the preferred location for the JIC.

Recommendations

Review JIC policies and procedures to ensure that JIC location is based on proximity to decision-makers.

Develop protocols and trigger points for JIC activation.

Other Observations

Training and exercises

Observations

Health care providers reported that training in pandemic influenza prior to the response was valuable in preparing staff to function in a dynamic response environment. Prior training and exercises were also identified among the PIOs as contributing significantly to their ability to function effectively and collaboratively.

Recommendations

Continue to provide training and exercise opportunities for pandemic preparedness that includes multiple functional areas. This should be done in collaboration with SCC OES.

Commitment of resources to response

Observations

During this response, particularly in the spring, there was a sense within most of the PHD that the H1N1 response was the only activity and resource and staffing decisions were being made on the perceived size and scope of the outbreak. However, there were other public health activities that needed to be addressed and the disconnect between continuity of operations and emergency response caused stress.

Recommendations

Make strategic decisions and implement responses based on available resources. Weigh the impact on business continuity.

Public Health Staff Preparedness

Observations

In an effort to support social distancing and continuity of operations during another pandemic, possibly more severe in mortality, Public Health staff needs some basic emergency supplies to support their health.

Recommendations

Obtain and distribute basic emergency preparedness supplies for Public Health staff to support the continuity of services during a future pandemic event.

IMPROVEMENT PLAN

Capability	Recommendation	Corrective Action	Responsible Agency	Responsible Party	Completion Date
Epidemiological Surveillance and Investigation	Revise current plans to address triggers for early recognition of the potential severity of a novel organism. Ensure that the plans address the need to use the Health Officers group as subject matter experts in the decision-making process. Clearly identify specific public health issues that are likely to arise in many, if not all, infectious disease outbreaks (e.g., the need to close schools, mass dispensing/mass vaccination operations, risk communications) and develop action plans to rapidly implement corrective actions to address issues.	Clearly define triggers based on 2009-2010 response.	SCC PHD	Health Officer/Deputy Health Officers	June 30, 2011
		Develop a process to implement real-time corrective actions during response.			
Epidemiological Surveillance and Investigation	Ensure that county and agency plans address the need for local management of response operations in the early stages of a public health emergency, recognizing that federal or state assistance/guidance will likely not be available immediately.	County should be prepared to manage response operations for a minimum of 96 hours.	SCC PHD, County OES	PHD leadership, County leadership	June 30, 2011
Epidemiological Surveillance and Investigation	Identify a staff capable of managing the collection and analysis of critical information for decision-making to support the Health Officers and other senior staff in the PHD.	Train and exercise potential staff pre-event to perform this function.	SCC PHD	PHD Operations	June 30, 2011
Epidemiological Surveillance and Investigation	Laboratory and epidemiology staff should collaborate to develop a decision-making process for testing samples and consider developing a decision-making algorithm to expedite the testing process.	Develop algorithm.	SCC PHD	Health Officers/Deputy Heath Officers, PHL leadership	June 30, 2011
		Test algorithm.			

Capability	Recommendation	Corrective Action	Responsible Agency	Responsible Party	Completion Date
Public Health Laboratory Testing	Provide clear expectations to the PHL as to appropriate communications channels during an event and provide additional safeguards (e.g., security) to ensure compliance.	Develop guidance for the flow of information.	SCC PHD	PHD Operations, PHL leadership	June 30, 2011
		Develop guidance for physical security at PHL.			
Public Health Laboratory Testing	Identify PHL liaisons to serve in a coordination role in the DEOC during an event. Ensure that these individuals are provided with training and experience in day-to-day laboratory operations and can effectively advocate for laboratory needs in a multi-function coordination environment.	Develop criteria for PHL liaison position.	SCC PHD	PHD Operations, PHL leadership	June 30, 2011
		Create job action sheet for PHL liaison position.			
		Develop training for PHL liaison position.			
Public Health Laboratory Testing	Engage laboratory liaisons to revise plans and procedures and to coordinate preparedness activities (e.g., workshops, seminars) among senior leaders, DEOC staff and laboratory staff. The purpose of these activities is to engage staff in discussions of anticipated requirements and limitations during an emergency event concerning a novel organism.	Identify and develop appropriate preparedness activities.	SCC PHD	PHL liaison	June 30, 2011
Public Health Laboratory Testing	Revise laboratory surge plans and procedures based on current staffing levels. Identify mechanisms to support laboratory operations, including MOUs with other labs to support additional specimen testing and/or staff sharing to ensure additional PHL capacity during a public health emergency.	Examine current plans in context with the 2009-2010 response and revise plans accordingly.	SCC PHD	PHL leadership	June 30, 2011
Public Health Laboratory Testing	Obtain funds and purchase back up generator specifically for the Public Health Laboratory	Identify funding and purchase back up generator	SCC PHD	PHD Operations, PHL leadership	June 30, 2011

Capability	Recommendation	Corrective Action	Responsible Agency	Responsible Party	Completion Date
Emergency Operations Center Management	Develop process to track the status of proposed policies and to identify and communicate the final status (e.g., implemented, deferred) of a policy.	Engage staff responsible for policy development and policy dissemination to develop a process.	SCC PHD SCC OES/EOC	PHD Operations SCC OES	June 30, 2011
Emergency Operations Center Management	Identify strategies for a scaled-down activation, whether part-time, virtual (e.g., WebEOC) or some other level of activation that does not require full implementation of ICS. All activations, regardless of size and scope, should include (to the extent possible) defined periods of dedicated activity and expectations of commitment to staff and supervisors.	Develop agency guidance regarding levels of activation and corresponding roles and responsibilities. Ensure a system to communicate staffing requirements to both staff and supervisors.	SCC OES/EOC	SCC OES	June 30, 2011
Emergency Operations Center Management	The DEOC and county EOC should establish roles for coordinating procurement at the onset of an incident.	Identify roles for procurement issues. Train procurement staff.	SCC PHD, SCC OES/EOC	PHD Operations, SCC EOC Operations SCC EOC Logistics SCC OES Management	June 30, 2011
Emergency Operations Center Management	The finance sections of the DEOC and EOC should revise or develop clear protocols for the reimbursement process and the critical information required by the finance section to process expenditures. All potential response staff should be trained on these critical needs to ensure compliance during a response.	Disseminate written guidance on reimbursement process. Develop and conduct training on reimbursement process.	SCC OES/EOC SCC PHD	SCC OES PHD Finance and Administration	June 30, 2011

