department of Tan Tock Seng Hospital was at the forefront of the severe acute respiratory syndrome (SARS) outbreak in 2003. The systemic approach for coping with an infectious disease outbreak the department might encounter will be discussed.

Early Detection: Patients presenting with similar patterns of disease are monitored so epidemiologic studies can be perfomed to identify common presentations.

An updated screening form was devised so that patients and their visitors are screened for symptoms like fever, travel history, employment, and social history that may have an implication on the spread of diseases.

Screening: Information is gathered from varied sources like the news media, the World Health Organization Websites, the (US) Centers for Disease Control and Prevention, and the medical and non-medical media to stay abreast on latest outbreaks so that screening mechanisms are updated constantly.

Contact Tracing: The screening mechanism also tracks patients and their companions.

This hospital has experienced the threat of the avian influenza outbreak in Asia, and also experienced, first-hand, dengue, malaria, and chikugunya disease outbreaks. The mechanisms of early detection and constantly updated screening mechanisms have allowed staff to stay abreast of these disease outbreaks.

Infectious disease outbreaks are constantly evolving issues facing the healthcare institutions.

Keywords: detection; emergency department; infectious disease; oubreak; preparedness; surveillance
Prehosp Disast Med 2009;24(2):s66–s67

(F48) Improving Pandemic Response Strategies—Lessons from Responding to Multiple Seasonal Influenza Outbreaks at World Youth Day 2008

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Introduction: Key strategies in Australia's plans for containing a future influenza pandemic are rapid case finding and contact follow-up, use of anti-viral agents to treat cases, and providing post-exposure prophylaxis to contacts, isolating/quarantining cases and contacts, and establishing influenza clinics. Managing outbreaks in discrete groups e.g., schools, has not been prominent in planning. At World Youth Day 2008 (WYD'08), held in Sydney Australia, more than 30 outbreaks of influenza were detected by routine and event-specific surveillance systems. They provided an opportunity to explore the implications of elements of these plans. When responding to outbreaks, we followed protocols derived from the above strategies. In addition, we established cluster-specific, temporary influenza clinics.

Methods: We analyzed situation reports generated by state and regional public health agencies during the response and post-event debriefing reports also were used.

Results: During WYD'08, we identified the following challenges likely to be magnified during a pandemic:

1. Detecting and responding to site-specific "clusters" of illness, including establishing temporary, multi-disciplinary influenza clinics;
2. Establishing appropriate clinical case definitions ("traditional" influenza case definition of fever with cough/fatigue proved to be insensitive);
3. Maintaining adequate staffing for the operation;
4. Providing disease control information and equipment to cases and contacts; and
5. Maintaining situational awareness for numerous concurrent outbreaks.

Conclusions: Containing the spread of a pandemic may be enhanced by cluster-specific activities, including temporary, site-specific, multi-disciplinary influenza clinics. Information management systems with capacity for recording several clusters of disease in real time are imperative. Although the responses not always are identical, lessons learned from responding to large seasonal influenza outbreaks can assist in pandemic planning.

Keywords: capacity building; communicable disease; influenza; mass gatherings; medical students; pandemic; public health; recent events; World Youth Day
Prehosp Disast Med 2009;24(2):s67

(F49) Nowcasting of Pandemic Outbreaks: Integration of Syndrome Detection with Real-Time Assessment of Disease Control Strategies

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Introduction: Each method used for detecting and forecasting infectious disease outbreaks has its specific benefits and shortcomings.[1] The aim of this study was to examine the general architecture of a test bed for development and formative assessments of integrated nowcasting systems in the area of infectious disease epidemiology.

Methods: A nominal group method was used for eliciting system requirements and design specifications from an international expert panel (n = 9). The experts provided the first round of individual comments to the study co-coordinator, who composed these into a case study assessment document. The data analysis proceeded in cycles in which each expert individually reviewed the requirements document, followed by discussions at telephone conferences (n = 12). Finally, the design specification was manifested as an implementation of a prototype test bed.

Results: Central requirements on the test bed included that it should allow representation of data quality and timeliness, permit evaluation of inductive syndrome detection and hypothetico-deductive population caseload analyses, and support explicit fact and hypothesis management. The resulting test bed is designed for use in an iterative procedure for knowledge-based nowcasting system development. The system comprises modules for access to surveillance data for experiments, scenario definition support, experi-

https://doi.org/10.1017/S1049023X00054534 Published online by Cambridge University Press