

**Thesis Title**        Nosocomial Infections among Traffic Accident Patients at  
Vachira Phuket Hospital

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**Abstract**

Traffic accident patients having severe multiple organ injuries were the group most likely to get nosocomial infections and to die from these problems. In order to determine the incidence, distribution and impact of nosocomial infections among traffic accident patients, data were collected from those patients who were admitted to Vachira Phuket Hospital between April 26 and July 25, 1996 by using surveillance forms. Definition of nosocomial infections of Division of Epidemiology, Ministry of Public Health and definition of surgical site infections of Centers for Disease Control and Prevention, 1992 were used to diagnose nosocomial infections.

The results revealed that 58 infections were diagnosed among 401 traffic accident patients. The infection rate was 4.8 per 100 patient-days. Males had higher infection rates than females (5.1 and 4.1 per 100 patient-days). The highest infection rate was in patients 10 years of age or less (6.5 per 100 patient-days). The infection rate of patients having multiple organ injuries was higher than patients having single organ injuries (6.7 and 4.4 per 100 patient-days). The infection rate of patients with dirty and contaminated wounds were 4.2 and 4.1 per 100 patient-days respectively. Patients admitted to hospital 7-12 hours after accident had the highest infection rate (12.5 per 100 patient-days). The highest infection rate was found in the intensive care unit, followed by the private and surgical units. The most common site of infection was surgical site infections, followed by respiratory tract infections and skin and soft tissue infections (43.2, 20.7 and 12.1 percent respectively). 75 percent of causative organisms were gram negative bacteria.

The average length of stay among patients who were infected and were not infected were 28 and 9.2 days respectively. The average cost of the antimicrobial drugs used among these two groups were 3,388.27 and 780.73 baht respectively. Both average length of stay and cost of antimicrobial drugs used were significantly higher among infected patients ( $p < .001$  and  $< .01$  respectively). Mortality rate of infected patients was 2 times higher than those who were not infected (6.9 and 3.4 per 100 patients respectively).

These results clearly indicate that infection control programs should be emphasized continuously. Hospital administrators are the key persons who promote personnel's morale and support budget for infection control programs in order to reduce the impact of nosocomial infections and promote efficiency of nursing care for patients.