

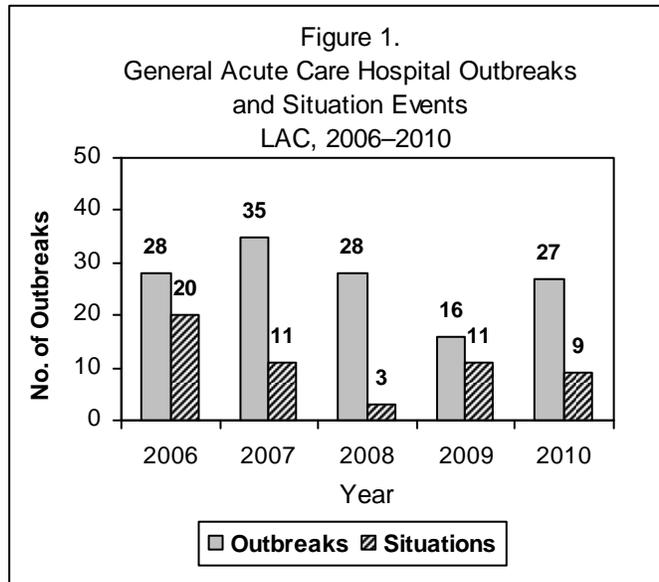


HEALTHCARE-ASSOCIATED OUTBREAKS GENERAL ACUTE CARE HOSPITALS

DEFINITION

This chapter will discuss healthcare-associated outbreaks and situation events that occur within the general acute care hospital setting on any patient unit, sub-acute or specialty area within the facility (e.g., surgical suites or procedure rooms). An outbreak in such settings is defined as a cluster of nosocomial (healthcare-associated) infections related in time and place, or occurring above a baseline or threshold level for a defined area of a facility, including the entire facility, specific unit, or ward. Baseline is relative to what is normally observed in a particular setting.

A situation event is defined as a cluster of nosocomial (healthcare-associated) infections that may not clearly meet all outbreak criteria defined above, for which additional information is required to determine if an outbreak has occurred.



ABSTRACT

There were 27 confirmed outbreaks reported in acute care hospitals in 2010 (Figure 1), an increase of 69% over 2009. Forty-one percent (n=11) occurred in a unit providing intensive or focused specialized care (e.g., neonatal intensive care, liver transplant and psychiatric units). Nineteen percent (n=5) occurred in a sub-acute unit located within the acute care hospital (Table 1). Scabies outbreaks increased from three in 2009 to five in 2010 and accounted for 19% of all outbreaks. Forty-four percent (n=12) of acute care hospital outbreaks were of bacterial etiology (Table 2) from a multidrug-resistant organisms (MDRO) such as *Acinetobacter baumannii* (*A. baumannii*), *Klebsiella pneumoniae*, carbapenem-resistant (*CRKP*) and *Clostridium difficile* (Figure 2). The etiologic agents contributing the largest number of cases in acute care hospital outbreaks were norovirus (68, 22%) followed by *A. baumannii* (58, 18%) and *C. difficile* (56, 18%). There were nine situation events reported in acute care hospitals in 2010. Sixty-seven percent (n=6) were of bacterial etiology and caused by multidrug-resistant organisms (Table 4).



Table 1. General Acute Care Hospital Outbreaks by Unit—LAC, 2010

Outbreak Location	No. of Outbreaks
Cardiothoracic Intensive Care - Adult	2
Cardiothoracic Intensive Care - Pediatric	1
Intensive Care – Adult	3
Intensive Care- Neonatal	3
Liver Transplant	1
Multiple Units	8
Psychiatric	1
Pulmonary Clinic - Pediatric	1
Rehabilitation	2
Sub-acute Unit within a Hospital - Adult	3
Sub-acute Unit within a Hospital - Pediatric	2
Total	27

Table 2. General Acute Care Hospital Outbreaks by Disease/Condition—LAC, 2010

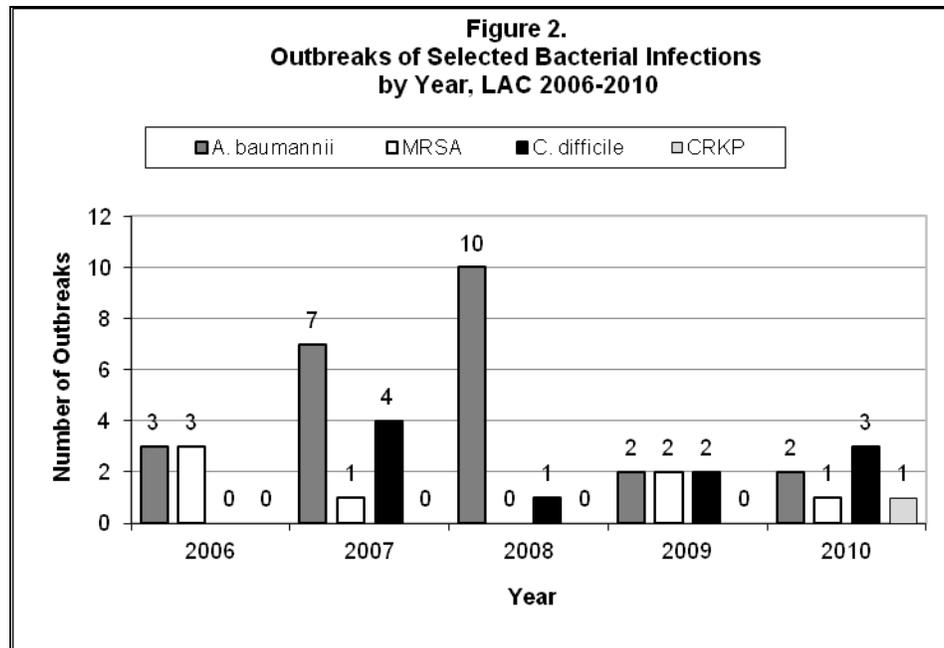
Disease/Condition/ Etiologic Agent	No. of Outbreaks	No. of Cases
<i>A. baumannii</i>	2	58
Aspergillosis	3	22
<i>C. difficile</i>	3	56
Conjunctivitis	1	3
<i>E. meningoseptica</i>	1	3
CRKP	2	29
MRSA	1	6
Norovirus	1	68
<i>Pseudomonas aeruginosa</i>	1	2
Respiratory Syncytial Virus	3	9
Scabies	5	34
<i>Stenotrophomonas maltophilia</i>	1	8
Unknown Gastroenteritis	1	10
Unknown Rash	1	4
Varicella Zoster Virus	1	4
Total	27	316

