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Title: Predictors of length of stay in hospitalized patients with community acquired pneumonia

Dr. Shiva 10159 Bikmalla shiva.bikmalla@uhns.nhs.uk MD ¹, Dr. Masood 10160 Khalil masood.khalil@uhns.nhs.uk MD ¹ and Dr. Muhammed 10161 Ganaie muhammed.ganiae@uhns.nhs.uk MD ¹. ¹ Department of Respiratory Medicine, University Hospital of North Staffordshire, Stoke-on-Trent, United Kingdom, ST4 6QG .

Body: Introduction: The proportion of patients with community acquired pneumonia (CAP) requiring hospitalisation range from 22-42%. In our centre the median length of stay was high compared to national average. This has major impact on the utilisation of health care resources. Therefore we aimed to identify the predictors of length of stay in patients with CAP. Methods: A prospective data collection over a period of 60 days (Dec 2012- Jan 2013) in a single tertiary centre. We included all patients admitted with symptoms of lower respiratory tract infection and has confirmation of pneumonia based on new infiltrates on the chest radiograph. Results: Data was collected on 50 patients who were consecutively selected based on the inclusion criteria. The median age was 72 years (range 23-98) and 54% were women. The median length of stay was 9 (range 2-35). Eleven patients (22%) who died during the stay had median age of 86 years. Patients with chronic lung conditions have higher length of stay (relative risk of 1.65). In our cohort hypoxia on admission, high CURB65 score, female sex, sputum production and pyrexia above 38c have shown increase in the length of stay.

Predictors of length of stay

	Predictor	Odds Ratio	95% confidence interval	p-value
1	Hypoxia	15	1.63-151	0.017
2	CURB65 >2	4.12	0.72-23.4	0.01
3	Female Sex	1.57	0.4-5.7	0.49
4	Sputum production	1.5	0.4-5.5	0.5
5	Pyrexia of >38C	1.12	0.29-4.2	0.85

Discussion: Through our study we have been able to identify predictive markers of length of stay in hospital. However large, multi-centred studies are required to describe the parameters with high significance, which would help in organising effective and safe early discharge planning.