Emergency Operations Center Management	Coordinate with county senior leadership to determine and document the scope of response that would activate the DSW.	Clarify the process for activating the DSW.	SCC OES/EOC SCC PHD, County Leadership	SCC OES/EOC PHD Leadership, County Leadership	June 30, 2011
Emergency Operations Center Management	Identify staff appropriate to serve as the Operations Section Chief at the county EOC during a public health emergency and ensure representation during county EOC activation.	Develop criteria for staff serving as Operations Section Chief in county EOC during public health emergency.	SCC OES/EOC SCC PHD	PHD Leadership SCC OES/EOC	June 30, 2011
		Develop a list of staff trained to serve as Operations Section Chief and provide to county EOC.			

Capability	Recommendation	Corrective Action	Responsible Agency	Responsible Party	Completion Date
Medical Supplies Management and Distribution	Establish memoranda of agreement/understanding with area pharmacies to serve as potential strategic dispensing locations for medical countermeasures in appropriate emergency scenarios.	Replicate and expand the process developed during the 2009-2010 response.	SCC PHD	PHD Operations	June 30, 2011
Medical Supplies Management and Distribution	Review the types of supplies that were difficult obtain during this incident (e.g., pediatric administration supplies) and analyze for common themes. Review medical countermeasure stockpile strategies and revise as appropriate.	Develop a list of needed supplies and identify ways to obtain them pre-event and during an event.	SCC PHD	PHD Logistics	June 30, 2011

Capability	Recommendation	Corrective Action	Responsible Agency	Responsible Party	Completion Date
Mass Prophylaxis	Coordinate with the county EOC to ensure an appropriate level of law enforcement and security presence throughout vaccination/dispensing operations.	Provide recommended security staffing needs to law enforcement.	SCC PHD	PHD Operations Supporting party: county OES/EOC	June 30, 2011
Mass Prophylaxis	Review/revise mass vaccination/dispensing plans/procedures as appropriate to reflect changes made to increase throughput for this event.	Identify expected throughput numbers based on various response scenarios.	SCC PHD	PHD Operations	June 30, 2011
Mass Prophylaxis	All planning for vaccination clinics, regardless of where they are being held, should be coordinated by the SCC PHD to ensure consistency in staffing levels, staff qualifications, resource management and training.	Create a single source for staffing and training mass vaccination clinics.	SCC PHD	PHD Operations	June 30, 2011
Mass Prophylaxis	Establish clear communications channels to link ambulatory care vaccination sites to county EOC or DEOC to provide support and clear points of contact.	Disseminate lines of communications for all vaccination clinics to county EOC during operations.	SCC PHD, County OES/EOC	PHD Operations, County OES/EOC	June 30, 2011

Capability	Recommendation	Corrective Action	Responsible Agency	Responsible Party	Completion Date
Emergency Public Information and Warning	Revise public information plans and procedures to include the best practices for message approval developed during this response.	Develop templates based on 2009-2010 response.	SCC PHD County OES/EOC	PHD PIO	June 30, 2011
Emergency Public Information and Warning	Revise plans and procedures to include the assignment of a Deputy Health Officer to the PIO at the beginning of an incident for the purpose of reviewing and approving risk communications messages. Identify additional health educators to support drafting information and messages for the PIO throughout an incident.	Create a roster of Deputy Health Officers that may be assigned to this role.	SCC PHD	Health Officer	June 30, 2011
Emergency Public Information and Warning	Continue outreach and education to vulnerable populations, specifically mono-lingual Spanish speaking community members through the “Promotoras” throughout Santa Clara County, with an emphasis in South County.	Conduct workshops for “Promotoras” to reach out and educate their target populations. Provide educational materials to distribute	SCC PHD	Public Health Preparedness	June 30, 2011
Emergency Public Information and Warning	Formalize translation support relationships utilized during this response to ensure predictable capacity for future emergencies, including hospitals, other health care organizations and private providers.	Develop MOUs or execute contracts with providers of translation services.	SCC OES/EOC SCC PHD	SCC OES/EOC PHD PIO	June 30, 2011

Emergency Public Information and Warning	Update Public Health website to become more user-friendly and to allow for surge of viewers during an emergency	Redesign Public Health website to allow for easier navigation. Expand website bandwidth to allow for more viewers	SCC PHD	SCC PHD Administration/ Information Services	June 30, 2011
Emergency Public Information and Warning	Establish a strategy to receive calls from health care providers that is either distinct from the public information call center, or modify the public call center procedure to accommodate provider calls.	Draft protocol for execution of provider access line. Train provider access line staff. Disseminate information regarding provider access line.	SCC PHD	PHD PIO	June 30, 2011
Public Health Staff Preparedness	Obtain and distribute basic emergency preparedness supplies for Public Health staff to support the continuity of services and support social distancing during a future pandemic event.	Purchase basic pandemic emergency preparedness kits for all Public Health Staff.	SCC PHD	Public Health Preparedness	June 30, 2011

Appendix B

COVID-19 Vaccination Planning Organizational Structure