

Palau Ministry of Health Surveillance Experience/Strategy during the 9th Festival of Pacific Arts

Overview of Festival

The 9th Festival of Pacific Arts, hosted by Palau in July 2004, was a multi-day mass gathering event where 28 Pacific nations shared their cultural heritage and legacy with attendees from around the world. This Festival occurs once every four years. The Festival lasted a total of 10 days. The Ministry of Health (MOH) response encompassed 12 days.

Summary of MOH response

The MOH was told by event planners that the 9th Festival of Pacific Arts was expected to bring over 4,000 visitors to the Republic of Palau, an increase in the usual population of more than 25%. The MOH was tasked with caring for the medical needs of these visitors while providing ongoing service to its own people.

Palau's MOH identified the challenges of the Festival to be consistent with a mass gathering. The three most likely health problems Palau was apt to face were, in order of likelihood:

- food/water contamination
- improper sanitation
- disruption of local health care system due to limited access and high demand.

Mass gatherings can easily become mass casualty events (e.g. due to the spread of a communicable disease from inadequate sanitation). In the event of mass casualties, the Ministry identified the need to secure surge capacity to deal with a sharp increase in number of patients and acuteness over a short period of time.

The Palau MOH made plans to combat these health threats through:

- aggressive prevention of infectious disease outbreaks through public education and intensive environmental health inspections;
- temporary expansion of ambulatory primary care services in the field to improve access to health care during the Festival;
- expanding the capacity of Belau National Hospital to respond to a mass casualty event;
- managing the complex operational, logistic, planning and administrative tasks of the medical response using the Incident Command System;
- implementation of a "real-time" system for monitoring location, type and number of patient contacts.

Managing the event: Incident Command System

Coordination of the MOH response was organised through the Incident Command System (ICS). The ICS was developed by wildfire fighters in the United States to handle large scale, multi-agency responses to catastrophic or disaster events. This system has become a standard worldwide for organising the response to disasters. As the medical requirements of responding to the Festival promised to be overwhelming (as would be the case in a disaster), the ICS system was used to organise a response management structure specific to the Festival. The Incident Commander coordinated the Festival response overall. A briefing of key incident command staff occurred daily in the Belau National Hospital Conference room.

Understanding the event: Real-time epidemiological response

The Public Health Epidemiologist and other staff from the office of Public Health Data and Statistics coordinated data collection for the MOH during the Festival. A data collection form was prepared that captured information regarding the clinic site, date of visit, patient first and

last name, diagnosis, injury information, treatment type, referral site (when applicable), country of residence, and suspected drug and alcohol use information. Forms were given to all clinic sites including the private clinics in Koror. Each delegation having its own medical team was considered a clinic for the sake of data collection and reporting. The Epidemiologist briefed clinic staff regarding the use of the form and the importance of capturing all Festival-related visit information prior to beginning the data collection. Staff were briefed frequently during the Festival regarding the data form usage and the MOH progress.

Each morning during the daily briefing of key incident command staff, a report was given by the Epidemiologist regarding the Festival-related patient encounters. This report included the number of visits per day and total Festival-related visits to date, the number of patient visits at each clinic site, the most commonly occurring diagnoses, the most commonly occurring types of treatment, the number of alcohol- and drug-related visits, and the most common sites for referral. This reporting system helped all key MOH staff understand what was happening in the field each day and prepared them for prevention and control of potential outbreaks. This data briefing also assisted in redirecting staff resources between various clinic and mobile sites as needed.

Conclusion

There were several unanticipated issues which occurred during the festival including:

- a local outbreak of dengue fever that began days prior to the Festival, and a second outbreak from a visiting delegation;
- malaria among visiting delegations with insufficient medicine available for treatment (neither malaria nor its vector are present in Palau);
- a 177% increase over baseline in patient visits during the Festival of Arts.

Despite high risk for preventable illnesses and the occurrence of unexpected health threats during the 9th Festival of Pacific Arts, there were no food/water/sanitation outbreaks during the entire event, local health care resources were not overwhelmed and there were no large scale preventable illnesses or deaths. The MOH's Festival-related response activities were effective without compromising crucial responsibilities unrelated to the Festival, including the ability to quell two dengue fever outbreaks.

Of particular note was the usefulness of collecting patient encounter data during the event and using that data to guide daily operations. It was key to the protection of visiting delegates, tourists, and the Palauan population. Knowing how many patients were seen, with what illnesses, and where they were being seen allowed the MOH to intelligently identify needed response activities and rapidly shift its scant resources as appropriate.

Real-time epidemiological data is critical to the efficient organisation of limited response resources. Efficient organisation of limited response resources may be all that keeps an overwhelming situation from becoming a disaster.

Authors:

Dr Julie A. Erb-Alvarez, MPH

Epidemiologist

Dr Stevenson Kuartei, MD

Director of the Bureau of Public Health

Dr Paul Heiderschiedt, MD

Emergency Health Physician

Ministry of Health

Palau