

**Outcome of low-risk community-acquired pneumonias admitted to hospital:
potential for cost-saving?**

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Objective: Fine et al (N Engl J Med 1997;336:243-50) from USA have identified a group of low-risk patients with community-acquired pneumonia (CAP) with a low risk of mortality and suggested that they may be treated as out-patients to save costs. We wanted to evaluate the outcome of these low risk CAP patients that were hospitalised in our local setting, and to gauge the number of such patients in order to estimate the potential cost-savings by treating them as out-patients, as well as the safety of such an approach.

Patients and methods: All patients with CAP admitted to our hospital from April 1st to November 1st 1997 was enrolled into a prospective cohort study. Low-risk patients (≤ 50 years; no neoplastic disease, congestive heart failure, cerebrovascular disease, renal disease, or liver disease; physical examination - no altered mental status, pulse < 125 /minute, respiratory rate < 30 /minute, systolic blood pressure ≥ 90 mmHg, temperature $\geq 35^{\circ}\text{C}$ or $< 40^{\circ}\text{C}$) were identified, and their hospital outcome compared with the other patients. Hospitalisation charges were obtained from the Finance Department.

Data: Mean \pm standard deviation. A 'p'-value < 0.05 is considered significant.

Results: There were 155 CAP patients with 69 females and 86 males. The mean age was 56.6 (± 22.2) years, ranging from 12 to 93 years old. The average hospital stay was 8.4 (± 11) days. Mortality was 12.9%.

| | Low risk | High risk |
|--------------------------------|--------------------|-------------------|
| Number of patients (%) | 37 (24%) | 118 (76%) |
| Age (years) | 32.5 (10.7) | 64.2 (19.2) |
| Mortality (%) | 0 | 17% |
| Hospital length of stay (days) | 6.2 (5.5)* | 9.1 (12.2) |
| Hospitalisation charges (US\$) | \$1,295 (\$1,169)* | \$3,180 (\$4,887) |

* $p < 0.05$ on t-test.

There were 37 (24%) low risk CAP patients, and there was no mortality in this group. None of these low-risk patient required mechanical ventilation. They had a significantly shorter hospital stay compared to the high-risk patients. An identifiable organism was found in 27% of the low-risk CAP with only one patient positive on the blood culture. Average hospitalisation charge for low risk CAP was as expected significantly lower than the high-risk patients.

Conclusion: Nearly one-quarter of our CAP admissions consist of low-risk patients that had no mortality, and required a significantly shorter hospitalisation period. The management of such patients who are young (≤ 50 years), and had no serious coexisting conditions in an outpatient setting, may lead to significant cost-savings as the average hospitalisation charge was US\$1,295.