



Potential ways to provide nasogastric or intravenous fluid therapy on an ambulatory basis, and outpatient antimicrobial therapy (OPAT) should be explored” ÓhAiseadha et al (2016).

Abstract:

BACKGROUND: Increasing demand for limited healthcare resources raises questions about appropriate use of inpatient beds. In the first paediatric bed utilisation study at a regional university centre in Ireland, we conducted a cross-sectional study to audit the utilisation of inpatient beds at the Regional Paediatric Unit (RPU) in University Hospital Limerick (UHL), Limerick, Ireland and also examined hospital activity data, to make recommendations for optimal use of inpatient resources.

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METHODS: We used a questionnaire based on the paediatric appropriateness evaluation protocol (PAEP), modified and validated for use in the United Kingdom, to prospectively gather data regarding reasons for admission and for ongoing care after 2 days, from case records for all inpatients during 11 days in February (winter) and 7 days in May-June (summer). We conducted bivariate and multivariate analysis to explore associations between failure to meet PAEP criteria and patient attributes including age, gender, admission outside

of office hours, arrival by ambulance, and private health insurance. Inpatient bed occupancy and day ward activity were also scrutinised.

RESULTS: Mean bed occupancy was 84.1%. In all, 12/355 (3.4%, 95% CI: 1.5%-5.3%) of children failed to meet PAEP admission criteria, and 27/189 (14.3%, 95% CI: 9.3%-19.3%) who were still inpatients after 2 days failed to meet criteria for ongoing care. 35/355 (9.9%, 95% CI: 6.8%-13.0%) of admissions fulfilled only the PAEP criterion for intravenous medications or fluid replacement. A logistic regression model constructed by forward selection identified a significant association between failure to meet PAEP criteria for ongoing care 2 days after admission and admission during office hours (08.00-17.59) ($P = .020$), and a marginally significant association between this outcome and arrival by ambulance ($P = .054$).

CONCLUSION: At a mean bed occupancy of 84.1%, an Irish RPU can achieve 96.6% appropriate admissions. Although almost all inpatients met PAEP criteria, improvements could be made regarding emergency access to social services, management of parental anxiety, and optimisation of access to community-based services. Potential ways to provide nasogastric or intravenous fluid therapy on an ambulatory basis, and outpatient antimicrobial therapy (OPAT) should be explored. Elective surgical admissions should adhere to day-of-surgery admissions (DOSA) policy.

Reference:

ÓhAiseadha, C., Mannix, M., Saunders, J. and Philip, R.K. (2016) Bed Utilisation in an Irish Regional Paediatric Unit – A Cross-Sectional Study Using the Paediatric Appropriateness Evaluation Protocol (PAEP). *International Journal of Health Policy and Management*. 5(11), p.643-652.

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