



LOS ANGELES COUNTY SMAPOX VACCINATION PROGRAM

BACKGROUND

In January of 2002, the Los Angeles County Immunization Program (LACIP) of the Los Angeles County Department of Health Services was given the responsibility for developing a plan to vaccinate persons in Los Angeles County (LAC) against smallpox in the event of a smallpox emergency. This smallpox vaccination plan, henceforth to be referred to as the "post event" vaccination plan, was heavily based on guidance provided by the Centers for Disease and Control and Prevention (CDC) through the "Interim Smallpox Response Plan and Guidelines," first released in November of 2001 [1]. The LAC post event vaccination plan provided for the vaccination of the following groups of individuals in priority order:

1. Non-ill persons exposed to the initial release of the smallpox virus.
2. Persons who had face-to-face, household, or close proximity contact with a confirmed or suspected smallpox case while the confirmed or suspected case was communicable.
3. Personnel selected for the direct medical or public health evaluation, care, or transportation of confirmed, probable, or suspected smallpox cases, and other persons with likelihood of contact with infectious material from a smallpox case or suspect such as laundry or medical waste handlers at a facility where a smallpox case or suspect is receiving care.
4. Family members of close contacts to cases or suspect cases.
5. Other groups whose unhindered function is deemed essential to the support of response activities such as selected law enforcement personnel, emergency response workers, or military personnel.
6. Larger segments of the community if mass vaccination campaigns are authorized by CDC.

As national and local efforts continued towards planning for a smallpox emergency, the need for vaccinating select personnel prior to a smallpox emergency (pre-event vaccination) achieved a higher level of priority. On November 22, 2002, CDC requested states, some larger cities, and other localities such as Los Angeles County, to develop plans for vaccinating key public health personnel and select hospital health care workers as part of the first phase of a three phase pre-event vaccination program. The urgency in completing such a plan was compounded by the build-up to the Iraq war in March 2003. The LAC Pre-Event Vaccination Plan was submitted to CDC for approval on December 1, 2002.

Organization, Management, and Implementation of the LAC Pre-Event Vaccination Plan: The Medical Director of the LACIP was given the responsibility for coordinating the pre-event vaccination program, with support from other LACIP management staff. The efforts of seven full time equivalent LACIP positions was required during a two month start up phase prior to the first vaccinations being offered.

Activities, which were required during the start up phase, were:

1. Educating LAC Public Health Personnel about the vaccination program.
2. Recruiting and screening public health response team members to be vaccinated.
3. Notifying hospitals about the program and working with them to develop procedures to: a) insure adequate vaccination site care, b) documentation of proper vaccination site cover dressing while at work, and c) recruiting and screening potential vaccinees.
4. Selecting fixed clinic vaccination sites and developing mobile sub-teams.
5. Identifying, ordering, and procuring appropriate supplies.
6. Implementing the pre-event vaccination system (PVS) data management system.
7. Developing a curriculum to train vaccination operations staff.
8. Conducting multi-venue training sessions for vaccination operations staff.
9. Developing a system to monitor for, report, and treat adverse events to vaccination.
10. Developing and implementing appropriate vaccine handling, storage, and distribution procedures.



Public health personnel stationed in the eight Service Planning Areas (SPAs) throughout LAC were given the responsibility for staffing the fixed clinics and mobile vaccinating sub-teams, once vaccination operations began. These persons were tasked with screening, educating, vaccinating and providing follow-up (document vaccine take, and monitor for adverse events) of the vaccinees. The public health personnel targeted for voluntary vaccination as public health response team members were: physicians, epidemiologists, public health nurses, disease investigators, laboratorians, environmental health staff, translators, and public health communication staff. The public health response team members are the persons who would be expected to initiate the containment activities around the first smallpox confirmed or suspect cases. Emergency transport staff and select security or force protection personnel were also targeted for vaccinations.

All of the 81, "911" paramedic receiving hospitals and veterans administration medical centers were encouraged to develop hospital smallpox health care teams and offer vaccination to the team members. In total, the LAC pre-event vaccination program was prepared to vaccinate 9,165 persons once vaccinations operation commenced.

RESULTS

The first smallpox vaccination clinic in LAC was held on January 29, 2003, five days after the Secretary of Health and Human Services made the declaration, required by law, that smallpox countermeasures were being implemented [2]. During the first clinic session in LAC, 27 public health staff were vaccinated against smallpox. A total of 52 vaccination clinic sessions were held over a period of 21 weeks resulting in a total of 243 persons receiving vaccinations. In addition, 240 public health staff received intensive training on smallpox vaccine operations. Also, 150 hospitals infection control, employee health, and hospital management staff received training on how to implement smallpox vaccination operations in the hospital environment. Most significantly, the capacity to safely vaccinate persons against smallpox was established at select health centers in each of the eight

SPAs. It should be noted that no major adverse events were attributed to the LAC pre-event vaccination program.

DISCUSSION

Ours was the first health department in California to initiate a pre-event vaccination program after the Secretary of Health and Human Services' Declaration that smallpox countermeasures were being initiated. In general, the number of persons vaccinated in LAC was significantly less than what was anticipated, based on estimates from our emergency medical services department regarding hospital interest and based on a survey of public health nursing staff which had been conducted in the fall of 2002 [3]. That survey suggested that almost 50% of public health nursing staff would accept the vaccine if it was offered to them. The lower than expected numbers of vaccinees that participated may have resulted from a combination of the following factors. Firstly, the CDC mandated screening criteria for this voluntary program excluded vaccinees both on the bases of their individual health (presence of a risk factor for an adverse response to vaccination) as well as the health status of family members and close contacts. There were individuals who wanted to be vaccinated but who could not, due to strict adherence to the CDC guidelines. Secondly, the lack of a no-fault compensation program in the first several months of the program for vaccinees who might experience an adverse event was stated by some potential vaccinees to be a disincentive for vaccination. Thirdly, the publicity around the cardiac events, including two deaths, which were reported in other parts of the country during the third operational month of the national program, affected interest in vaccination. On resumption of our local vaccination program after an approximately two week hiatus required by CDC to implement new cardiac related screening criteria, the "broken" appointment rate significantly increased, exceeding 50% for many of the scheduled clinic sessions.

Despite the above circumstances and the low numbers of persons vaccinated, it is noteworthy that the infrastructure to administer this unique vaccine was developed and established in LAC. Additionally, a



critical core of persons recently vaccinated against smallpox has been established in LAC. Both of these accomplishments have increased LAC's level of preparedness to respond to a smallpox emergency.

REFERENCES

1. CDC. Interim Smallpox Response Guidelines. For Distribution to State and Local Public Health Bioterrorism Response Planners. Draft 2.0. November 21, 2001.
2. Tommy G. Thompson, Secretary of Health and Human Services. Declaration Regarding Administration of Smallpox Countermeasures. January 24, 2002.
3. Walshe L., Jones J. Personal Communication of Unpublished Study of Acceptance of Smallpox Vaccine by Public Health Nurses in Los Angeles County.