Table 3. General Acute Care Hospital Situation Events by Unit—LAC, 2010

Outbreak Location	No. of Events
Allergy-Immunology Clinic – Pediatric	1
Cardiology	1
Hematology-Oncology	1
Intensive Care – Adult	3
Intensive Care- Neonatal	1
Medical-Surgical	2
Total	9

Table 4. General Acute Care Hospital Situation Events by Disease/Condition—LAC, 2010

Disease/Condition/ Etiologic Agent	No. of Events	No. of Cases
<i>A. baumannii</i>	3	18
<i>C. difficile</i>	1	3
Epstein Barr Virus	1	2
<i>Haemophilus influenzae</i>	1	2
CRKP	1	4
MRSA	1	10
Norovirus	1	5
Total	9	44



COMMENTS

Short-term, acute care hospital inpatient services have traditionally provided for patients acute healthcare needs. Once recovered from their acute illness, patients who continued to require skilled medical or nursing services for a chronic condition remained hospitalized until ready for discharge. Over the past two decades, however, there have been an increasing number of medically complex patients admitted to acute care hospitals who required specialized care beyond the acute episode, resulting in a prolonged hospital stay. Since the mid-1980's, there has been a gradual shift in where these services are delivered, transitioning from the inpatient acute care hospital to a variety of other settings, located either within the hospital (hospital within a hospital model), or outside the hospital in a freestanding facility. This shift was partially the result of the changes in managed care and government payment systems.^{1, 2}

In 2011, 19% (n=5) of Los Angeles County (LAC) acute care hospital outbreaks occurred in a sub-acute facility located within the acute care hospital and 11% (n=3) occurred in a free-standing long-term acute care hospital (LTAC). Both facilities fall under the umbrella of post-acute care services. According to the American Hospital Association, "post-acute care services support patients who require ongoing medical management, therapeutic, rehabilitative or skilled nursing care".³

Post-acute services are also provided in freestanding subacute care facilities, skilled nursing facilities (SNF), home health facilities, hospice, dialysis centers, and inpatient rehabilitation centers. All are components of the healthcare continuum and face similar challenges of healthcare associated infections (HAI), multidrug resistant bacterial infections, and related infection control and patient safety concerns.

Many medical, nursing, respiratory and surgical procedures, once performed exclusively in the acute care hospital, e.g. extensive wound debridement, cardiac monitoring and administration of inhalation medication for a ventilator dependent patient, are now provided in other healthcare settings as long as licensing and/or certification eligibility requirements are met.⁴

There are numerous definitions of sub-acute and long-term acute care which has led to some confusion among healthcare providers. For purposes of this report, sub-acute care is defined as a level of care needed by a patient who does not require hospital acute care, but who requires more intensive nursing



and other care than can be provided to patients in a skilled nursing facility (SNF).⁵ Long-term acute care is defined as an acute care hospital that has its own governing body independent from the acute care hospital and must have a separate administrative and employee structure and distinct medical staff.^{6, 7}

In California, healthcare facilities may participate in the CDPH Subacute Care Program and must meet specific criteria. The unit may be located within the acute care hospital and licensed as an acute care hospital with a distinct part (DP) or a SNF; or it may be licensed as a freestanding SNF and certified as a long-term care Medicare and Medi-Cal provider. A LTAC must also be licensed as an acute care hospital and meet the conditions for Medicare and Medi-Cal. Both types of facilities provide care to adult or pediatric medically complex patients with acute or chronic medical conditions.⁸

In 2010, ten outbreaks (37%) occurred in a neonatal intensive care unit (NICU), adult ICU, cardiothoracic ICU or transplant unit of the hospital. Forty-four percent (n=12) of reported outbreaks in Los Angeles County (LAC) were caused by a multi-drug resistant organism (MDRO) such as *C. difficile*, CRKP, and *A. baumannii*, an increase of 100% from 2009 to 2010. Of these, 3 outbreaks (25%) occurred in a freestanding LTAC. The Joint Commission, Centers for Disease Control and Prevention (CDC), Association for Professionals in Infection Control and Epidemiology, Society for Healthcare Epidemiology of America and national, state and local hospital organizations continue to work collaboratively to address the problem of multi-drug resistance and infection prevention in healthcare facilities.

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