

## Scheduled Admissions and High Occupancy at a Children's Hospital

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**BACKGROUND:** High hospital occupancy is a challenge for quality of care and access, while low levels of occupancy may be inefficient in terms of resource utilization. Variability from scheduling decisions may affect occupancy and be amenable to alteration.

**OBJECTIVE:** Describe variability in admission, discharge, and occupancy patterns at a large children's hospital and assess the relationship between scheduled admissions and occupancy.

**DESIGN:** Retrospective administrative data analysis.

**SETTING:** One urban, tertiary-care children's hospital.

**PATIENTS:** A total of 22,310 consecutive patients admitted from July 1, 2007 to June 30, 2008.

**MEASUREMENTS:** Admission-discharge-transfer (ADT) data for 1 fiscal year were abstracted for analysis of admission and occupancy patterns.

**RESULTS:** Among 22,310 admissions, 78% were coded as emergent and 22% as scheduled. Variation in admission volume by day of week was high for scheduled admissions (coefficient of variation [CV] 65.3%), while it was more consistent for emergent admissions (CV 12.0%). For patients with length of stay (LOS)  $\leq$  7 days (84%), Mondays and Tuesdays generated 45.2% of scheduled patient hours. Wednesdays and Thursdays had the highest frequency of high occupancy.

**CONCLUSIONS:** Scheduled admissions contribute significantly to variability in occupancy and risk of mid-week crowding. Predictable patterns of admissions lead to high occupancy on some days and unused capacity on others, which can be addressed with proactive management of admissions (eg, greater use of unused capacity on weekends and in summer). Hospitals interested in optimizing patient flow should assess their admission and occupancy patterns. Further studies should link variation in occupancy to outcomes including quality of care, educational activities, and staff satisfaction.

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