

ISDS One Health Surveillance (OHS) Case Study

CASE STUDY TITLE

Enhanced Animal Surveillance for Super Bowl XLIX in Maricopa County, Arizona, 2015

PROJECT/ACTIVITY TITLE

Animal Surveillance Strategies for Mass Gatherings

CONTACT INFORMATION

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WHAT DOMAIN(S) DO YOU WORK IN?

Human health

Animal health

Environmental health

OHS AREA(S) OF FOCUS ADDRESSED BY CASE STUDY

Cross-Agency Communication and Collaboration

Training and Resources

Technologies and Methodologies

Other: _____

PROBLEM DESCRIPTION (150 word maximum)

Summarize the problem/situation that was addressed with a OHS approach.

From December 2014 to February 2015, Maricopa County, Arizona was the host site for several high profile events, including Super Bowl, Pro Bowl, and Fiesta Bowl. Public health officials were allocated with implementing numerous enhanced surveillance activities to quickly identify health risks to the public. These included laboratory-based surveillance, mortality surveillance, and syndromic surveillance at select hospitals, urgent cares, hotels, and on-site at the events. Enhanced Animal Disease Surveillance (EADS) was added to detect animal disease cases, outbreaks or mortality events that (1) would be considered unusual, (2) might involve potential bioterrorism agents such as plague, tularemia, anthrax, and (3) that may signal a significant increase over background levels of disease. To accomplish this goal, an animal disease surveillance network was established among agencies that deal with animal health. This EADS collaboration was enacted before, during and after the Super Bowl through email updates, teleconferences and daily phone calls.

ACTION TAKEN (500 word maximum)

Describe how the problem was addressed and how the action taken was measured. Please include a description of the collaborators and the data sources used.

The aim of enhanced surveillance efforts during Super Bowl XLIX and associated events was to develop methods for early detection of public health emergencies and outbreaks, monitor levels of disease, and provide disease situational awareness to partners and stakeholders in an efficient and timely manner during mass gathering events. Epidemiologic surveillance strategies were developed and coordinated to monitor levels of disease activity and provide situational awareness during Pro Bowl (January 25th, 2015), NFL Experience and Super Bowl Central (January 24th, 2015 through February 1st, 2015) and Super Bowl. Fiesta Bowl (December 31st, 2014) scheduled to take place in the same location as Super Bowl, was selected to pilot test epidemiologic surveillance strategies. Animal surveillance was seen as complimentary to human surveillance and a novel approach for early detection of potential bioterrorism agents circulating in the population. An animal health focused surveillance team called EADS (Enhanced Animal Disease

Surveillance) was established using existing inter agency networks and by making new animal health agency connections. The EADS team included representatives from the local and state departments of public health, Arizona Game & Fish Department, State and Federal Departments of Agriculture, Arizona Veterinary Medicine Association, county and municipal animal control programs, Humane Society, zoo veterinarians, animal disease testing laboratories, Midwestern University Department of Veterinary Medicine and other partners. Through the EADS team, animal disease surveillance was enhanced for any morbidity and mortality events among wildlife, livestock, poultry, pets and zoo animals. Events were investigated and arrangements made for prompt testing when warranted. A 24/7 contact list was created for rapid communication, and the EADS team stayed connected through emails, teleconferences and bi-daily phone calls/check-ins which occurred during the days before, during and after the Super Bowl. Events of significance were reported to the Public Health Liaison at the Emergency Operations Center. An enhanced surveillance report summarizing all surveillance strategies in place, including EADS, was also developed and distributed on a daily basis during Super Bowl and Super Bowl associated events to all stakeholders and partner agencies. A couple of animal disease events within Maricopa County were reported and investigated during the EADS effort, including a sick cat in North Phoenix that was tested for plague and tularemia (results were negative) and an unexplained mortality in a back yard chicken flock that was tested for avian influenza (also negative). Animal disease events outside Maricopa County were also reported. No significant zoonotic disease events were identified through the EADS effort. However, the EADS effort proved to strengthen multi-disciplinary partnership between agencies, increased the emergency response capacity of the public health department for the early detection of potential public health threats, and was a successful adjunct to other enhanced surveillance activities that were in place during the Super Bowl XLIX and associated events.

FACILITATORS AND BARRIERS (100 words max each)

Please list and describe any factors that contributed positively to this project/activity.

EADS received excellent support from all partner agencies that participated in Super Bowl XLIX surveillance. Because of the interest from all partner agencies, EADS is now an ongoing work group that meets regularly to monitor and discuss animal disease surveillance events of interest in Maricopa County, Arizona. During Super Bowl, EADS was successfully integrated with other surveillance strategies within a one health approach that included syndromic and laboratory-based surveillance, outbreak investigations, air monitoring and food inspections. The experiences and lessons learned from this project will be applied to future epidemiologic enhance surveillance efforts for mass gathering events in Maricopa County.

Please list and describe any factors that were a challenge or barrier to overcome.

Planning and coordinating for EADS and other enhanced epidemiologic surveillance activities was a challenge. Over 60 local, state, and federal partner agencies participated in the overall planning and coordination for the events. Design and coordination of activities required 13 months of planning meetings that included monthly meetings of a Public Health and Medical Resource Work Group, monthly meetings for an Epidemiology Work Group and numerous meetings to coordinate EADS and other enhanced epidemiologic surveillance strategies . Monitoring of mass gathering events such as the Super Bowl, requires a substantial amount of advance planning and coordination efforts between agencies and stakeholders.

LESSONS LEARNED (250 word maximum)

Please describe any lessons learned or best practices identified by this project/activity.

Scientific literature regarding methods, best practices and utility of enhanced epidemiologic surveillance strategies for mass gatherings in general, and for animal surveillance specifically, are very limited. We found it particularly useful to schedule meetings during the early planning phases with other jurisdictions that had experience with Super Bowl and other large scale events. Coordinating with jurisdictions and subject matter experts with knowledge and experience in animal disease surveillance was also very helpful. To allow adequate planning and coordination for large events such as the Super Bowl, we recommend at least a year of planning efforts. Early identification of relevant agencies and partners is important for the integration of the different strategies into a cohesive epidemiologic surveillance plan. Significant allocation of staff and resources are required for the planning phases as well as for monitoring of data from surveillance strategies during events. Development of a risk communications strategy is also important for an efficient and timely distribution of epidemiologic surveillance data to policy, stakeholders, as well as the media and general public if the situation requires. Finally, a comprehensive epidemiologic surveillance plan must be interdisciplinary and monitor not only humans, but animals and the environment. Our plan included various components of human surveillance such as laboratory-based surveillance and syndromic surveillance. Additionally, it included other components such as animal disease surveillance, food inspections and air monitoring for potential bioterrorism agents.

ADDITIONAL COMMENTS (75 words max)

Summarize the problem/situation that was addressed with a OHS approach.

A limited number of jurisdictions have implemented enhanced animal surveillance during mass gatherings. Maricopa County Department of Public Health successfully implemented an enhanced animal disease surveillance (EADS) strategy during Super Bowl XLIX. EADS is now an ongoing work group and lessons learned from the Super Bowl XLIX experience will aid in implementation of animal disease surveillance for future mass gathering events in our jurisdiction.