



Infection Prevention in a Large Community Wide Drive-Thru Point of Dispensing (POD) for H1N1 Pandemic Influenza Immunization

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Background

In response to the H1N1 influenza pandemic, Louisville Kentucky, a metro area with a population of more than 750,000, elected to utilize a unique community-based immunization process consisting of walk-up and drive-thru options targeting individuals in designated high risk categories¹. The event held on November 11-12, 2009 was the first community access to vaccine so large numbers of individuals seeking immunization were anticipated. Ensuring a single standard of care with respect to infection prevention for vaccine recipients as well as healthcare personnel administering the vaccine was a priority and posed unique challenges in the large drive-thru. Event organizers had fifteen years of experience with drive-thru immunization campaigns² and a recent publication by Rebmann and Coll³ provided a summary of infection prevention activities relevant for use in a point of dispensing (POD) site.

Purpose

The purpose of this review was to identify infection prevention risks relevant to a large drive-thru POD and determine if the identified risks can be effectively and safely managed.

Given the circumstances of the drive-thru, specific infection prevention issues were anticipated including 1) vaccine handling, 2) injection site skin disinfection, 3) hand hygiene, 4) environmental cleanliness and disinfection, 5) needle safety, and 6) occupational exposure management.

Setting and Population

The setting for the drive-thru POD was a large football stadium parking lot (Papa John's Cardinal Stadium) at the University of Louisville. The event was held for twelve hours on November 11, 2009 (0800-2000) and again for six additional hours on November 12, 2009.

(0800-1400) until all available vaccine had been distributed. **(Image 1)** A walk-up immunization process was also in place at the same site but discussion of infection prevention activities in the POD will be confined to the drive-thru portion of the event. Although the focus of the event targeted those specific high risk groups, no one was turned away.



Image 1: Drive-Thru H1N1 Immunization Point of Dispensing at Papa John's Cardinal Stadium in Louisville KY

Project Description

During the two day event, a total of 19,079 doses of vaccine were administered with 12,613 (66.1%) being administered via a ten lane drive-thru. Five tents were utilized allowing two lanes of cars to pass through each tent. Both injectable and intranasal forms of the vaccine were provided and were administered by Registered Nurses (RN) and student nurses. Each tent had ten nurses (RN and students) in addition to at least one faculty member from the School of Nursing present to provide active oversight and mentoring of the students. Consent forms were provided upon entry onto into the stadium and nurses administering the vaccine were responsible for reviewing the information and using it to determine appropriateness of vaccine type and dosage.

Each of the five tents had enclosed sides and used water ballast containers for stability. Tables were placed beside each lane for supplies including

alcohol swabs for skin disinfection, band-aids, alcohol hand sanitizer, gloves, environmental disinfectant wipes, tissues and injection equipment.

Most, but not all, vaccine had been drawn into syringes by the University Hospital pharmacy the day prior to the event. Vaccine was obtained from the hospital then stored in portable vaccine refrigerators during the event. Multidose vials, single dose intranasal, and a few pre-filled syringes of the vaccine were also available. Quantities were released from the vaccine refrigerator in amounts sufficient for administration in 30-60 minute increments.

Safety devices provided by the government included safety needles and syringes. Large sharps containers were placed beside each traffic lane. **(Image 2).**



Image 2: Drive-Thru Immunization Process

Results and Lessons Learned

During the drive-thru process, all six anticipated infection prevention concerns were encountered. Providing immunization to adults and children while in their cars required that the healthcare professional administering the vaccine recognize the importance of infection prevention throughout the entire process.

Identified infection-related risks involved 1) drawing of vaccine from multidose vials while in a tent with vehicular and worker traffic, 2) performing adequate skin disinfection while assisting the recipient with clothing adjustment, 3) ensuring hand hygiene



Image 3: Administration of Vaccine at the Drive-Thru POD

product and process availability, 4) ability to maintain a hygienic environment for injection supplies, 5) ensuring safe and effective use of safety devices that may be unfamiliar to a given healthcare worker, and 6) addressing exposure to blood/body fluids via needlestick or contact with non-intact skin. No additional infection prevention risks were identified and all identified risk were able to be effectively managed. Although the infection prevention risks posed by a drive-thru immunization process were anticipated, unique aspects of those risks emerged including 1) the ability to identify and maintain an appropriate clean area to draw up additional doses of vaccine from multidose vials, 2) ensuring adequate training for unfamiliar needle safety devices, and 3) the need to have immediate first aid available for occupational exposure.

References

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